

## Article

# Legal and Illegal Drug Consumption among Students at the University of Seville (Spain)

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**Abstract:** In current society, the fight against drug abuse is an important social challenge given its harmful effects on health and quality of life, globally. Numerous studies show that university life fosters drug use among university students. This research explores the perceptions of legal and illegal drug use of undergraduate students at the University of Seville (Spain). The research design is quantitative: a specific questionnaire was administered to a sample of 1478 students. Descriptive and inferential statistics were used for data analysis using SPSS v.27 software. It is found that the majority of students do not use illegal drugs, although they do use alcohol and tobacco. Students with a failing grade average use more legal and illegal drugs than those who have outstanding grade averages. There are gender differences in drug use, with males using legal and illegal drugs more than females. Nevertheless, women report taking more tranquilizers and sleeping pills. It is necessary for universities to develop policies for the prevention of legal and illegal drug use, as well as the creation of training programs and counselling courses to promote good health.

**Keywords:** drug abuse; university students; Spain; legal drugs; illegal drugs



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## 1. Introduction

Nowadays, drug-use prevention is an authentic social challenge. In fact, it is the subject of numerous investigations, given its harmful effects on health, quality of life and safety at a universal level [1]. In addition, globally, 11.8 million people die per year from both legal and illegal drug use [2]. The fight against this problem of international implications cannot be done in a univocal way, since drugs' current use and classification depends on the society and each person's status [3].

Normally, most people start consuming substances during their adolescence and early adulthood, a stage that frequently coincides with their university studies [4–7]. This situation entails a series of changes in their lifestyle habits caused by the assumption of an incipient autonomy, an exposure to new demands and, sometimes, a new academic situation [8,9]. Likewise, this new lifestyle may lead them to a separation from their previous closest circle, which not only increases their emotional stress but also triggers an overriding need to fit into new social groups. It is not surprising, then, that these changes induce situations of depression or stress as well as experimentation with alcohol, tobacco and other drugs [10–12] as an attempt to escape from the difficulties they tend to perceive during this stage [13].

A large body of research highlights the concerning negative effects of tobacco, alcohol and other drug use during adolescence and early adulthood. They give particular attention to substance use in men, as they are the group who consume them the most [13–17]. College-aged youth become an at-risk population for drug use [18], as they are extremely sensitive to outside influences [19]. This population's risk factors are usually conditioned by learned behaviours (shyness or rebelliousness, among others), family conflicts or dysfunctions, and their individual sociocultural background [20]. These situations are exacerbated in

lower economic contexts, where legal and illegal substances consumption increases [21]. Nevertheless, the fact that family conflicts or dysfunctions are risk factors for the onset of consumption is at least striking, since the family is the first agent who suffers the negative consequences derived from a family members' substance abuse [22].

Given the relevant role of higher education institutions in drug use prevention, it is of vital importance to create a collaboration network between the university and its teaching staff. However, there is little teacher involvement in drug prevention since they consider it to be an external issue that does not affect the teaching-learning process [23]. Nevertheless, many studies point out the harmful effects of drug use, not only on the physical and mental well-being of students, but also on their academic performance [24–26].

There is currently an extensive field of research on the topic under study [4,13,16]. In this sense, it is necessary to set a specific scope when studying drug use among university students so that it is possible to achieve fruitful results [15]. The aim is not to address this issue for the mere knowledge of students' reality (what and how much they consume, which repeatedly confirms the already known problem), but rather to find a correlation between consumption and education. If higher education is somehow able to help prevent or reduce substance use, it is its duty to plan actions towards change and improvement.

Consequently, this study aims to contribute to the prevention of drug use among students at the University of Seville (Spain). In order to achieve this objective, the following specific objectives are determined:

- To analyse students' perceptions of their consumption of legal and illegal drugs depending on the stage of the academic year: term time or exam period.
- To identify differences in students' perceptions of their consumption of legal and illegal drugs according to gender, field of study, shift (morning/afternoon), work situation employment status and average grades.
- To detect the correlation between students' perception of their use of legal and illegal substances and having friends or family who consume drugs.

