Asociación entre consumo del alcohol y tabaco con la salud mental de estudiantes de enfermería en Sinaloa

Association between alcohol and tobacco consumption and the mental health of nursing students in Sinaloa

Associação entre o consumo de álcool e tabaco e a saúde mental de estudantes de enfermagem de Sinaloa

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Resumen

La depresión y la ansiedad son fenómenos de salud pública en los cuales se manifiestan trastornos emocionales como tristeza, culpa, inutilidad, inseguridad, miedo, preocupación, pensamientos negativos, entre otros, que pueden desencadenar el consumo de alcohol y tabaco. El abuso en el consumo de estas drogas lícitas representa un problema de salud pública de alto impacto económico. Por ello, es de suma importancia conocer la asociación que puede existir entre ellas dentro de las escuelas de Enfermería de Culiacán, Sinaloa. Recordando que este grupo de estudiantes representa para la sociedad un modelo de protección, nos permitirá establecer estrategias innovadoras de educación contra las adicciones y la salud mental. La metodología utilizada fue el paradigma cuantitativo, observacional, transversal, prospectivo, de tipo correlacional causal.

Palabras Clave: Alcohol, Tabaco, Ansiedad, Depresión, Enfermería, Estudiantes.

Abstract

Depression and anxiety are a public health phenomenon, manifesting emotional disorders such as: sadness, guilt, uselessness, insecurity, fear, worry, negative thoughts, among others that can trigger the consumption of alcohol and tobacco, abuse in consumption of these legal drugs represent a public health problem with a high economic impact, therefore it is extremely important to know the association that may exist between them within the Nursing schools of Culiacán Sinaloa, remembering that this group of students represent a protection model, will allow us to establish innovative education strategies against addictions and mental health. The methodology used was the quantitative, observational, cross-sectional, prospective, causal-correlational paradigm.

Keywords: Alcohol, Tobacco, Anxiety, Depression, Nursing, Students.

Resumo

A depressão e a ansiedade são um fenômeno de saúde pública onde se manifestam distúrbios emocionais como: tristeza, culpa, inutilidade, insegurança, medo, preocupação, pensamentos negativos, entre outros que podem desencadear o consumo de álcool e tabaco, abuso no consumo desses as drogas representam um problema de saúde pública com alto impacto econômico, por isso é de extrema importância conhecer a associação que pode existir entre elas dentro das Escolas de Enfermagem de Culiacán Sinaloa, lembrando que este grupo de estudantes representa

para a sociedade um modelo de proteção, irá permitem-nos estabelecer estratégias educativas inovadoras contra as adições e a saúde mental. A metodologia utilizada foi o paradigma quantitativo, observacional, transversal, prospectivo, causal-correlacional.

Introduction

The problem of addictions represents a public health problem in which adolescents replicate the patterns of the adults with whom they live. They begin to consume substances such as tobacco and alcohol at ever younger ages. It is important to describe that the National Survey of Drug, Alcohol and Tobacco Consumption 2016 (ENCODAT, 2016) reports that 51.4% of the Mexican population consumes alcohol. Regarding tobacco consumption, this same survey estimates that 12.3% (1.7 million) of adolescents are active smokers. Another important fact to mention is that the average age of initiation of tobacco use in México is 14.1 years (National Addiction Survey, 2011).

On the other hand, it is reported that depressive symptoms are one of the five main factors that limit student development, with rates that can be above 50% (Medina-Mora M. et al., 2003). In addition, depression and anxiety are a public health problem that affects daily activities. These are emotional disorders that are characterized by symptoms and signs such as sadness, guilt, worthlessness, insecurity, fear, worry, negative thoughts, among others. Twenty percent of the population in Mexico has suffered from depression at some point in their childhood or adolescence (Flores R. et al., 2007), data that shows the magnitude of the social problem, particularly in adolescent Mexican students from Sinaloa. .

It is important to point out that, as a teacher in the community area, it has been possible to observe symptoms and signs compatible with depression and anxiety in Culiacán nursing students. Therefore, hypothetically we can say that there is an association between these four variables. This is how the question arises: Is there an association between alcohol and tobacco consumption with the mental health of nursing students in Sinaloa?

Content development

Beyond analyzing the phenomenon in a single nursing school, this research was carried out in three nursing academic units: Culiacán, Mazatlán and Los Mochis of the Autonomous University of Sinaloa. This is where this problem was known, as well as the association that these variables of interest presented with each other.

The student population is immersed in a process of transition and adjustment at a personal and interpersonal level, which can affect their academic performance and cause risk behaviors. These include: the consumption of alcohol, tobacco and mental disorders such as depression and anxiety, which can be preventable.

