

Influence of Drugs on The Mental Health of Adult Patients in The Ecuadorian South

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Abstract

The consumption of illegal substances is considered one of the health problems facing the world today, given the affection they cause in the population, the damage or consequences of their consumption (Observatorio Español de Drogas y Adicciones [OEDA], 2022). The aim of this research is to analyze the current state of some psychological variables (anxiety, depression, stress and self-esteem) in patients hospitalized in therapeutic communities in southern Ecuador after drug use. The study was carried out with a population of 505 patients admitted to these institutions, with a sample of 480 patients representing 95% of the population, selected intentionally by non-probabilistic sampling. The results obtained allow to deepen the current knowledge on drug use and its relationship with anxiety, depression, perceived stress and self-esteem, in a population group that includes patients in early adulthood, middle adulthood and late adulthood; in addition to broadening the vision of the behavioral dynamics of these phenomena. From a practical point of view, these results contribute to the epidemiological surveillance of the mental state of hospitalized patients, as well as to the generation of general and specific intervention proposals on anxiety, depression, stress, and self-esteem through the regulation of drug consumption.

Keywords: *Anxiety, Self-Esteem, Depression, Drug Addiction, Stress*

INTRODUCTION

The World Health Organization (WHO) provides a comprehensive framework for understanding drug use, highlighting its multifaceted nature and global impact. Drug use is a complex phenomenon that affects millions of people around the world, with significant consequences for health, the economy and social cohesion. The (WHO, 2022) defines drugs as substances that, when introduced into the body, can alter one or more physiological or psychological functions. These substances can be legal or illegal and cover a wide range of products, from alcohol and tobacco to illicit drugs such as cocaine and heroin.

Drugs trigger problems on a psychological level, the change in behavior is one of the main problems that appear in the individual, since it varies progressively and affects the attitude, he takes towards himself and those around him. In this way, there is a decrease in self-confidence, a feeling of dissatisfaction, devaluation and other associated attitudes. With this, interest in maintaining personal cleanliness and hygiene, a healthy relationship on a personal and family level is lost.

Drug consumption produces an alteration in the normal development of microglia, the immune system, levels of receptors responsible for motivation-memory, short-term memory, introspection and time perception, mainly, personality disorders, cognitive deficit, euphoria and anxiety (Martínez-Godínez et al., 2020). Furthermore, the psychological consequences caused by drug use are sleep disturbances, anxiety, depression, stress, low self-esteem and the emergence of even more serious disorders, such as schizophrenia or paranoid disorder.

In recent years, anxiety disorder has been increasing, due to its significance at a psychological and psychiatric level. If this problem is the result of drug use, and depending on the type of substance used, the individual may face compulsions, obsessions, phobias and anxiety attacks. In that sense, both in the period of intoxication or even withdrawal, symptoms can last up to 30 days, depending on the substance, dosage and frequency.

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However, among the main substances that cause anxiety are inhalants, phencyclidine, cocaine, cannabis, caffeine, amphetamines, hallucinogens and alcohol (Contreras-Olive et al., 2020).

In the event that frequent use of a psychoactive substance occurs, the individual may experience the need to consume more frequently, leading to tachycardia, irritability and discomfort. Consequently, there is a need to ingest the substance again, which is why several investigations have found an increase in the prevalence of drug use in individuals who present various disorders, including anxiety. It has been shown that it is normal for the individual who ingests psychoactive substances to present moderate levels of anxiety; an anxiety disorder itself entails functional conditions, as well as anxiety problems (Pan American Health Organization [PAHO], 2019).

Likewise, Chacón-Delgado et al. (2021) indicate that the substances that are used to obtain pleasurable sensations, minimize inhibitions or improve relaxation levels, are the same ones that cause anxiety disorder, therefore, for an individual to be diagnosed with anxiety caused by substances psychotropic, the levels of the symptoms mentioned above must be high and influence social activities, academics, work or issues that are important in the consumer's life. There are cases where anxiety occurs after consuming a substance immediately, even when it has only been ingested once. However, individuals who have an anxiety disorder have a considerable risk of acquiring an addiction to the substance they consume, due to the need to reduce this sensation, which leads to a degree of severe anxiety when its use is stopped (Chacón-Delgado et al., 2021).

Depression is another psychological consequence that alcohol consumption frequently triggers, according to Ribeiro-Beneton et al. (2021) refers to a disorder in a person's mood, which encompasses a series of symptoms such as loss of interest, persistent feeling of sadness, a state of dejection and changes in behavior, which occur permanently. The person who takes drugs to reduce depression and relieve these symptoms is unaware that it is these same substances that worsen the symptoms. Like anxiety, depression occurs when the individual has gone through a tragic event that cannot be overcome, reaching a temporary duration that can range from a few days, or in extreme cases, several years (Ribeiro-Beneton et al., 2021).