This research focuses on the use of the following legal drugs: alcoholic drinks, tobacco, vape, hookahs with nicotine, coffee, energy drinks, vitamin supplements, energy supplements (Guarana, Ginseng, Taurine . . . ), tranquillizers and sleeping pills. Furthermore, the illegal drugs considered for study were cannabis and marijuana, cocaine, ecstasy and other synthetic drugs, amphetamines, speed, hallucinogens, magic mushrooms and new substances (ketamine, spice, mephedrone, superman . . . ) [27,28].

## 2. Materials and Methods

### 2.1. Study Design and Data Analysis

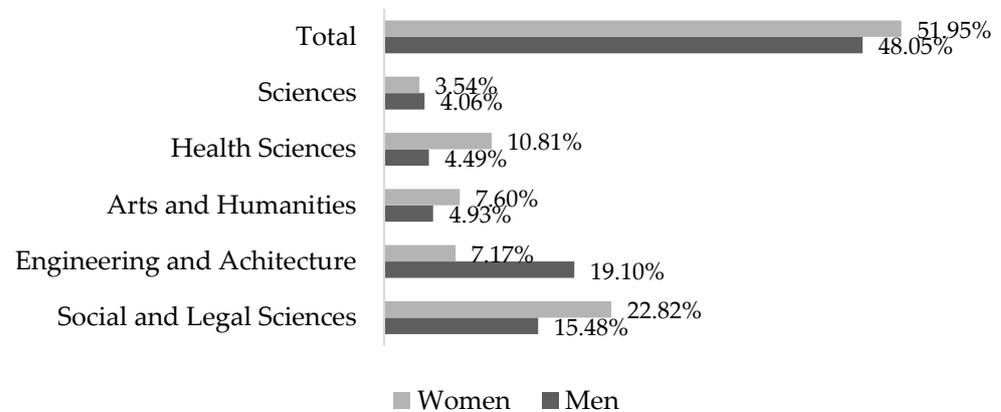
The study design is non-experimental (*ex post facto*) and was conducted using a descriptive survey research method [29].

For data analysis, descriptive, correlational and inferential statistics were used, through SPSS v.27 software. For the descriptive statistics, means ( $\bar{x}$ ) and standard deviation (SD) were used. For the correlational statistics, the Pearson's chi-squared test was employed. For the inferential statistics, the Kolmogorov–Smirnov (K–S) test was first applied to check that the sample was normally distributed, followed by the non-parametric Kruskal–Wallis H test (H) for more than two independent samples, and the Mann–Whitney U-test (U) for two independent samples, respectively. In addition to the non-parametric inferential analysis, the effect sizes were calculated using the squared correlation coefficient (ER2) [30].

### 2.2. Participants and Procedure

The study population included all undergraduate students enrolled at the University of Seville during the 2019/2020 academic year, a total of 48,039 students [31]. To calculate the sample, the formula for infinite populations (>10,000 subjects) was used:  $n = z^2 P * Q / E^2$ . With a margin of error of 3.3% for a 97% confidence interval, a total of 1478 students were obtained. Simple random sampling with proportional allocation

according to sex and field of study was used (Figure 1). The demographic characteristics of the sample can be seen in Table 1.



**Figure 1.** Sample according to sex and field of study. Source: Authors' own.

**Table 1.** Demographic characteristics of the sample.

VARIABLE	CATEGORY	PERCENTAGE
Age	Under 20	23.9%
	20 to 25	70.6%
	26 to 30	4%
	31 to 35	0.9%
	36 to 40	0.3%
	Over 41	0.3%
Year of Course	1	16%
	2	32.2%
	3	22.5%
	4	24.3%
	5	3.5%
	6	1.5%
Shift	Morning	54.4%
	Afternoon	17.4%
	Morning & Afternoon	28.2%
Average mark	Fail	1.3%
	Pass	35.8%
	Very good	59.8%
	Outstanding	3.1%
Work situation	I study and am not looking for work	56.9%
	I study and work at the same time	27.1%
	I am a student and looking for work	16%

Source: Authors' own.

The questionnaires were completed both online, using Google Forms, and in person. Students participated by completing the questionnaire, which was on a voluntary basis. Anonymity and confidentiality in responses were preserved at all times. The questionnaire was previously approved by the ethical committee of the Socio-educational Research in Action Group (HUM929).

### 2.3. Instrument

A specific questionnaire was designed for the present research. It had three main dimensions: a. frequency of drugs consumption during the examination period; b. frequency of substance consumption during term time (excluding the exam period); c. primary reference group's drug consumption.

