ISSN 1695-6141
Revista electrónica trimestral de Enfermería
N°70
Abril 2023
www.um.es/eglobal/

ORIGINALES

# Influential risk factors in consumption of psychoactive substances in university students in times of COVID-19

Factores de riesgo influyentes en consumo de sustancias psicoactivas en estudiantes universitarios en tiempos de COVID-19

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https://doi.org/10.6018/eglobal.537841

Received: 3/09/2022
Accepted: 16/01/2023

## ABSTRACT:

**Introduction:** The consumption of psychoactive substances has become a public health problem, having great consequences on the health, economy, academic performance, family, and social coexistence of the consumer.
**Objective:** To determine the risk factors influencing the consumption of psychoactive substances in university students during COVID-19.
**Materials and Methods:** Research with quantitative correlational, cross-sectional descriptive type, with a sample of 272 university students of a University of Barranquilla of the Nursing program of fourth, fifth, sixth, seventh, and eighth semesters. The instrument used was a virtual survey divided into five sections, comprising identification and sociodemographic data, individual, sociocultural, family, and psychological factors.
**Results:** In the statistical analysis, the predominant sex was female with 69%, and 74% of them aged 17–20 years. Seventy-nine percent stated that they had consumed psychoactive substances, and 58% indicated that the type of psychoactive substance they had consumed for the first time was alcohol.
**Discussion:** In contrast to a study conducted by Fernández et al, in 2021, it was found that the frequency of consumption of psychoactive substances in the students of the Simón Bolívar University was higher with a percentage of 74%, on the other hand the study in question only 41.8% consumed some type of psychoactive substance (alcohol, tobacco, etc.).Through the research carried out, it was possible to evaluate each of the factors that significantly influence the consumption of psychoactive substances, taking into account each of the variables evaluated (sociodemographic, consumption, individual, family, psychological, sociocultural) in times of COVID-19.

**Key words:** COVID-19, Substances, Psychoactive, University Students, Risk Factors.

**RESUMEN:**
**Introducción:** El consumo de sustancias psicoactivas se ha convertido en un problema de salud pública, teniendo grandes consecuencias en la salud, economía, rendimiento académico, la convivencia familiar y social del individuo consumidor.
**Objetivo:** Determinar los factores de riesgo que influyen en el consumo de sustancias psicoactivas en estudiantes universitarios en tiempos de COVID-19.
**Materiales y Métodos:** Investigación con enfoque cuantitativo, de tipo descriptivo correlacional, con una muestra de 272 estudiantes universitarios de una Universidad de Barranquilla del programa de Enfermería de cuarto, quinto, sexto, séptimo y octavo semestre. El instrumento utilizado fue una encuesta virtual estuvo dividida en 5 secciones, que comprenden la parte de datos de identificación y sociodemograficos, factores individuales, socioculturales, familiares y psicologicos.
**Resultados:** Realizando el análisis estadístico, predominó el sexo femenino con 69%, y las edades 17-20 años con 74%. El 79% afirmaban que sí habían consumido sustancias psicoactivas y 58% indicaban que el tipo de sustancia psicoactiva que habían consumido por primera vez era el alcohol.
**Discusión:** En contraste con un estudio realizado por Fernández et al, en el 2021, se encontró que la frecuencia de consumo de sustancias psicoactivas en los estudiantes de la Universidad Simon Bolivar es mayor, con un porcentaje del 74%, por otro lado, el estudio en mención solo el 41.8% consume algun tipo de sustancia psicoactiva (alchohol, tabaco, etc). A través de la investigación realizada permitió evaluar cada uno de los factores que influyen de manera significativa en el consumo de sustancias psicoactivas teniendo en cuenta cada una de las variables evaluadas (sociodemográficas, de consumo, individuales, familiares, psicológicas, socioculturales) en tiempos de Covid 19.

**Palabras clave:** COVID-19, Sustancias, Piscoactivas, Universitarios, Factores de Riesgo.

**Funding Source:**
This work has been funded by Universidad Simón Bolívar (Barranquilla, Colombia).

# INTRODUCTION

The use of psychoactive substances (PAS) has become one of the main issues of concern in the present times, as it not only affects the user, but also the society as a whole[(1)]. Nowadays, psychoactive substance use is considered a public health concern, with major consequences for the consumer's health, financial situation, academic performance, family, and social lives[(2)]. Drug use leads to dissatisfaction, demotivation, low self-esteem, poor social, and interpersonal relation skills among adolescents, which are psychological risk factors that diverts them toward the use of legal and illegal PAS as a way out for their frustrations and sorrow[(3)].