The accumulation of the aforementioned symptoms will directly affect the individual's daily performance, it is difficult for them to get up in the morning, motivation is decreased, fatigue increases, and a low energy level. Likewise, in hobbies or activities that the individual carried out in their free time, when they have depression, they prefer to avoid, which is why family members and close friends are frustrated for not being able to help in an effective way (Gastón-Guerrero, 2020). Furthermore, depression results in the individual having suicidal thoughts, being unable to concentrate, experiencing feelings of guilt, reacting violently to acts that do not merit it, among others, and all of this is accompanied by drug abuse (Mochrie et al., 2020).

Additionally, Beverido -Sustaeta et al. (2020) indicate that when an association between substance addiction and depression occurs, it generally involves past trauma, family history, and imbalances in chemistry at the CNS level. In this way, alcohol is considered one of the main substances that, although it fulfills a stimulating function, subsequently causes symptoms of depression, drowsiness and lethargy. In this way, as excess alcohol causes a decrease in judgment, reasoning and inhibitions, the risk of suicide attempts increases.

Drug consumption affects the self-esteem of the people who consume it, Torres-Suárez et al. (2021) emphasizes a sense of respect for oneself and the capabilities that the individual possesses, that is, the value that oneself has. In other words, self-esteem is a value of great relevance in people's lives and derives from the previous experiences they had with various events throughout their lives, both successes and failures, as long as they have consciousness. Among the experiences that directly influence a person to have healthy self-esteem are recognition for achievements, being listened to, having attention and having communicated with respect. In contrast, a person has decreased self-esteem if they have received negative criticism, ridicule, been ignored, or received some type of physical, sexual, or emotional abuse.

In this way, when a person leans towards the consumption of psychotropic substances, self-esteem weakens, and remains so as long as the individual continues with this consumption behavior. In this regard, Martin (2021) considers that self-esteem levels develop in the early stages of the individual, especially in adolescence, since it is here where the individual tries to establish his or her own identity and, in addition, goes through both physical and emotional changes. psychological factors that directly influence this aspect. Consequently, self-esteem is

not considered innate, but rather develops throughout a person's life, and, therefore, is susceptible to modifications if they become involved in dependent drug use.

Referring to stress considered as a reaction that people present to external situations in their environment that occur frequently. Therefore, stress usually manifests itself when highly complex situations arise that are difficult to control, which leads to the appearance of different symptoms at a psychological level (Cerna-Dorregaray & Ugarriza-Chávez, 2020), also if the shelter is consumption enhances the symptoms .

For their part, Armenta-Zazueta et al. (2020) indicate that there is a direct relationship between drug consumption and increased stress, because every individual throughout their existence goes through stressful situations of various kinds, and in certain cases, they usually opt for consumption of psychoactive substances to be able to control. By itself, stress cannot directly cause addiction, because the individual experiences a series of risk factors that, in addition to chronic stress, can contribute to substance abuse. Likewise, this relationship occurs bidirectionally, since in addition to the aforementioned, the ingestion of psychoactive substances can favor the appearance of stress, since the effects of these substances modify certain areas of the brain that are responsible for controlling aspects such as behavior, pleasure, motivation and impulses, which in the long term makes it difficult for the individual to control (Chávez-Parillo & Peralta-Gómez, 2019).

Furthermore, when there is substance abuse, health conditions, interpersonal relationships, job loss and financial problems increase, which also lead to increased stress, anxiety, depression and low self-esteem.

Design and type of research

The study is based on the positivist paradigm under a quantitative approach. This approach is appropriate given the identified problem and the clearly defined objectives of the study, which allow for the development of hypotheses. These hypotheses will be tested through empirical tests, seeking to determine their truth or falsity.

The positivist paradigm is based on the idea that reality is objective and can be measured and analyzed independently of the opinions and beliefs of individuals. This approach uses quantitative methods to collect and analyze numerical data, allowing generalizations to be made and causal relationships established between the variables studied.

In the study, various statistical techniques will be used to analyze the data collected and evaluate the proposed hypotheses. This included data collection through surveys and subsequent analysis using appropriate statistical methods.

The research is channeled methodologically, exhibiting the levels of mental health problems such as depression, anxiety, self-esteem problems and stress that manifest after the ingestion of narcotics and how these are related to the consumption of different drugs.

Taking into account the characteristics exhibited by the research and according to the means used to obtain the data, the study design used was the association analysis. The aim is to explain the association between variables without assuming a causal relationship between them (Rovetto, 2018).

Participants

The research was developed in the therapeutic communities of southern Ecuador that have licensing from the Ministry of Public Health of Ecuador, with a population of 505 patients hospitalized in these institutions and a sample was composed of 480 patients that represent 95% of the population, intentionally selected through non-probabilistic sampling- The other 25 patients did not participate because they met the exclusion criteria.