For dimensions a. and b., a total of 30 items were included, with a five-point Likert-type response scale (1 = never; 2 = almost never; 3 = sometimes; 4 = almost always; 5 = always). The variables included in dimension a. inquired about the frequency of use of the following substances during the exam period: alcoholic drinks, tobacco/vape/hookahs with nicotine, coffee, energy drinks, vitamin supplements, energy supplements (Guarana, Ginseng, Taurine . . . ), tranquillizers and sleeping pills, weed (cannabis, marijuana . . . ), cocaine/ecstasy and other synthetic drugs, amphetamines/speed, hallucinogens, magic mushrooms, new substances (ketamine, spice, mephedrone superman . . . ). In dimension b., the variables analyzed the frequency of use of the same substances indicated above during term time (excluding the exam period). Meanwhile, 8 items corresponded to dimension c. with a four-point Likert-type scale (1 = totally disagree; 2 = disagree; 3 = agree; 4 = totally agree). Among the variables for this dimension, students were asked to indicate if they had family who usually smoked cigarettes, drank alcohol, used tranquilizers or sleeping pills and used illegal drugs. The same variables were used for having friends who had these kinds of habits.

Before starting the descriptive analysis of results, it is worth explaining some of the terms employed in the present study. In the design of the questionnaire, some colloquial drug terms were chosen in order to make it understandable and closer to students' realities. The colloquial term for psilocybin mushrooms is magic mushrooms and this term was used when surveying the students and employed to refer to this substance henceforth. Likewise, "meow meow" was employed for surveying the students instead of its formal name: mephedrone. The latter term was utilized subsequently. Students were also asked if they smoked joints, including cannabis and marijuana. Due to the informality of the term joint, only marijuana and cannabis were included in the text.

Reliability was calculated using Cronbach's alpha internal consistency coefficient, obtaining values close to unity for the questionnaire as a whole (0.943) and its three constituent dimensions: a. ( $\alpha = 0.912$ ) b. ( $\alpha = 0.958$ ) c. ( $\alpha = 0.961$ ).

Exploratory factor analysis (EFA) with the Principal Component method was used to evaluate construct validity, after previously checking sampling adequacy with the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity (see Table 2). Both dimensions obtained adequate measures of sampling adequacy, rejecting the sphericity hypothesis with optimal statistical significance in all cases ( $p \leq 0.001$ ). In addition, item saturation was reached on factors with a value above 0.4 [29]. Goodness of fit was confirmed by using non-metric scaling with PROXSCAL algorithm. Obtaining stress values (misfit of the data) close to 0 and goodness-of-fit measures close to 1 (DAF and Tucker's coefficient of congruence); hence, an acceptable goodness of fit was obtained.

**Table 2.** Exploratory factor analysis (EFA) and construct validity of the questionnaire.

Dimension	KMO	Bartlett's Test			Saturation Coefficients	% Variance	Stress Values and Goodness-of-Fit Measures					
		$\chi^2$	DF	Sig.			Normalised Raw Stress	Stress-I	Stress-II	S-Stress	DAF	Tucker
a. Frequency of drugs consumption during the examination period.	0.752	11,292.209	105	0.000	0.489; 0.600; 0.581; 0.630; 0.640; 0.570; 0.771; 0.780; .596; 0.688; 0.651; 0.772; 0.671; 0.677; 0.821;	51.745	0.00238	0.04874	0.06811	0.00412	0.99762	0.99881
b. Frequency of substance consumption during term time (excluding exam period).	0.832	9305.615	105	0.000	0.610; 0.706; 0.585; 0.486; 0.603; 0.567; 0.472; 0.578; 0.691; 0.789; 0.809; 0.856; 0.731; 0.776; 0.445	53.017	0.00147	0.03840	0.05490	0.00094	0.99853	0.99926
c. Primary reference group's drug consumption	0.677	2647.442	28	0.000	0.537; 0.637; 0.616; 0.639; 0.467; 0.501; 0.493; 0.669	50.399	0.00041	0.02028	0.04439	0.00050	0.99959	0.99979

Source: Author's own. Abbreviations:  $\chi^2$  = chi-squared; DF = degrees of freedom; sig. = significance level.