Approximately 269 million people worldwide used drugs during 2018, meaning a 30% increase compared to consumption in 2009; whereas, over 35 million individuals suffer from drug-use related disorders, according to the latest World Drug Report published by the United Nations Office on Drugs and Crime (UNODC)[(2)]. Psychoactive substance use among Colombian university students is considered a public health issue due to its prevalence and rising trend[(4)].

In Colombia, the lifetime prevalence of an illegal or legal psychoactive substance among university students was 29.3%[(5)]. Likewise, their prevalence last year was 13.5%, with marijuana being the most widely consumed illegal psychoactive substance (11.5%), followed by cocaine and/or its derivatives (2.9%), and by any kind of synthetic drugs (1.7%), especially lysergic acid diethylamide (LSD) and ecstasy. In the fourth place is the use of inhalants, with a prevalence of 1.4% over the last year[(4)].
During COVID-19, after reviewing the research and the information provided by different sources, both national, such as the Health Insurance Fund Administrative

Institutions (IAFA, by its Spanish acronym), and international, i.e., the National Institute on Drug Abuse and the Inter-American Observatory on Drugs (OID, by its Spanish acronym), the major concern does not lie on the increase in consumption resulting from the confinement, despite knowing that individuals are under strong stressors, such as isolation, social fear caused by the pandemic[6], lack of work or an unfavorable economic situation, instability, and virtually no face-to-face classes, but on the consumer's health condition and his/her contact with the SARS-COV-2 (severe acute respiratory syndrome) (type-2 coronavirus). As the use of PAS affects the central nervous system, and thus its whole functioning, the consumers are at risk[7].

Based on the foregoing, in order to counteract this problem, the government approved the National Plan on Health Promotion and the Psychoactive Substance Use Prevention and Care[8], in a nationwide effort to incorporate the public health approach into an intersectoral framework aimed at decreasing exposure to drug use and its subsequent impact on the Colombian population[9]. Therefore, it is of the utmost importance to conduct further research that allows for the timely identification and engagement when facing this problem, understanding its human dimension through the analysis, and description of the conditions associated to the psychoactive substance use, as well as knowing those risk factors that promote their abuse. To this end, the aim was to determine risk factors that exert an influence on the use of PAS among university students in times of COVID-19.

# MATERIALS AND METHODS

This research project adopted a correlational, descriptive, and quantitative approach[10], on a sample population consisting of students from a university in Barranquilla during COVID-19. After conducting a probability sampling[11], the total number of nursing students was 862. For sample selection purposes, the inclusion criteria considered students enrolled in the nursing program of a university located in Barranquilla, attending the fourth, fifth, sixth, seventh, or eighth semesters, within an age range of 17–35 years. Those students completing other university programs, or those enrolled in the first–third semesters were excluded from the study. A 5% error margin was considered for the sample estimation, in addition to a 95% confidence level, through the following formula:

$$n = \frac{z^2(p*q)}{e^2 + \frac{(z^2(p*q))}{N}}$$

Using a sample calculator, and based on the formula proposed, a sample of 272 students was finally established. Quantitative tools were employed, as they allowed to obtain the information required to carry out this project[12]. The data (from primary and secondary sources)[13] was collected from an online survey prepared by the authors in the Google Form virtual platform, through which the sociodemographic characteristics and the various aspects influencing psychoactive substance use, such as personal, family, psychological, and sociocultural factors, were assessed.

The instrument was divided into five sections and included personal and sociodemographic information, as well as individual, sociocultural, family, and psychological factors. For validation and comprehension purposes, a pilot test was

conducted on 30 students with the same characteristics who had enrolled in other university institutions, so as to identify whether the survey participants would understand its content. Once the pilot test was completed and yielded positive results, the online survey was officially launched with the informed consent included at the beginning, to provide the required authorization to participate in the project.