Data collection techniques and instruments

For the study and analysis of the different mental health problems of drug ingestion, multiple self-assessment instruments have been developed that allow individuals to be evaluated and detect the level of affectation they present due to anxiety, depression, stress, low self-esteem or high consumption of alcohol, tobacco, and chemical substances:

- Purpose-built questionnaire to inquire about sociodemographic data and the alcohol, tobacco and substance use screening test (ASSIST) developed by the WHO (Higgins-Biddle & Babor, 2018)
- Regarding depression, the instrument used was Hamilton's (HDRS), the latter assesses the presence of depression, it is a hetero-applied scale that consists of 21 items. It is used to measure the severity of the depressive level, the reliability of this scale in its two versions has good internal consistency (Cronbach's alpha between 0.76 and 0.92) and a reliability between 0.65 and 0.92, the validity ranges between 0.8 and 0.9.
- The Hamilton Anxiety Test (HARS) was used in the research to assess the presence of anxiety; it is a 14-item content state scale, whose purpose is to assess the intensity of anxiety. Internal consistency reliability: 0.79 – 0.86; Test- retest reliability: 0.96; validity correlations were significantly high (0.62 – 0.73) and a Cronbach's alpha of 0.89 was obtained.
- perceived stress scale (PSS) is used (Martínez-Muñoz et al., 2019). This scale assesses the presence of Perceived Stress, it has an internal consistency that has been observed between 0.74 and 0.91 and a Cronbach's alpha coefficient of 0.86, it was used by Remos in Spain and Colombia.
- Rosenberg Self-Esteem Scale, evaluates low, medium, or high level of self-esteem. It is made up of 10 items, with a reliability of 0.70 and the internal consistency of Cronbach's alpha of 0.81 (Martínez-Muñoz et al., 2019).

Procedure

First, approval was obtained from the directors of the selected Therapeutic Communities. This step was essential to ensure legitimacy and institutional support for the research. A meeting was held with the patients to inform them about the study, its objectives, and the activities to be carried out by the researchers. In this phase, the purpose of the research, the importance of their participation and the potential impact of the results were clearly explained to them.

Patients were invited to take part in the study as volunteers. Informed consent was explained to them in detail, ensuring that they understood the rights and responsibilities involved. Patients who decided to participate in the research were moved to another room where they freely guaranteed their compliance and ethical protection.

Information collection was carried out individually, through direct interviews with all the subjects who were part of the study. This method allowed for detailed and specific data to be obtained from each participant, ensuring the quality and depth of the information collected. The time taken to complete the surveys was 45 minutes. This period was sufficient to address all the study questions without causing excessive fatigue to the participants, as well as complying with the ethical standards adjusting to work with human beings as indicated by the Helsinki Convention.

Data processing and analysis

The SPSS 28.0 statistical program is used to process the data obtained. For quantitative variables with a scale measurement level, position and dispersion statistics are determined. For the nominal and ordinal scale variables, absolute frequencies are presented, estimating the prevalence rates of depression, anxiety, stress, and low self-esteem, as well as their association with the presence of drug use, types and severity, with confidence intervals from of the binomial distribution. The hypothesis contrasts are carried out by using the Chi-square technique, to determine whether the proportions with which the qualitative variables observed in the sample appear have a significant relationship with each other or not, that is, they are not attributed to chance.

The analysis to determine the proportions of some variables over others is carried out through contingency tables, thus determining the extent to which the general aspects of the patients such as age, sex, education, origin, marital status, occupation, time of confinement and economic income are represented in aspects related to consumption, such as incidence of substances, frequency of consumption or intensity of consumption.

Results obtained from self-assessment to detect Hamilton anxiety

To analyze the relationship between the variables of frequency of consumption of tobacco, alcohol, cannabis, coca, amphetamines, inhalants, tranquilizers, hallucinogens, opiates and other drugs with the anxiety index obtained in the applied instrument, the Chi technique is used. -square, to determine whether the proportions with which the quantitative variables observed in the sample appear have a significant relationship with each other, that is, they are not attributed to chance. For cases in which significance is demonstrated, the corresponding contingency tables will be obtained to analyze the extent to which they are associated with each other. The significance level $\alpha = 0.05$ is selected for the investigation.

Relationship between frequency of consumption and anxiety level

To verify the relationship between the frequency of consumption and the anxiety index, the following hypotheses are formulated:

Null hypothesis (H_0): The variables frequency of consumption and the anxiety index are independent and there is no significant relationship between them.

Hypothesis alternative (H_1): The variables frequency of consumption and the anxiety index are dependent and there is a significant relationship between them.

Thus, based on the significance value obtained from the Chi-square test (p), the results are interpreted as follows:

If the significance value of the test ($p \leq 0.05$), the null hypothesis is rejected and the alternative of dependence and significant relationship between the variables is accepted.

If the significance value of the test ($p > 0.05$), the null hypothesis is accepted, and the alternative is rejected.

Consequently, **Table 1** shows that the variables frequency of consumption of tobacco, alcohol, cannabis, coca, amphetamines, inhalants, tranquilizers and opiates, with respect to the level of anxiety, have a significance value (p) (0.23; 0.32; 0.68; 0.40; 0.81; 0.72 and 0.47, respectively) greater than 0.05, therefore, the null hypothesis that the variables are independent There is a significant relationship between them.