### 3. Results

#### 3.1. Students' Perception of Drug Use during Term Time and Exam Period

Table 3 shows the descriptive statistics on the students' perceptions of drug consumption during the exam period (E) and during term time (TT). The item referring to coffee consumption stands out with the highest mean. Thus, students perceive a monthly consumption of coffee. Furthermore, a high standard deviation for this item is also observed; hence, the variability of the responses with respect to the mean is very high with students perceiving a weekly and daily consumption of coffee. It is found that coffee consumption increases during exams when compared to consumption during term time (2.85).

**Table 3.** Descriptive statistics corresponding to students' perceptions of legal and illegal drug use during term time (excluding exam period) and exam period.

Item	Exam Period		Term Time (Excluding Exam Period)	
	$\bar{x}$	SD	$\bar{x}$	SD
Alcoholic drinks	1.96	1.076	2.84	1.152
Tobacco/Vape/Hookahs with nicotine	1.94	1.446	2.18	1.485
Coffee	3.04	1.773	2.85	1.690
Energy drinks	1.71	1.174	1.53	0.949
Vitamin supplements	1.37	0.967	1.27	0.806
Energy supplements (Guarana, Ginseng, Taurine . . . )	1.17	0.654	1.12	0.526
tranquillizers and sleeping pills	1.31	0.825	1.17	0.573
cannabis, marijuana . . . )	1.21	0.702	1.29	0.764
Cocaine	1.01	0.158	1.02	0.182
Ecstasy and other synthetic drugs	1.02	0.180	1.03	0.229
Anfetamines, speed	1.02	0.144	1.03	0.220
Hallucinogens	1.01	0.097	1.02	0.153
Magic mushroom	1.01	0.090	1.02	0.155
New substances (ketamine, spice, mephedrone superman . . . )	1.01	0.078	1.01	0.140

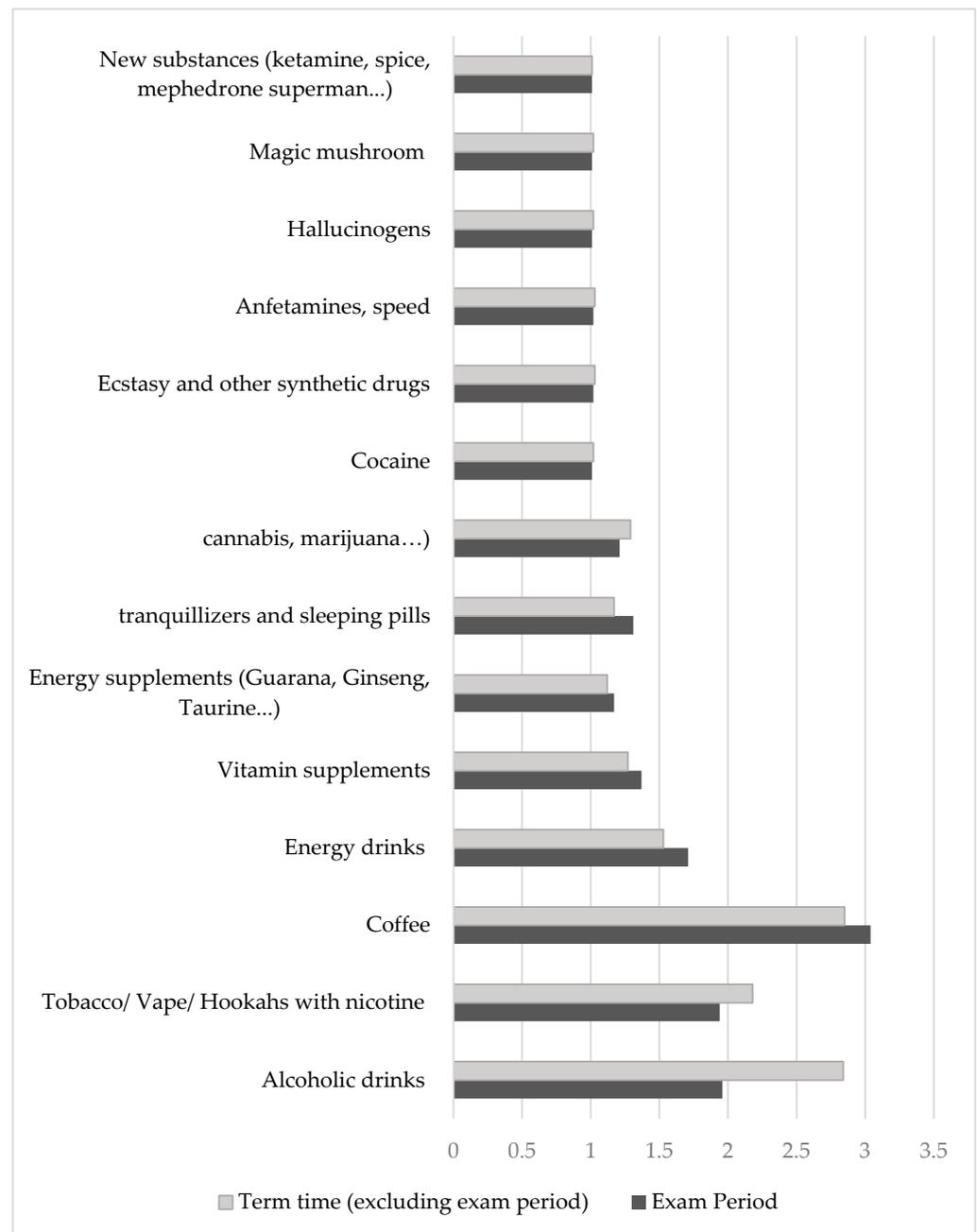
Source: Author's own. Abbreviations:  $\bar{x}$  = mean (scale 1 to 5); SD: Standard Deviation.