Currently, there are programs established by the government through the CONADIC (National Commission Against Addictions), such as the Program Against Alcoholism and the Abuse of Alcoholic Beverages, the Program Against Tobacco, and the care offered by the Ministry of Health through its programs and the Ramón de la Fuente Muñiz National Institute of Psychiatry for anxiety and depression care. However, it is not possible to reduce the incidence of tobacco, alcohol, depression and anxiety consumption, and this social phenomenon continues to increase.

However, there are no programs that cover the group of nursing students, nor institutionally. Therefore, it is important to treat them and take advantage of the fact that it is a large, captive group and that it will be a model for the population that, at some point, it will treat directly.

This research presents results that will allow the possible implementation and development of programs aimed at this vulnerable population. In this study, the prevalence of tobacco, alcohol, anxiety and depression consumption was estimated. Finally, the intention of this work is to process the data to show if there is an association between these variables of interest and present the findings to health decision makers for the benefit of the population.

There is a theoretical reference for the production of new research, the development and implementation of programs aimed at the attention of students who require it, and may be disorders of consumption of legal drugs such as alcohol and tobacco, or disorders such as depression. and anxiety. These programs will make it possible to provide students with care and/or treatment alternatives to achieve educational objectives and enter the state workplace in adequate mental health conditions.

It is important to mention that, during the review of the literature, it was found that there is little information in relation to the social phenomenon that we are dealing with, specifically focused on nursing students. Therefore, students, adolescents and university students will be taken as theoretical references to broaden the search.

The main objective was to evaluate the association of alcohol consumption, tobacco, depression and anxiety, and three specific objectives: a) to estimate the prevalence of alcohol and tobacco consumption, b) to estimate the prevalence of depression and anxiety and c) to determine the association between alcohol consumption, tobacco, depression and anxiety in nursing undergraduate students in three academic units of the Autonomous University of the state of Sinaloa, Mexico.

Concepts

Alcohol

Alcohol is a substance extracted from the fermentation of starches and, although it produces an initial excitement, it actually depresses the central nervous system. This causes speech difficulties, coordination problems, delayed reflexes, hallucinations, and eventually disturbances in the heart, liver, stomach, and brain.

When we talk about alcohol, we usually refer to ethanol or ethyl alcohol, as it is the fundamental constituent of alcoholic beverages. This is a legal drug that is routinely "used" at most social events. However, use can become abuse or dependency. Being a central nervous system depressant, alcohol delays reaction time, produces a lack of risk perception, provides a false sense of security, causes psychomotor incoordination, causes sensory disturbances (mainly vision) and causes drowsiness, tiredness and fatigue.

Tobacco

As for tobacco, it contains nicotine, which is extremely addictive. It acts as a stimulant and sedative of the central nervous system. Tobacco smoke is easily absorbed into the lungs. With regular use, nicotine concentrations build up in the body during the day, which persist through the night. Therefore, people who smoke cigarettes daily are exposed to the effects of nicotine 24 hours a day. It takes just seconds for nicotine absorbed from cigarette smoking to reach the brain, and its direct effect on the body can last up to 30 minutes. Nervous tension and anxiety affect nicotine tolerance and dependence. The hormone produced by nervous tension reduces the effects of nicotine and, therefore, it is necessary to consume more of the substance to achieve the same effect. This increases tolerance to nicotine and leads to greater dependence on it. The Environmental Protection Agency has determined that the inhalation of environmental tobacco smoke causes lung cancer in adults and increases the risk of respiratory infections in children and infant death (WHO, 2014).

According to the WHO, any natural or synthetic substance that, when consumed, can alter the mental and physical activity of people, due to its effects on the central nervous system, is a drug. Substances for legal consumption such as alcohol and tobacco are also drugs, because they generate addiction, that is, there is an urgent or compulsive need to consume again to experience the reward they produce, such as a sensation of pleasure, euphoria, stress relief, etc.

Anxiety

The Catalan Association for the Treatment of Anxiety and Depression (ACTAD) in Barcelona, Spain, calls "anxiety disorders" a group of conditions that share anxious symptoms, both physical and psychological. However, each anxiety disorder has its own characteristics, as well as a particular genesis and an appropriate treatment. Therefore, it is important to determine what type of anxiety disorder you have. The most common are usually: anxiety attacks or panic attacks, agoraphobia, social phobia, obsessive-compulsive disorder, generalized anxiety, post-traumatic stress, specific phobias and separation anxiety.