In the case of the variables frequency of hallucinogen consumption with respect to the level of anxiety, the level of significance (p) (0.01) is less than 0.05, therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted. that the variables are dependent and there is a significant relationship between them.

Table 1 Significance of Chi-square for the Frequency of Consumption Variable and Level of Anxiety

Variables		Significance value (p)	Variables		Significance value (p)
Anxiety Level	FC Tobacco	0.23	Anxiety Level	FC Inhalants	0.81
	FC Alcohol	0.32		FC Tranquilizers	0.72
	FC Cannabis	0.68		FC Hallucinogens	0.01
	FC Coca	0.40		FC Opioids	0.47
	FC Amphetamines	0.47			

Table 2 reflects that, of the 40 patients who consume hallucinogens daily or almost daily, 19 present a mild level of anxiety severity, nine patients mild to moderate, and 12 patients moderate to severe; Of the 16 patients who consume them every week, 11 patients have a level of mild severity of anxiety, two patients have mild to moderate severity of anxiety and three patients have moderate to severe anxiety; Each month 15 patients consume it, of them four at the mild level, ten in patients with mild to moderate anxiety severity and one patient in moderate to severe anxiety. In general, it is noticeable that the frequency of daily or almost daily consumption and the mild level of severity of anxiety predominate.

Table 2 Contingency Tables for Frequency of Hallucinogen Consumption and Level of Anxiety

		Hallucinogenic FCs			
		N	CM	C.S	ADCA
Anxiety Level	17 or > 17 Mild severities of anxiety	212	4	elev en	19
	18-24 Mild to moderate anxiety severity	125	10	2	9
	< 24 Moderate to severe anxiety	72	1	3	12
Total		409	fiftee n	16	40

Note: N: Never, CM: Every month; CS: Every week; ADCA: Daily or almost daily.

Results obtained from the Hamilton Depression Self-Assessment

To analyze the relationship between the variables of frequency of consumption of tobacco, alcohol, cannabis, coca, amphetamines, inhalants, tranquilizers, hallucinogens, opiates and other drugs with the depression index obtained in the applied instrument, the Chi technique is used. -square, to determine whether the proportions with which the qualitative variables observed in the sample appear have a significant relationship with each other, that is, they are not attributed to chance. For cases in which significance is demonstrated, the corresponding contingency tables will be obtained to analyze the extent to which they are associated with each other. The significance level $\alpha = 0.05$ is selected for the investigation.

Relationship between the intensity of consumption and the level of depression

To verify the relationship between the intensity of consumption and the depression index, the following hypotheses are formulated:

Null hypothesis (H_0): The variables intensity of consumption and the level of depression are independent and there is no significant relationship between them.

Hypothesis alternative (H_1): The variables intensity of consumption and the level of depression are dependent and there is a significant relationship between them.

Thus, based on the significance value obtained from the Chi-square test (p), the results are interpreted as follows:

If the significance value of the test ($p \leq 0.05$), the null hypothesis is rejected and the alternative of dependence and significant relationship between the variables is accepted.

If the significance value of the test ($p > 0.05$), the null hypothesis is accepted and the alternative is rejected.

Consequently, **Table 3** shows that the variables intensity of consumption of tobacco, alcohol, cannabis, coca, amphetamines, inhalants, tranquilizers, hallucinogens, opiates and other substances, with respect to the level of depression, have a significance value (p) (0.12; 0.87; 0.79; 0.05; The null hypothesis is accepted that the variables are independent and there is no significant relationship between them. The aforementioned reflects that there is no significant relationship for any of the variables. However, it is valid to highlight that, as shown in **Table 4**, a situation that manifests itself equally for all substances, the strong desire to consume daily or almost daily is representatively higher and is associated with patients without depression.

Table 3 Significance of Chi-square for the Consumption Intensity Variable and the Level of Depression

Variables		Significance value (p)	Variables		Significance value (p)
Depressi on Level	IC Tobacco	0.12	Depress ion Level	IC Inhalants	0.96
	IC Alcohol	0.87		IC Tranquilizers	0.91
	IC Cannabis	0.79		IC Hallucinogens	0.84

	IC Coca	0.10		IC Opioids	0.21
	IC Amphetamines	0.65		IC Others	0.73

Table 4 Contingency Table for Tobacco Consumption Intensity and Depression Level

		Tobacco FC			
		N	CM	C.S.	ADCA
Depression Level	No depression	135	2	1	73
	light depression	43	1	3	fifty
	moderate depression	70	1	1	44
	severe depression	39	0	1	16
Total		287	4	6	183

Note: N: N: Never, CM: Every month; CS: Every week; ADCA: Daily or almost daily

Results obtained from the self-assessment of perceived stress

To analyze the relationship between the variable’s frequency of consumption of tobacco, alcohol, cannabis, coca, amphetamines, inhalants, tranquilizers, hallucinogens, opiates and other drugs, with the level of stress perceived in the applied instrument, Chi-square test is used to determine whether or not the proportions with which the qualitative variables observed in the sample appear have a significant relationship with each other, that is, they are not attributed to chance. For cases in which significance is demonstrated, the corresponding contingency tables will be obtained to analyze the extent to which they are associated with each other. The significance level $\alpha = 0.05$ is selected for the investigation.