Low mean values and low standard deviations are identified for items referring to cocaine use (E:1.01; TT:1.02), hallucinogens (E:1.01; TT:1.02), magic mushrooms (E:1.01; TT:1.02) and new substances (ketamine, spice, mephedrone superman . . . ) (E:1.01; TT:1.01), ecstasy and other synthetic drugs (E:1.02; TT:1.03), and amphetamines and speed (E:1.02; TT:1.03). In other words, most students report never using these substances.

It is found that a large proportion of students consider that they occasionally use alcoholic drinks (E:1.96; TT:1.076), tobacco, vapes or hookahs with nicotine (S:1.94; TT:2.18) and energy drinks (E:1.71; TT:1.53). These results show high standard deviations, so there is great variability in the responses. That is to say, students also report using these substances monthly, weekly and even daily. It should also be noted that during the school year, students perceive that they smoke and drink alcohol more frequently than during the exam period. Moreover, they consider that they consume more energy drinks during the exam period than during term time.

Finally, the items referring to the consumption of vitamin supplements (E:1.37; TT:1.27), energy supplements (Guarana, Ginseng, Taurine . . . ) (E:1.17; TT:1.12), tranquillizers and sleeping pills (E:1.31; TT:1.17), and cannabis and marijuana (E:1.21; TT:1.29) show mean values slightly higher than 1, with high standard deviations. These results show that the

use of these substances among young people is not unanimous. In other words, while a large number of students do not use them, there are others who do. They also perceive that they consume more vitamin supplements, energy supplements, tranquilizers and sleeping pills during the exam period than during term time. However, it is noted that they consider consuming cannabis and marijuana to a greater extent during the academic year. The differences in the drug use during the exam period and term time can be seen in Figure 2.



**Figure 2.** Comparison of means corresponding to students' perceptions of legal and illegal drugs use during term time (excluding exam period) and exam period. Source: Authors' own.

### 3.2. Significant Differences according to Gender in Student's Perception of Drug Use during Term Time and Exam Periods

Application of the Mann–Whitney U-test revealed statistically significant differences according to the gender of the respondent (Table 4). It is noteworthy, with a large effect

size ( $ER^2$ ), that males report drinking more energy drinks than their female counterparts during exam periods.

**Table 4.** Significant differences according to gender in student's' perception of drug use during term time and exam periods.