The Microsoft Office software program Excel was used to tabulate and collect information, which allowed for data consolidation, while the Strata program was employed in the correlational descriptive analysis. Furthermore, the Kruskal–Wallis test was performed when scattered distribution variables were found with regard to the average, in terms of social stratum and age. A chi-squared test was carried out for the correlation of qualitative variables such as gender, others' opinion, self-esteem problems, family maltreatment, domestic violence, influence of the social group on PAS use, and past bullying experience.

Ethical considerations followed resolution 8430 of 1993[14], which establishes the scientific and technical standards for health research and classifies this study as a risk-free research. The study was accompanied by an informed consent and the importance of informing the participants in this study of the respect for their dignity, the protection of their rights, and wellbeing, was emphasized.

# RESULTS

Table 1 shows the sociodemographic characteristics of nursing students from a university of Barranquilla in times of COVID-19. The predominant age group was 17–20 years, with a mean of 19.94 and a standard deviation of 19.15 Females were predominant, with the greatest participation being that of fourth-semester students, who were single and belonged to socioeconomic stratus 2.

**Table 1. Sociodemographic characteristics of nursing students from a university in Barranquilla in times of COVID-19**

| Age | Number | Percentage |
|---|---|---|
| 17–20 | 188 | 69% |
| 21–24 | 77 | 28% |
| 25–28 | 7 | 3% |
| media | 19.94 | |
| Desv. Est.: | 19.15 | |
| **Gender** | | |
| Female | 215 | 79% |
| Male | 57 | 21% |
| **Semester** | | |
| 4 | 101 | 37% |
| 5 | 58 | 21% |
| 6 | 50 | 18% |
| 7 | 34 | 13% |
| 8 | 29 | 11% |
| **Marital status** | | |

| | | |
|---|---|---|
| Married | 1 | 0% |
| Single | 263 | 97% |
| Common-law marriage | 8 | 3% |
| **Socioeconomic strata** | | |
| 1 | 65 | 24% |
| 2 | 125 | 46% |
| 3 | 53 | 19% |
| 4 | 29 | 11% |

Source: Data matrix of the instrument applied in the research

Table 2 shows the frequency of use of PAS among the enrolled nursing students. It can be observed that 74.2% of individuals consume some type of PAS, accounting for a total of 202 cases. The analysis also considered the consumption of legal substances in Colombia, such as alcohol and tobacco.

The majority of the population using PAS is within 18–22 years of age. Most students, both consumers and non-consumers, were attending the fourth semester, where the greatest proportion (28%) of students who used PAS can be found. 46% of which belonged to stratum 2, followed by those in stratum 1 (23.9%). It is important to establish whether the stratum is a critical determinant for the occurrence of the phenomenon (PAS use); nonetheless, it must be noted that the stratum variable confounds structures influencing the socioeconomic analysis, which cannot be measured only with the classification of the Colombian public services.

96.6% of the individuals under study were single; and since the study included only university population, the civil status of “married” or “common-law marriage” do not prevail, and therefore, associating this variable with use of PAS could result in aberration, as it might generate a wrong association between the marital status “single” and the others. Alcohol is the most widely consumed substance by both women and men, either alone or mixed with other substances.

As for the bivariate correlation between PAS use and age, stratum, and gender, a statistically significant difference between PAS use and the various socioeconomic strata included in the test has been observed. A p-value lower than 0.05 dismisses the null hypothesis that indicates that there is no difference in the means between the groups of interest, thus proving the dependent variable explanation (PAS use) instead of the independent variable (Socioeconomic stratum). Likewise, a p-value lower than 0.05 dismisses the null hypothesis, suggesting that the age differences account for PAS use or distributes cases into a specific age group. As for gender, a statistically significant association can be observed between the two variables; the p-value of 0.009 (<0.05) rules out the null hypothesis, concluding that gender significantly influences the possible use of PAS. We must consider that the sample was not homogenous, and therefore, values can be biased by the significant difference between male and female data.