Relationship between frequency of consumption and perceived stress level

To verify the relationship between the frequency of consumption and the level of perceived stress, the following hypotheses are formulated:

Null hypothesis (H_0): The variables of frequency of consumption and the level of perceived stress are independent and there is no significant relationship between them.

Alternative hypothesis (H_1): The variables frequency of consumption and the level of perceived stress are dependent and there is a significant relationship between them.

Thus, based on the significance value obtained from the Chi-square test (p), the results are interpreted as follows:

If the significance value of the test ($p \leq 0.05$), the null hypothesis is rejected and the alternative of dependence and significant relationship between the variables is accepted.

If the significance value of the test ($p > 0.05$), the null hypothesis is accepted, and the alternative is rejected.

Based on the above, **Table 5** shows that the variables frequency of consumption of tobacco, cannabis, coca, amphetamines, inhalants, hallucinogens, and opiates, with respect to the level of stress, have a significance value (p) (0.63; 0.24; 0.33; 0.96; 0.77, respectively) greater than 0.05, therefore, the null hypothesis that the variables are independent There is a significant relationship between them.

In the case of the variables frequency of alcohol and tranquilizer consumption, with respect to the level of stress, for both cases, the level of significance (p) (0.00) is less than 0.05, therefore, the hypothesis is rejected. null and the alternative hypothesis is accepted that the variables are dependent and there is a significant relationship between them.

Table 5 Significance of Chi-square for the Frequency of Consumption Variable and Stress Level

Variables		Significance value (p)	Variables		Significance value (p)
Stress Level	FC Tobacco	0.63	Stress Level	FC Inhalants	0.82
	FC Alcohol	0.00		FC Tranquilizers	0.00
	FC Cannabis	0.24		FC Hallucinogens	0.77
	FC Coca	0.33		FC Opiates	0.77
	FC Amphetamines	0.96			

In this sense, **Table 6** reflects that, of the 304 patients who consume alcohol daily or almost daily, one of them presents mild stress, 202 patients moderate stress and 101 patients' severe stress; Of the 31 patients who consume the substance every week, 15 have moderate stress and 16 have severe stress; Only four patients consume alcohol every month, three of them show moderate stress and one severe stress. Regarding the consumption of tranquilizers, of the 51 patients who consume them daily or almost daily, 21 present moderate stress and 30 severe stresses; Every week 31 patients consume them, of them 14 with moderate stress and 17 with severe stress; 20 patients consume tranquilizers every month, of these eight present moderate stress and 12 severe stress. In general, a predominance of moderate stress is noticeable with the frequency of alcohol consumption and severe stress with the frequency of consumption of tranquilizers.

Table 6. Contingency tables for frequency of consumption and level of stress

		FC alcohol				FC tranquilizers			
Stress Level		N	CM	C.S	ADCA	N	CM	C.S.	ADCA
	mild stress	4	0	0	1	5	0	0	0
	moderate stress	122	3	fifteen	202	299	8	14	twenty-one
	severe stress	fifteen	1	16	101	74	12	17	30
Total		141	4	31	304	378	twenty	31	51

Note: N: Never, CM: Every month; CS: Every week; ADCA: Daily or almost daily.

In this sense, **Table 7** reflects that, of the 306 patients with a strong desire to consume alcohol daily or almost daily, one of them has mild stress, 204 patients have moderate stress, and 101 patients have severe stress; Of the 28 patients with a strong desire to consume the substance every week, 14 patients manifest moderate stress and 14 severe stress; Only four patients feel a strong desire to consume each month, two of them show moderate stress and two, severe stress; Only a patient who manifests severe stress feels the strong desire to consume once or twice.

219 patients feel a strong desire to consume cannabis daily or almost daily, of which: three have mild stress, 169 patients have moderate stress, and 47 patients have severe stress; six patients with moderate stress feel the strong desire to consume each week; For its part, each month it is consumed by a patient with moderate stress and once or twice, by two patients with severe stress.

Regarding the strong desire to consume tranquilizers, of the 50 patients who consume them daily or almost daily, 19 present moderate stress and 31 severe stresses; Every week 28 patients consume them, 12 of them with stress

moderate and 16 with severe stress; 24 patients feel the strong desire to consume tranquilizers every month, of these, ten present moderate stress and 14 severe stresses; only two patients with moderate stress do it once or twice. In general, a predominance of moderate stress is noticeable when faced with a strong desire to consume alcohol and cannabis, and severe stress is observed when faced with a strong desire to consume tranquilizers.