The symptoms of anxiety are very varied and depend largely on the biology and psychosocial characteristics of individuals. Although the list of symptoms is extensive, the appearance of just one sign, both physically and mentally, is often enough to cause great discomfort. Some common physical symptoms, although not common to all disorders, are: rapid heartbeat, sweating, dizziness, tremors, vertigo, nausea, and tingling in the extremities. From a psychological point of view, it highlights the feeling of loss of control, attention and memory problems, depersonalization, and even the appearance of false beliefs, obsessive ideas and a feeling of death threat, among others. As far as behavior is concerned, the most characteristic feature is the avoidance of situations that could generate anxiety. Hypervigilance, body rigidity, fear of ridicule, and lack of social skills are often symptoms of some anxiety disorders. In addition, some disorders associated with anxiety, such as substance abuse, sexual problems, and eating disorders, are themselves the source of another list of symptoms.

Depression

The ICD-10 mentions that depression is an affective disorder that varies from low mood, characteristic of everyday life, to clinical syndrome of severity and prolonged duration.

Depression has effective treatment, but first it is necessary to make a good diagnosis. It is important to know if it is a major depression, dysthymia, bipolar disorder or a pathological mourning process. It is worth clarifying that, although it does not occur in all cases, depression

may be associated with other psychopathologies, mainly anxiety disorders. Among the most common symptoms of depression are the following:

- Feelings of sadness, anxiety and a persistent feeling of emptiness.
- Feelings of hopelessness and pessimism.
- Feelings of guilt, worthlessness and helplessness.
- Loss of interest or pleasure in previously enjoyed hobbies and activities, including sexual activity.
- Decreased energy; fatigue, exhaustion
- Difficulty concentrating, remembering and making decisions.
- Insomnia, waking up early or sleeping more than necessary.
- Weight loss, appetite or both, or conversely overeating and weight gain.
- Thoughts of death or suicide; suicide attempts.
- Restlessness, irritability.
- Persistent physical symptoms that do not respond to medical treatment, such as headaches, digestive disorders, and other chronic pain.

The International Classification of Diseases, published and updated periodically by the WHO, the latest version being the International Classification of Diseases (ICD-10), determines the classification and coding of diseases and a wide variety of signs, symptoms, abnormal findings, complaints , social circumstances and external causes of damage and/or disease. It officially codes anxiety with the F41 code and depression with the F32 code (ICD-10, 2014). The Pan American Health Organization (PAHO), in its manual for use in primary care, mentions that anxiety and depression are risk factors associated with alcohol consumption. These factors are an important part of the present investigation, as is tobacco consumption.

Phil Barker's Nursing Model
(The Tidal Model in Mental Health Recovery)

For the description of the phenomenon and as a contribution to the Nursing discipline, we will return to the studies carried out by Phil Barker and, according to Jacqueline Fawcett, specific nursing knowledge derived from the research is being generated. In this case, a precise model and methodology is used that allows research with contributions to the discipline. The tide model is taken up again in this article, since it focuses on the fundamental processes of nursing care. It is universally applicable and is a practical guide for psychiatric and mental health nursing. In addition, it highlights the importance of developing knowledge of the person's needs through

collaborative work, developing a therapeutic relationship through differentiated methods of delegating actions, establishing nursing as an educational element at the center of interdisciplinary intervention, and the search for problem solving and promotion of mental health through narrative methods.

The Tide Model is not prescriptive, but rather a set of principles (the 10 Commitments) that function as a metaphorical compass for the practitioner. Guides the nursing staff in developing responses to meet individual and conceptual needs attached to the person, who is now the patient. The experience of psychic distress is always described in tidal metaphorical terms, using universal and culturally significant metaphors associated with the power of water and the sea to represent familiar aspects of human stress. Water is "the central metaphor of the lived experience of the person and the care system towards the person with the help of nurses."

It is based on three theories that support the tidal model:

1. Peplau's theory of interpersonal relations (1952-1969)
2. The theory of psychiatric nursing and mental health derived from the need for nursing studies.
3. The delegation of power in interpersonal relationships.

The tidal model draws its central philosophical metaphor from chaos theory, where the unpredictable, yet limited, nature of human behaviors and experiences can be likened to the flow and power of water. This social problem can be visualized through Phil Barker's model of the tide in mental health recovery (Raile M, Marriner A, 2011). This model allows recommendations that allow the nurse to understand what mental health can mean for a specific person and how the person can be helped to define, understand and begin the complex and demanding journey of recovery. In the case of students as a vulnerable group, this theory allows us to understand their behavior in order to carry out support and guidance activities. On this journey, they encounter alcohol and tobacco consumption behaviors associated with multiple emotional health problems such as anxiety and depression, as well as economic, cultural, family and violence problems.