Item	Period	U	P	Mean Rank	( $ER^2$ )
Alcoholic drinks	E	221,403.500	0.000	M = 800.24 F = 685.78	0.135 Intermediate Effect
	TT	223,279.500	0.000	M = 785.57 F = 687.24	0.13 Intermediate Effect
Tobacco/Vape/Hookahs with nicotine	E	244,269.000	0.009	M = 763.24 F = 712.71	0.1 Intermediate Effect
	TT	239,359.500	0.010	M = 759.39 F = 706.10	0.106 Intermediate Effect
Coffee	E	243,616.500	0.016	M = 763.16 F = 711.95	0.101 Intermediate Effect
	TT	234,565.500	0.002	M = 766.10 F = 700.42	0.113 Intermediate Effect
Energy drinks	E	225,967.000	0.000	M = 783.48 F = 690.23	0.127 Intermediate Effect
	TT	215,546.500	0.000	M = 789.98 F = 677.10	0.143 Large Effect
Energy supplements (Guarana, Ginseng, Taurine ...)	E	247,257.000	0.000	M = 757.26 F = 716.23	0.096 Intermediate Effect
	TT	246,775.000	0.002	M = 745.11 F = 714.73	0.095 Intermediate Effect
tranquillizers and sleeping pills	E	239,856.000	0.000	M = 697.62 F = 759.65	0.106 Intermediate Effect
	TT	243,135.000	0.001	M = 703.93 F = 744.58	0.1 Intermediate Effect
cannabis, marijuana ...	E	239,331.500	0.000	M = 771.23 F = 706.90	0.107 Intermediate Effect
	TT	233,591.000	0.000	M = 768.69 F = 699.44	0.114 Intermediate Effect
Cocaine	E	259,867.500	0.039	M = 738.00 F = 731.09	0.079 Intermediate Effect
	TT	254,051.0000	0.010	M = 735.20 F = 723.65	0.085 Intermediate Effect
Ecstasy and other synthetic drugs	E	258,592.500	0.005	M = 740.07 F = 729.68	0.081 Intermediate Effect
	TT	252,512.500	0.007	M = 737.72 F = 721.83	0.087 Intermediate Effect
Anfetamines, speed	E	258,674.000	0.019	M = 739.93 F = 729.68	0.081 Intermediate Effect
Hallucinogens	E	258,598.500	0.006	M = 740.06 F = 729.59	0.081 Intermediate Effect
Magic mushroom	E	257,985.000	0.004	M = 738.87 F = 728.73	0.082 Intermediate Effect

Source: Author's own. Abbreviations: U = Mann-Whitney U test; p = significance level; M = male and F = female; E = Examination Period; TT = Term Time (excluding examination period).

With an intermediate effect size ( $ER^2$ ), it can be observed that during exam period and term time, men consider using more legal and illegal drugs than women, including alcoholic beverages, tobacco/vape/hookahs with nicotine, coffee, energy drinks, energy supplements (guarana, ginseng, taurine . . . ), cannabis and marijuana, cocaine and ecstasy or other synthetic drugs. Likewise, during exam period, men consider that they use amphetamines, speed and hallucinogens more frequently than women. However, women perceive that they consume tranquilizers and sleeping pills more often than men during the term time and the exam period.

### 3.3. Significant Differences according to Average Mark, Shift (Morning or Afternoon), Work Situation and Field of Study

Application of the Kruskal–Wallis H-test revealed statistically significant differences in the student's perception of legal and illegal drugs use during term time (excluding exam periods) (Table 5). Although the effect sizes are small, it is worth noting that:

- Engineering and architecture students perceive that they consume more than social and legal sciences students.
- Students with failing average grades consider that they consume more than those with outstanding grades.
- Students in the afternoon shift consider that they consume more than students in the morning shift.
- Those who are studying and looking for a job perceive that they consume more than those who are studying and not looking for a job.

**Table 5.** Significant differences according to average grade, shift, work situation, field of study in student's perception of legal and illegal drugs use.

	H	P	Mean Rank	( $ER^2$ )
	Field of study			
Students' perception of legal and illegal drugs use.	17.780	0.001	Sci = 671.62 AE = 784.48	0.01 Small effect
	Average mark			
Students' perception of legal and illegal drugs use.	26.495	0.000	O = 483.10 F = 810.50	0.019 Small effect
	Shift			
Students' perception of legal and illegal drugs use.	30.209	0.000	M = 812.80 A = 977.28	0.016 Small effect
	Work situation			
Students' perception of legal and illegal drugs use.	56.987	0.000	S = 787.62 SW = 997.28	0.032 Small effect

Source: Author's own. Abbreviations: H = Kruskal–Wallis H-test; p = significance level; M = morning; A = afternoon, M and A= morning and afternoon; AE: Architecture and Engineering; Sci = Social Sciences; O = Outstanding; F = Fail; S = studying and not looking for work; SW = Studying and looking for work.