Table 7 Contingency tables for frequency of consumption and level of stress

		FC alcohol				FC cannabis			
Stress Level		N/1-2V	CM	C.S	ADCA	N/1-2V	CM	C.S	ADCA
	mild stress	4/0	0	0	1	2/0	0	0	3
	moderate stress	122/0	2	14	204	166/0	1	6	169
	severe stress	15/1	2	14	101	84/2	0	0	47
Total		141/1	4	28	306	252/2	1	6	219
		FC tranquilizers							
Stress Level		N/1-2V	CM	C.S	ADCA				
	mild stress	5/0	0	0	0				
	moderate stress	295/2	10	12	19				
	severe stress	71/0	14	16	31				
Total		371/2	24	28	fifty				

Note: N: Never, 1-2 V: Once or twice; CM: Every month; CS: Every week; ADCA: Daily or almost daily

Resultados obtenidos de la autoevaluación de autoestima de Rosenberg

Para analizar la relación existente entre las variables frecuencia en la que se consume tabaco, alcohol, cannabis, coca, anfetaminas, inhalantes, tranquilizantes, alucinógenos, opiáceos y otras drogas, con el nivel de autoestima obtenido en el instrumento aplicado, se utiliza la técnica de Chi-cuadrado, para dictaminar si las proporciones con las que aparecen las variables cualitativas observadas en la muestra guardan o no una relación significativa entre sí, es decir, que no son atribuidas al azar. Para los casos en que se demuestre significatividad se obtendrán las tablas de contingencia correspondientes para analizar en qué medida se asocian entre sí. Se selecciona para la investigación el nivel de significación $\alpha = 0,05$.

Relationship between frequency of consumption and level of self-esteem

To verify the relationship between the frequency of consumption and the level of self-esteem, the following hypotheses are formulated:

Null hypothesis (H₀): The variables frequency of consumption and the level of self-esteem are independent and there is no significant relationship between them.

Alternative hypothesis (H): The variables frequency of consumption and level of self-esteem are dependent and there is a significant relationship between them.

Thus, based on the significance value obtained from the Chi-square test (p), the results are interpreted as follows:

If the significance value of the test $(p) \leq 0.05$, the null hypothesis is rejected and the alternative of dependence and significant relationship between the variables is accepted.

If the significance value of the test $(p) > 0.05$, the null hypothesis is accepted and the alternative is rejected.

Based on the above, **Table 8** shows that the variables frequency of consumption of cannabis, coca, inhalants and opiates, with respect to the level of self-esteem, have a significance value (p) (0.99; 0.09; 0.42 and 0.68, respectively) greater than 0.05, therefore, the null hypothesis is accepted that the variables are independent and there is no significant relationship between them.

In the case of the variables frequency of consumption of tobacco, alcohol, amphetamines, tranquilizers and hallucinogens, with respect to the level of self-esteem, the level of significance (p) (0.00; 0.00; 0.00; 0.00 and

0.01) is less than 0.05, therefore, the null hypothesis is rejected, and the alternative hypothesis is accepted that the variables are dependent and there is a significant relationship between them.

Table 8 Significance of Chi-square for the frequency of consumption variable and the level of self-esteem

Variables		Significance value (p)	Variables		Significance value (p)
Self-esteem	FC Tobacco	0.00	Self-esteem	FC Inhalants	0.42
	FC Alcohol	0.00		FC Tranquilizers	0.00
	FC Cannabis	0.99		FC Hallucinogens	0.01
	FC Coca	0.09		FC Opioids	0.68
	FC Amphetamines	0.00			

Table 9 reflects that, with respect to the frequencies every week and daily or almost daily as they are the ones with the highest incidence, with respect to tobacco consumption, six patients with low self-esteem consume it every week and 186 patients consume it daily or almost daily. daily, of these 157 patients have low self-esteem, 12 patients have average self-esteem, and 17 patients have high or normal self-esteem.

Regarding alcohol consumption, 31 patients consume it every week, of them, 21 have low self-esteem, two have average self-esteem and eight have high or normal self-esteem; 304 patients consume it daily or almost daily, of which 275 have low self-esteem, 24 patients have average self-esteem, and five patients have high or normal self-esteem. Five patients consume amphetamine every week, three of them with low self-esteem and two with high or normal self-esteem; Four patients consume it daily or almost daily, all with low self-esteem.

Of the 31 patients who consume tranquilizers every week, 27 have low self-esteem, three patients have average self-esteem, and one has high or normal self-esteem; 51 patients consume them daily or almost daily, of them 47 with low self-esteem, three with average self-esteem and one with high or normal self-esteem. Finally, of the 16 patients who consume hallucinogens every week, 15 have low self-esteem and one has high or normal self-esteem; 40 patients consume it daily or almost daily, of them 38 with low self-esteem and two with average self-esteem. In general, a marked deterioration in self-esteem is noticeable as the frequency of consumption increases.

Table 9 Contingency tables for frequency of consumption and level of self-esteem.