The tidal model is based on the chaos theory, which mentions that in certain natural systems, small changes in the initial conditions lead to huge discrepancies in the results. This principle is also often called the "butterfly effect" because, in meteorology, the non-linear nature of the atmosphere has led to the affirmation that it is possible that the fluttering of a butterfly in a certain place and moment could be the cause of a terrible hurricane. several months later on the other side of the globe (Chaos Theory, 2014). We can also mention that the constant flow of the tides that come and go shows non-repetitive patterns, although they remain within certain defined

parameters. In this perspective, small changes can create unpredictable changes. Chaos theory suggests that there are limits we must know, and Barker encourages nurses to stop seeking certainty, embracing real action instead.

The experience of mental illness translates into various disturbances of daily life and human responses to everyday problems. A key feature of Barker's nursing practice has been the exploration of the possibilities of genuine participatory relationships on the part of the person to achieve mental recovery.

The recommendations for this social problem of alcohol and tobacco consumption in nursing students, with the presence of anxiety and depression, take up the model of the tide and, as the main concept, water: a metaphor that describes how essential experience is human through the central allusion of water. In this case, the student's life is conceived as a journey made in an ocean of experiences at school, with his classmates, friends, family, teachers, including his experiences of health and illness. At some critical moments of that trip there may be storms. The boat may leak and the person may have to face the prospect of drowning. In other words, that metaphorical critical moment can become a reality if you are consuming alcohol and/or tobacco, and are also going through a health problem such as anxiety and depression. This concept allows us to visualize that there are care alternatives for these cases, such as government programs financed under the correct development of programs aimed at the problem of alcohol and tobacco consumption, and the presence of anxiety and depression in Sinaloa students.

Alcohol and tobacco in Latin America

A systematic review of international studies on legal drug use in nursing students in 2014, López-Maldonado reports a high prevalence of alcohol and tobacco use in Colombia and its incidence in young people. Some studies show the impact of consumption on the increase in social problems such as intrafamily violence, low productivity, high rates of violent deaths, in addition to the psychological and physical deterioration that alcohol abuse entails (López-Maldonado MC, Villar MA, da Silva Gherardi-Donato EC, 2014).

A study carried out in 2011 by Meza and Ferreira in Costa Rica reports that one of the causes of the growth in drug use is the globalization of the world economy, and that there is a trend towards an increase in smoking among women (Meza-Benavides MA , Ferreira AR, 2011).

The problem of drug use is serious, and in this section some of the causes are mentioned. Among them, the nursing career that generates a lot of pressure and that, for many students, entering the university is a radical change. Behavior changes are another of the problems that quickly lead to a

world where people feel freer and more responsible for themselves. The use of drugs is associated with the forms of recreation of young people; there is also a certain indifference to the problem, without realizing its magnitude, which has increased and has become so complex that the population tends not to see it. This represents a problem in the sense that the same thing happens in the group of nursing students, who affirm that the phenomenon is everyone's responsibility. They also consider that adolescence is a stage of greater vulnerability.

On the other hand, in Costa Rica, traffic accidents in which there is alcohol consumption are among the leading causes of death and disability. According to the responses expressed by the students, the strategies that have been implemented to address the problem are very weak and there is no relationship between the magnitude of the problem and the resources that are invested to address it. The student population presents important risk factors such as unhealthy lifestyles, drug use by people close to them such as family, friends and colleagues, highlighting the consumption of alcohol and tobacco (Leiva V. 2009).

Jamal, M. and colleagues conducted a cohort study that began in September 2012, in the Netherlands, on depression and anxiety. They included 1725 participants with a recent diagnosis of one of these two pathologies. In addition, they were asked about smoking, which was associated with depressive symptoms and general and social anxiety. Participants were measured at baseline (baseline measurement), at the first and second year of follow-up. The response rate was 87.1%. Age, gender, education, alcohol consumption, physical activity, and negative life events were measured. Baseline measurements indicated that depressive symptoms and general anxiety were strongly associated with nicotine-dependent smokers. After two years of follow-up, the proportion of smokers, nicotine-dependent participants, with depressive symptoms and anxiety, was lower in relation to the other groups (non-smokers, non-nicotine-dependent smokers).