**Table 2. Frequency of psychoactive substance use among nursing students enrolled in a university from Barranquilla in times of COVID-19**

| Overall PAS use | | | |
|---|---|---|---|
| **Psychoactive substance use** | **Frequency** | **Percentile** | **Accumulated value** |
| No | 70 | 25.74 | 25.74 |
| Yes | 202 | 74.26 | 100.00 |
| **Age distribution for PAS users** | | | |
| **Psychoactive substance use** | | | |
| **Age** | **No** | **Yes** | **Total** |
| 17 | 4 | 3 | 7 |
| 18 | 24 | 39 | 63 |
| 18 | 15 | 52 | 67 |
| 20 | 11 | 40 | 51 |
| 21 | 6 | 18 | 24 |
| 22 | 3 | 32 | 35 |
| 23 | 3 | 4 | 7 |
| 24 | 3 | 8 | 11 |
| 25 | 1 | 4 | 5 |
| 26 | 0 | 1 | 1 |
| 27 | 0 | 1 | 1 |
| p = 0.000 | | | |
| **PAS use per semester** | | | |
| **Psychoactive substance use** | | | |
| **Semester** | **No** | **Yes** | **Total** |
| 4 | 44 | 57 | 101 |
| 5 | 11 | 47 | 58 |
| 6 | 10 | 40 | 50 |
| 7 | 3 | 31 | 34 |
| 8 | 2 | 27 | 29 |
| | | | |
| **PAS use per stratum** | | | |
| **Psychoactive substance use** | | | |
| **Stratum** | **No** | **Yes** | **Total** |
| 1 | 29 | 36 | 65 |
| 2 | 28 | 97 | 125 |
| 3 | 28 | 46 | 74 |
| 4 | 6 | 23 | 29 |
| p = 0.000 | | | |

| Marital status and PAS use | | | |
|---|---|---|---|
| Psychoactive substance use | | | |
| **Marital status** | No | Yes | Total |
| Married | 0 | 1 | 1 |
| Single | 67 | 196 | 263 |
| Common-law marriage | 3 | 5 | 8 |

| PAS type and gender | | | |
|---|---|---|---|
| | Gender | | |
| **Type of PAS used** | **Male** | **Female** | **Total** |
| Alcohol | 27 | 118 | 145 |
| Alcohol, Tobacco | 8 | 16 | 24 |
| Alc, Tob, Baz | 1 | 0 | 1 |
| Alc, Tob, Mar | 9 | 4 | 13 |
| Alc, Tob, Mar, Coc | 1 | 0 | 1 |
| Alc, Tob, Mar | 1 | 0 | 1 |
| Alc, Tob, Mar, Ecs | 1 | 0 | 1 |
| Alc, Tob, Ecs | 1 | 6 | 7 |
| Alcohol, Cocaine | 1 | 0 | 1 |
| Alcohol, Marijuana | 0 | 2 | 2 |
| Alcohol, Ecstasy | 0 | 9 | 9 |
| Tobacco, Marijuana | 0 | 1 | 1 |
| Marijuana | 0 | 1 | 1 |
| None | 7 | 58 | 65 |

| Chi-square test gender–PAS use | | | |
|---|---|---|---|
| Psychoactive substance use | | | |
| **Gender** | **No** | **Yes** | **Total** |
| Male | 7 | 50 | 57 |
| Female | 63 | 152 | 215 |
| **Total** | 70 | 202 | 272 |
| | p = 0.009 | | |

Source: Data matrix of the instrument applied to research assessed using the Strata program. PAS, psychoactive substance; Alc, alcohol; Tob, Tobacco; Mar, marijuana; Baz, bazuco; Coc, cocaine, Ecs, Ecstasy

Table 3 shows the individual factors of nursing students enrolled in the university, evincing that >50% of the students always know what they want in life, although sometimes they just follow the crowd. However, most stated that they sometimes take others' opinions into account when making decisions and, finally, 38% of students reported being true to their own choices, influenced by their mood.

**Table 3. Individual factors that influence the use of psychoactive substances among university students in times of COVID-19**

| REALLY KNOWS WHAT HE/SHE WANTS | Number | Percentage |
|---|---|---|
| Sometimes | 33 | 12% |
| Most of the time | 84 | 31% |
| Never | 8 | 3% |
| Always | 147 | 54% |
| Total | 272 | 100% |
| **FOLLOWS THE CROWD** | | |
| Sometimes | 145 | 53% |
| Almost always | 5 | 2% |
| Never | 122 | 45% |
| Total | 272 | 100% |
| **TAKE OTHERS' OPINIONS INTO ACCOUNT WHEN MAKING DECISIONS** | | |
| Sometimes | 218 | 80% |
| Most of the time | 3 | 1% |
| Never | 48 | 18% |
| Always | 3 | 1% |
| Total | 272 | 100% |
| **TRUE TO HIS/HER OWN CHOICES, TAKING INTO ACCOUNT HIS/HER MOOD** | | |
| Sometimes | 58 | 21% |
| Most of the time | 107 | 39% |
| Never | 3 | 1% |
| Always | 104 | 38% |
| Total | 272 | 100% |

Source: Data matrix of the instrument applied to research.