		Tobacco FC		FC alcohol		FC amphetamine	
		C.S.	ADCA	C.S.	ADCA	C.S.	ADCA
Self-esteem level	Low self-esteem	6	157	twenty-one	275	3	4
	Average self-esteem	0	12	2	24	0	0
	High or normal self-esteem	0	17	8	5	2	0
Total		6	186	31	304	5	4
		FC tranquilizers		Hallucinogenic FCs			
		C.S.	ADCA	C.S.	ADCA		
Self-esteem level	Low self-esteem	27	47	fifteen	38		
	Average self-esteem	3	3	0	2		
	High or normal self-esteem	1	1	1	0		
Total		31	51	16	40		

Note: CS: Every week; ADCA: Daily or almost daily.

In this sense, Table 10 reflects the strong desires to consume each week and daily or almost daily as they are the ones with the highest incidence. Regarding tobacco consumption, the six patients with strong desires to consume each week, five have low self-esteem and one high or normal self-esteem; 183 patients feel the strong

desire to consume daily or almost daily, of these, 155 patients have low self-esteem, 12 patients have average self-esteem, and 16 patients have high or normal self-esteem.

Regarding alcohol consumption, 28 patients feel a strong desire to consume each week, of which 18 have low self-esteem, one has average self-esteem, and nine have high or normal self-esteem; Every day or almost daily, 306 patients feel a strong desire to consume, of which 276 have low self-esteem, 25 patients have average self-esteem, and five patients have high or normal self-esteem.

Of the 11 patients with strong desires to consume cocaine every week, eight have low self-esteem and three have high or normal self-esteem; 179 patients experience it daily or almost daily, of them 154 with low self-esteem, 20 with average self-esteem and five with high or normal self-esteem.

Four patients consume amphetamine every week, three of them with low self-esteem and one with high or normal self-esteem; Seven patients, all with low self-esteem, feel a strong desire to consume it daily or almost daily. Of the 28 patients with a strong desire to consume tranquilizers every week, 25 have low self-esteem, two patients have average self-esteem, and one has high or normal self-esteem; Every day or almost daily, 50 patients feel a desire to consume, of them 46 with low self-esteem, three with average self-esteem and one with high or normal self-esteem.

Finally, of the 12 patients with a strong desire to consume hallucinogens every week, 11 have low self-esteem and one has high or normal self-esteem; 41 patients feel this desire daily or almost daily, of them 39 with low self-esteem and two with average self-esteem. In general, a marked deterioration in self-esteem is noticeable due to the intensity of consumption.

Table 10. Contingency tables for the intensity of consumption and the level of self-esteem

		Tobacco FC		FC alcohol		FC Coca	
Self-esteem		C.S.	ADCA	C.S.	ADCA	C.S.	ADCA
	Low self-esteem	5	155	18	276	8	154
	Average self-esteem	0	12	1	25	0	twenty
	High or normal self-esteem	1	16	9	5	3	5
Total		6	183	28	306	eleven	179
		FC amphetamine		FC tranquilizers		hallucinogenic FC	
Self-esteem		C.S.	ADCA	C.S.	ADCA	C.S.	ADCA
	Low self-esteem	3	7	25	46	elev en	39
	Average self-esteem	0	0	2	3	0	2
	High or normal self-esteem	1	0	1	1	1	0
Total		4	7	28	fifty	12	41

Note: CS: Every week; ADCA: Daily or almost daily

Discussion

The representativeness of the anxiety and depression indices in the community under study coincides to some extent with studies published by Ramírez-Giraldo et al., (2017). when he states that these disorders are phenomena of enormous importance in the functionality of people. They tend to be among the most frequent reasons for consultation in the psychological and psychiatric field, given that they are conditions that are closely associated. Within public health, they represent one of the significant problems and his importance epidemiological in the last years is huge, because it affects all age groups, including the populations students

(Gaibor-González & Moreta-Herrera, 2020; Mayorga-Lascano & Moreta-Herrera, 2019 and Wathelet et al., 2020).

According to Van-Rheenen et al., (2020), during the pandemic, the increase in mental health difficulties among university students has been evident. Among the main factors associated with this increase are socio-economic precariousness, gender, psychiatric history, social isolation derived from confinement, low quality of current social relationships, and low quality of life (Wathelet et al., 2020; Velastegui-Hernández & Mayorga-Lascano, 2021). The place of residence or neighborhood presupposes a risk factor, which negatively influences the adjustment of male adolescents, especially, regardless of the socialization styles of their parents (Rivadeneira-Díaz et al., 2021). In this sense, in the present investigation it was found that these aspects themselves and others such as marital status, origin, educational level, occupation and economic income also constitute risk factors, but for the ingestion of illicit substances.

Studies such as those by Contreras-Olive et al. (2020) and Martín-Sánchez (2018) highlight the important relationship between the use and abuse of some substances and the presence of mental health problems. However, it is difficult to establish the specific role that each substance plays in the onset, maintenance or worsening of the mental disorder. This is due to several reasons: firstly, most substances are usually consumed in association with others. Secondly, it is considered that the beginning of the mental disorder could precede the use of the substance, or simply coincide in time on many occasions.