### 3.4. Correlational Statistics: Students' Perception of Legal and Illegal Drugs Use and Family and Friends' Drug Use

Considering correlational statistics, it is stated that there are significant correlations between students' perceptions of specific drugs use ( $\leq 0.005$ ) and the existence of an immediate environment (family or friends) that also consumes (Table 6). Nevertheless, these correlations are always of a low or very low intensity (values between 0–4). Thus, a low correlation is obtained between the students' perception of drug use and their family or circle of friends' drug use. The items with higher Rho values are displayed below.

**Table 6.** Correlational statistics in students' perception of legal and illegal drugs use and their family and circle of friends drug use.

		Alcoholic Drinks	Tobacco/Vape/Hookahs with Nicotine	Coffe	Energy Drinks	Cannabis, Marijuana ...	Ecstasy and other Synthetic Drugs	Anfetamines, Speed	Hallucinogens	Magic Mushroom
<b>I have family that usually smokes tobacco.</b>	rho	0.051 *	0.163 **	0.051 *	0.068 **					
	p	0.050	0.000	0.049	0.009					
<b>I have close Friends that usually smoke cigarettes.</b>	rho	0.322 **	0.315 **	0.128 **	0.141 **	0.224 **	0.056 *			
	P	0.000	0.000	0.000	0.000	0.000	0.032			
<b>I have family that usually drinks alcohol.</b>	rho	0.169 **	0.070 **	0.088 **		0.096 **				
		0.000	0.007	0.001		0.000				
<b>I have close Friends that usually drink alcohol.</b>	rho	0.310 **	0.153 **	0.064 *	0.070 **	0.218 **	0.067 *			
		0.000	0.000	0.014	0.007	0.000	0.010			
<b>I have family that usually use tranquillisers, sleeping pills ...</b>	rho						0.067 *	0.061 *	0.067 *	
							0.010	0.019	0.010	
<b>I have family that use illegal drugs.</b>	rho		0.089 **	0.070 **		0.105 **	0.063 *	0.065 *	0.083 **	
			0.001	0.008		0.000	0.016	0.013	0.002	
<b>I have close Friends that usually use illegal drugs.</b>		0.201 **	0.191 **	0.138 **	0.102 **	0.324 **	0.132 **	0.113 **	0.073 **	0.100 **
		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.000

Source: Author's own. Abbreviations: \* =  $p < 0.05$ ; \*\* =  $p < 0.01$

Highest correlations are found for the items referring to the circle of friends' drug use. It is confirmed with 99% certainty that students who state that they drink alcohol have a greater number of close friends who consume tobacco, alcohol, or illegal substances (Rho= 0.322; 0.314; 0.201 respectively). Similarly, the students who report smoking tobacco, vapes or hookahs more, also have friends who use tobacco, vapes, hookahs or illegal substances (Rho = 0.315; 0.153; 0.191 respectively). In the case of students' perceptions of cannabis and marijuana use, the Rho values are 0.224, 0.228 and 0.324 for the items referring to the group of friends who use tobacco, alcohol and illegal substances, respectively.

#### 4. Discussion and Conclusions

The present study accomplishes the first research objective by analysing the perceptions of students at the University of Seville on legal and illegal drug use according to the period of the academic year (term time or exam periods). It is identified that numerous students consider that they usually drink coffee, which increases during exam periods, as does the consumption of energy drinks. These results coincide with those presented by Khalil and Antoun [32] in which students report consuming more caffeine during exam periods, which in turn is associated with alcohol consumption, smoking and the appearance of symptoms of stress.

It is found that some students consider that they drink alcohol and energy drinks, smoke cigarettes, vapes, hookahs with nicotine, cannabis and marijuana occasionally, while others report monthly, weekly or even daily use. In this sense, it is worth highlighting the studies conducted in Spanish universities in which there is a high prevalence of tobacco, alcohol and cannabis use [33,34]. In addition to that, students consider that their consumption of tobacco, alcohol, cannabis and marijuana increases more during term time than during the exam period. These results could be explained by students having enough free time until exams, which they spend in different social activities, parties and festivities that usually involve alcohol consumption [35]. Hence, this argument might also explain their consumption of tobacco, cannabis and marijuana.