Table 4 shows the psychological factors of nursing students influencing PAS use, revealing that most students reported that, whenever they used psychoactive substances or lost control of their emotions was never due to the influence of others. Likewise, a large proportion of students suffer from episodic stress, which, according to the scale, would correspond to number 3. In addition, most nursing students declared having stress symptoms, such as anxiety, extreme fatigue, digestive problems, irritability, and headaches (48%), which indicates that students frequently suffer from episodic acute stress. On the contrary, students highlight that they never used or do not currently use any type of PAS to mitigate stress (79%). On the other hand, 51% of students reported feeling good with themselves most of the times, both physically and emotionally. However, 61% of them stated that they sometimes have low self-esteem, and 82% never resorted to the use of any type of psychoactive substance despite their situation.

**Table 4. Psychological factors influencing the use of psychoactive substances by university students**

| PSYCHOACTIVE SUBSTANCE USE, DECISION OR INFLUENCE | Number | Percentage |
|---|---|---|
| Sometimes | 66 | 24% |
| Most of the time | 19 | 7% |
| Never | 132 | 49% |
| Always | 55 | 20% |
| **PSYCHOACTIVE SUBSTANCE USE WHEN LOSING CONTROL OF EMOTIONS** | | |
| Sometimes | 62 | 23% |
| Most of the time | 3 | 1% |
| Never | 207 | 76% |
| **STRESS SCALE (1–4)** | | |
| 1 | 5 | 2% |
| 2 | 85 | 31% |
| 3 | 142 | 52% |
| 4 | 40 | 15% |
| **PRESENCE OF STRESS SYMPTOMS** | | |
| Nervousness, irritability, feeling tense all the time, anxiety, bad temper (Acute stress) | 70 | 26% |
| Anxiety, extreme exhaustion, digestive problems, irritability, headaches (Episodic stress) | 131 | 48% |
| Anxiety, insomnia, muscle pain, blood pressure problems, asthenia, appetite changes (Chronic stress) | 71 | 26% |
| **PSYCHOACTIVE SUBSTANCE USE TO MITIGATE STRESS** | | |
| Sometimes | 55 | 20% |
| Most of the time | 2 | 1% |
| Never | 215 | 79% |
| **TYPE OF PSYCHOACTIVE SUBSTANCE USED** | | |
| Alcohol | 29 | 11% |
| Tobacco | 21 | 8% |
| Ecstasy | 3 | 1% |
| Marijuana | 4 | 1% |
| None | 215 | 79% |

| | | |
|---|---|---|
| **SELF-ESTEEM (EMOTIONAL AND PHYSICALLY)** | | |
| Sometimes | 57 | 21% |
| Most of the time | 138 | 51% |
| Never | 6 | 2% |
| Always | 71 | 26% |
| **LOW SELF-ESTEEM** | | |
| Sometimes | 166 | 61% |
| Most of the time | 24 | 9% |
| Never | 76 | 28% |
| Always | 6 | 2% |
| **LOW SELF-ESTEEM RELATED TO THE USE OF PSYCHOACTIVE SUBSTANCES** | | |
| Sometimes | 47 | 17% |
| Most of the time | 2 | 1% |
| Never | 223 | 82% |

Source: Data matrix of the instrument applied to research.

Table 5 shows family factors of nursing students, revealing that most of the students had a good family relationship (55%) and not being victims of intrafamily violence (82%). However, 16% of the population surveyed declared to have suffered emotional violence. Consequently, 88% of students stated they have never used psychoactive substances as a result of these violence factors.