Finally, different diseases, and especially anxiety and depression problems, are usually associated with other disorders (comorbidity), which makes it impossible to establish a direct relationship between the substance and each problem. In line with these works, in the present investigation it was possible to verify a weak, little or no correlation between the different types of drugs and the levels of anxiety, depression, stress and self-esteem.

The correspondence between each group of narcotics and psychopathology can generally be thought of at two levels: the ingestion of the drug as the probability of developing a psychological problem (cause) and because of suffering from it (effect). The consumption of a substance systematically and for a long period of time can lead to the manifestation of various psychiatric diseases (Contreras-Olive et al., 2020). Assuming the above, it is justified that in the present investigation the results of the frequency and intensity of consumption correspond to both levels.

In the opinion of these authors themselves, according to the literature reviewed, several patients with dependence on narcotic consumption may experience depressive and anxious symptoms, with more or less levels of duration, during their evolution. The manifestation of these symptoms does not imply compliance with the criteria for a mood and anxiety disorder by the subject. Occasionally, the presence of alcohol or other CNS depressants is the determining factor and tends to disappear in parallel with the intoxication.

In other cases, depressive and anxiety symptoms are linked to the withdrawal syndrome and stressful circumstances, common during addiction, but without achieving the necessary intensity and persistence that makes it possible to establish the diagnosis of mood or anxiety disorder. anxiety. The morbidity associated between drug ingestion and depression is the most frequent dual pathology in the field of substance addictions. Thus, various studies establish various elements that expose this vast range of prevalence to be considered: diagnostic criteria or instruments to be used, main substance consumed, carrying out the study in general populations or in samples of consumers recruited in addiction treatment centers or in places with mental health assistance.

According to Contreras-Olive et al. (2020), women with addictions make up a fundamentally vulnerable group. Each research works carried out at the population level and at the clinical level show that depression and drug addiction are more common in females than in males and twice as common in addicted women than in those in the general population. The result of the previous study is partially like the present one, since, although men generally prevail with respect to the frequency or intensity of consumption, in the analysis alone, women from the population group under study exhibited a higher intensity index. in depressive symptoms compared to men.

It is valid to highlight that even though for cocaine or opiate addictions or in polydrug users, the event of depression and anxiety is observable, it frequently occurs independently of consumption. Regarding alcohol, a

higher prevalence of association with induced depression has been described, however, in the same subject both types of depression (primary and induced) can appear, an aspect with which the research agrees.

For their part, Pepe et al. (2024) indicate that in addition to problems of anxiety and depression, at a psychopathological level, problems of violent behavior, psychotic symptoms, irritability, apathy, slowness, alteration of the perception of time and memory have been evident, while the consequences Physical symptoms include cardiovascular accidents, cardiac arrest, seizures, kidney failure, dizziness, loss of balance, blurred vision, vomiting, nausea, excessive sweating, flushing, tachycardia, high blood pressure, increased respiratory rate, among others.

Furthermore, the latest manifestation of the link between affective disorders and substance dependence is appreciable, exposing the need to delve into it, as a necessary term in the comprehensive treatment of these patients. Identifying and treating mood disorders associated with drug ingestion currently represents a transcendental area of work and a frontline healthcare challenge for mental health professionals.

In accordance with what was developed in the present research, Belfiore et al. (2024) agree that, in stable family and social environments, the risk of drug use is lower, in relation to environments where social functioning is weakened or in constant conflict. In this way, the authors indicate that there is a bidirectional relationship between drug intake and the individual's social relationships, in which women are more prone to alcohol intake when their social environment has high levels of crime, excess of noise, graffiti and disorder, while, in men, drug consumption increases when there are attachment problems with the people who live in their neighborhood.

CONCLUSION

Based on these results, it was also evident that when the frequency of drug consumption is daily or almost daily, the participants presented symptoms of anxiety severity, while for depression, only the sum of all participants who present some type of depression, is greater than those who do not have this disease, while the intensity of consumption did not present a significant relationship for depression.

In the case of stress, it was evident in patients who consume alcohol and tranquilizers, mainly, with a predominance of moderate stress in the case of a strong desire to consume alcohol and cannabis, and severe stress in the case of a high desire to consume tranquilizers. Regarding self-esteem, it is weakened as the frequency and intensity of substance use increases.

In this way, although both negative and positive associations were evident for the different types of drugs with psychological consequences, the intensity of the association is weak or non-existent. Which implies that, although the consumption, intensity and frequency of drug use can condition the psychological well-being of an individual, it does not necessarily determine it.

From practice, the results obtained can contribute to monitoring epidemiological of the mental state of patients in hospitalization, as well as paying taxes to the production of alternatives of intervention general and specific of the anxiety, the depression, stress, and self-esteem by regulating drug use. This aspect is considered a limitation of the research, which is why it is considered appropriate to continue researching the topic, to consolidate the results obtained and implement the designed tools in practice.

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