It is detected that, generally, a high percentage of students never uses illegal drugs, such as cocaine, hallucinogens, magic mushrooms, new substances (keta, spice, mephedrone, superman . . . ), ecstasy and other synthetic drugs, amphetamines and speed. This reality is extremely positive, despite disagreeing with other research conducted in universities on an international level in which students mostly consume illegal drugs such as non-prescribed sedatives, stimulants and depressants, among others [6,36–39].

It is stated that there is no clear consumption pattern for vitamin supplements, energy supplements, tranquillizers and sleeping pills. While some students consider not to use them at all, others perceive that they use them more often. Furthermore, it is noticed that these substances are more frequently consumed during exam periods than during term time. This is explained by Lo et al.'s work [13], which states that young people use drugs as a way of escaping from annoying or harsh realities. Therefore, this could be likely to occur as an attempt to reduce their typical anxiety and stress derived from exam periods.

Considering the second research objective, it is discovered that men perceive using more legal and illegal drugs than women. This evidence is supported by numerous studies that show the same gender differences, in which men are more susceptible to using drugs, especially alcoholic drinks [13–17]. However, it is worth noting that in this study women perceive using more tranquillizers and sleeping pills than men, both in exam and term time periods. These results may indicate that women are subject to higher levels of stress and anxiety and, therefore, use these substances as a way to cope with the requirements of their academic life [1].

The average grade is also identified as a variable that affects students' perceptions of drug use. Students who report higher legal and illegal drug use have lower average grades, results that are in line with several studies that prove drug use affects students' academic performance [24–26].

It is found that engineering and architecture students perceive using more legal and illegal drugs than social and legal sciences students. Similar evidence was obtained in the study of Patiño-Masó et al. [40], in which education and psychology students were more careful with cocaine use than engineering students. However, these results are still striking, as recent studies have not differentiated drug use according to the field of study [6,36,39] or have mainly focused on substance use among health science students, owing to their future responsibility as healthy lifestyle promoters [41–44]. In addition, it is revealed that students who are studying and looking for a job, as well as those enrolled in the afternoon shift, normally consider using more legal and illegal drugs than those studying and not looking for a job and in the morning shift.

Regarding the third objective, it is detected that the students who perceive consuming alcohol, tobacco, vapes, hookahs with nicotine, cannabis and marijuana more frequently are those who have family and friends who also use these drugs. These results coincide with several studies in which family and friends' substance use increases each individual's consumption [18–20,37].

This study has potential limitations. Firstly, the data collected were self-reported; hence, the results should be interpreted with caution, since they show the students' own perception of legal and illegal drug use rather than their actual drug consumption. Secondly, although the questionnaire was administered guaranteeing the anonymity of the participants, it should also be borne in mind that some students may have responded in a way that would reflect well on them since drug use could be a controversial subject. Nevertheless, using a questionnaire is the most convenient method for such cases because it allows a low refusal rate, and it assures the anonymity of the participants.

Further research is needed to identify what factors could potentially place university students at risk for drug use. In addition, it would be interesting to identify the availability and access that university students have to these substances. This would not only help understand students' drug use but would also motivate its prevention.

In conclusion, a large number of students agree that although they do not use hard drugs, they do use alcohol, tobacco, cannabis and marijuana, as these are the most socially accepted drugs. It is important to highlight the influence of society in the adoption of these habits, specifically that of family and close friends. Furthermore, it is necessary to rethink the motives and differences in consumption according to gender, since men are mostly the ones who tend to abuse both legal and illegal drugs. Moreover, the fact that a large number of women may be taking high levels of tranquillizers and sleeping pills is alarming and may be an indicator of the social or professional pressure to which they are often subjected.

In light of the results obtained, we consider that the university should develop policies for the prevention of legal and illegal drug use. These policies should include a wide variety of intervention and prevention plans at an individual, collective and university level. In addition to that, the creation of training programmes and counselling courses on healthy lifestyle promotion, developed by professionals and university experts in this field, would be extremely beneficial. These actions would promote healthy lifestyles and raise awareness on the impact and repercussions of drug use on the quality of life.

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