**Table 5. Family factors influencing the use of psychoactive substance among university students**

| FAMILY RELATIONSHIP | Number | Percentage |
|---|---|---|
| Good | 150 | 55% |
| Excellent | 77 | 28% |
| Poor | 7 | 3% |
| Average | 38 | 14% |
| **HAS BEEN A VICTIM OF SOME KIND OF ABUSE** | | |
| Physical abuse | 5 | 2% |
| Psychological abuse | 76 | 28% |
| None | 191 | 70% |
| **HAS BEEN A VICTIM OF SOME TYPE OF VIOLENCE** | | |
| None | 222 | 82% |
| Emotional violence | 43 | 16% |
| Physical violence | 5 | 2% |
| Sexual violence | 2 | 1% |
| **PAS USE IN VIOLENT CIRCUMSTANCES** | | |
| Sometimes | 32 | 12% |

| | | |
|---|---|---|
| Most of the times | 2 | 1% |
| Never | 238 | 88% |
| **PAS TYPE USED IN VIOLENT CIRCUMSTANCES** | | |
| Alcohol | 26 | 10% |
| Alcohol, Tobacco, Marijuana | 3 | 1% |
| Alcohol, None | 1 | 0% |
| Tobacco | 1 | 0% |
| Tobacco, Marijuana | 1 | 0% |
| None | 240 | 88% |

Source: Data matrix of the instrument applied to research.

Table 6 shows the sociocultural factors of the nursing students. It can be observed that most nursing students surveyed reported to have never been influenced to use a psychoactive substance (50%) by their social circle, nor have been intimidated to the extent of having used psychoactive substances (73%). In addition, the individuals surveyed declared to have sometimes been bullied (50%), with the emotional type prevailing (18%). As a result, 70% of students indicated that having been bullied on some occasion has never affected their interpersonal, family, or even their own relationships. To conclude, evidence suggests that bullying can be considered as a trigger factor for university students to begin using some type of psychoactive substances (46%).

As for the bivariate correlation, factors such as considering others' opinion when making decisions, being mistreated by their own family members, suffering from domestic violence, having low self-esteem, and being influenced by their social group are statistically significant determining factors that plausibly explain the use of psychoactive substances, with a chi-squared test and a p-value under 0.05. However, PAS use is not associated with being bullied, a factor that, with a p-value of 0.27, does not dismiss the null hypothesis; therefore, the statistical evidence is not enough to establish whether this phenomenon is related to the use of a psychoactive substance.

**Table 6. Sociocultural factors influencing the use of psychoactive substances among university students**

| INDIVIDUALS IN THEIR SOCIAL CIRCLE THAT INCITE THEM TO USE PSYCHOACTIVE SUBSTANCES | Number | Percentage |
|---|---|---|
| Sometimes | 131 | 48% |
| Most of the times | 5 | 2% |
| Never | 136 | 50% |
| **INDIVIDUALS BEING INTIMIDATED INTO USING PSYCHOACTIVE SUBSTANCES** | | |
| Sometimes | 72 | 26% |
| Most of the times | 1 | 0% |
| Never | 199 | 73% |
| **BULLYING** | | |
| Sometimes | 135 | 50% |
| Most of the times | 4 | 1% |
| Never | 131 | 48% |
| Always | 2 | 1% |

| | | |
|---|---|---|
| **TYPE OF BULLYING** | | |
| Cyber bullying | 34 | 13% |
| Emotional | 49 | 18% |
| Physical | 17 | 6% |
| None | 131 | 48% |
| Verbal | 41 | 15% |
| **AFFECTED BY BULLING IN THEIR INTERPERSONAL RELATIONSHIPS** | | |
| Sometimes | 77 | 28% |
| Most of the times | 4 | 1% |
| Never | 190 | 70% |
| Always | 1 | 0% |
| **BULLYING RELATED TO THE USE OF PSYCHOACTIVE SUBSTANCES AMONG UNIVERSITY STUDENTS** | | |
| Sometimes | 124 | 46% |
| Most of the times | 62 | 23% |
| Never | 53 | 19% |
| Always | 33 | 12% |
| **BIVARIATE CORRELATION** | | |
| **VARIABLE** | P-value | |
| Others' opinion | 0.002 | |
| Low self-esteem | 0.000 | |
| Family mistreatment | 0.000 | |
| Domestic violence | 0.019 | |
| Influence of the social group to use PAS | 0.000 | |
| Previous bullying experience | 0.278 | |

Source: Data matrix of the instrument applied to research.

# DISCUSSION

This study established risk factors that influence the use of various psychoactive substances among nursing students from a university of Barranquilla in times of COVID-19. Based on the results obtained, the sociodemographic characteristics suggest that 69% of participants lie within the 17–20 years of age, the largest interval of the population under study. These data are consistent with those found in a study by Córdoba et al.[15], in which students aged 18–25 years constituted the largest population (87.2%). Regarding the gender variable, women are the predominant group among the nursing students participating in the survey (79%), which is contrary to the results found in the aforementioned study, in which 55% students surveyed were men[15].

As for the number of students who took part in this study, it could be observed that the greatest proportion of individuals surveyed is women (79.6%), and students who were on their seventh semester of their degrees (27.4%). Similar data were found in the study conducted by Enrique Fernandez Hernandez et al.[16], in which participants were mostly women (79%), although, in terms of semesters, most participants were completing their fourth semester (37%), a finding that is inconsistent with our study[16]. As for the frequency of consumption, alcohol was found to be the most frequently used PAS (53.3%, 145 individuals), which is in line with the information obtained by Blanco

Guerrero's research[17]. The latter stated that alcohol is the most frequently consumed substance (81%), although this study highlights the combination of alcohol with other substances such as bazuco, marijuana, and cocaine, among others.

It is important to conduct other studies aimed at determining the impact of alcohol consumption on the life of students, as it is a substance most of the participants in this study reported using as a psychoactive substance or with combinations with other drugs. Therefore, it is crucial for public health authorities to provide recommendations with regard to consumption prevention and promotion and the presence of positive remarks among adolescents; however, it is also important to consider the cultural structures that may give rise to this phenomenon.

Regarding the personal factor variables, the influence of interpersonal relationships is noticeable when nursing university students make decisions (53%). They sometimes considered outside opinions, as opposed to the findings in the study carried out by González Trujillo and Londoño Pérez[18]. As for psychological factors, it was noted that 76% of the students surveyed never resorted to the use of psychoactive substances whenever they lost control of their stability, unlike in the study by Meléndez Mejía[19], which reported that 69.87% of the participants presented psychopathological symptoms or emotional states that induced them to use PAS.

On the other hand, with regard to family factors, where building a healthy bond since childhood is crucial for developing upright and peaceful adults, the results show that 55% of the students surveyed have a good relationship with their family, conversely to what was found in the study conducted by Reyes Ruíz et al.[20], which reported that 62% of students have a chaotic relationship with their family; in other words, there is a deficient parental control or it is erratic or ineffective resulting in PAS use[20]. Similarly, another contrasting finding by Rojas Piedra, Talia et al[21] was that in their study, students stated that the most influencing factor for their PAS use was the relationship with their friends, family problems, and their desire to escape from reality, as they considered that drug consumption was a way out and a temporary relief from their personal, family, or social problems.

Among the sociocultural factors, bullying is considered a trigger for consumption, as results show that 46% think that bullying has sometimes led adolescents to use psychoactive substances, which is in contrast with the findings in the research conducted by Meléndez Mejía[19], where social or peer pressure stood out as a highly influential sociocultural factor. This is due to the fact that the study found that 69.57% of participants had begun using psychoactive substances after being influenced by social or peer pressure.

The research conducted allowed us to assess each of the factors that significantly influenced the use of psychoactive substances among nursing students that were in fourth–seventh semesters during COVID-19, thus fulfilling the purposes of this study. In particular, the population under study was characterized through variables such as gender, age, and socioeconomic stratum, and found that most of the individuals surveyed were women, aged 17–20, who belonged to socioeconomic stratum 2.

# CONCLUSIONS

To conclude, the establishment of the various individual, psychological, cultural, and social factors that influence the use of psychoactive substances among university students allows us to understand that there is a need for developing prevention activities by university institutions. Therefore, it is essential for said institutions to adopt educational strategies that promote emotional intelligence, which in turn will allow students to identify, understand, and control their emotions, helping them avoid maintaining difficult interpersonal relationships and suffering from mood disorders that may contribute to the use of psychoactive substances.

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ISSN 1695-6141