Driven by existing socialization theories, this study describes the specific friendship contexts in which peer influence of alcohol abuse and depressive symptoms occur. In the fall and spring of the 2010 school year, a survey was applied to 704 Italian adolescents (male, 53%; median age, 15.5) enrolled in grades 9, 10, and 11. Different relationship contexts are distinguished on the basis of two dimensions: friendship level (best friendships and friendship networks) and reciprocity (unilateral and reciprocal). Social network analyzes were applied in a complementary way to estimate the effects of peer socialization in the different contexts of friendship. An analysis of variance was performed to compare the ages. The results showed that, within networks of adolescent friends of both sexes, alcohol abuse was affected by friends who abuse

alcohol, regardless of whether the relationship was reciprocated or not. In contrast, peer socialization of depressive symptoms only emerged within best friends in adolescent females. The results suggest that the effects of peer socialization depend on the friendship context and specific types of behaviors. (Giletta M. et al. 2012).

On the other hand, Susan J. Roberts, in 2010 in Massachusetts, reports that a third of the population (n=128) of her study has a smoking habit, 22% with moderate depression, and 81% drink alcohol. Moderate depression was related to cigarette smoking, physical and verbal aggression. Understanding these associations can be used to detect and intervene risk in students (Roberts SJ, Glod CA, Kim R, Hounchell J., 2010). Ortega Pérez reports that in a study carried out in September 2012 in El Salvador, alcohol is one of the first drugs used by nursing students, followed by tobacco, and the age of first drug use is between 13 and 21 years. In the users, the self-perception of the effect of drugs showed a tendency to deny that drugs had any impact on their own academic performance, thus evidencing that drug use is not perceived as a problem that affects them if they use drugs, but it does it affects others when they consume drugs (Ortega-Pérez CA, Da Costa-Júnior ML, Pereira G., 2011).

In Concepción, Chile, it is felt that university students are expected to be role models and health educators. And when it comes to gender, men are more likely to be tobacco smokers and alcohol users, while women are less likely to use tobacco and alcohol because such behavior is not consistent with traditional female gender norms (Cid P, Pimenta AM., 2008).

Specifically, some aspects of masculinity put men's health at risk, and traditional femininity has a protective effect on the consumption of these substances, as reported by the 2012 study by Sánchez López in Spain (Sánchez-López MP, Rivas -Diez R, Cuellar-Flores I., 2012). It is important to highlight a relevant piece of information from their results that underscores the need to pay attention to the phenomenon of drug use: 90.7% of the population studied in Colombia agrees with the investment of economic resources in rehabilitation and follow-up programs for the affected population. for this phenomenon of drug use (Melina J. et al., 2012).

Public health problems in Mexico

The National Survey of Psychiatry, in its 2010 publication, mentions that the general population in Mexico has suffered from depression at some point in their childhood or adolescence. The young student population is immersed in a process of transition and adjustment at a personal and interpersonal level, which can affect their academic performance and produce risk behaviors. Some make these adjustments happen successfully, while others don't. In this population, the

presence of some mental health and psychosocial problems has been documented, as well as low school performance, suicidal problems, substance use and high depressive symptoms. The latter is likely to be one of the main factors limiting academic development among students. Likewise, it has been associated with risk behaviors that contribute to the presence of unintentional injuries, violence, use of tobacco, alcohol and other drugs (ENEP, 2010).

The most frequent data regarding the health of the Mexican population show that of mental illnesses, only a small part receive treatment, but these cause greater disability than many other chronic illnesses. Within the ten main diseases, three are mental and depression ranks first. It is a frequent disease with a high level of disability. According to surveys conducted in 2010 by the Ramón de la Fuente Muñiz National Institute of Psychiatry, 6.4% of the population suffers from it. Disorders related to alcohol use rank ninth, reporting 2.5% (Becoña E. et al., 2014).

One of the important contributions for the care of psychiatric disorders is the one made by the National Institute of Psychiatry in 2010. As part of its project, 12 clinical guidelines were prepared on the most frequent disorders in our country, based on the analysis of the scientific evidence, diagnostic criteria of therapeutic practices and preventive actions that have proven to be more effective in the field of management of mental illnesses. Within these guidelines, there is the clinical guide for the management of depression, which reports specific symptoms for the detection of the disorder such as handicap, uselessness, guilt, asthenia, suicide, self-harm, high or low psychomotor skills, increased or decreased appetite, and increased or decreased sleep (Gerhard M, Camacho P., 2010).

One of the national priorities has been to have updated statistics for decision-making aimed at the prevention and treatment of the phenomenon of consumption and abuse of psychoactive substances. This is one of the public health problems of our time, which occurs both nationally and internationally. This health phenomenon affects both genders, affecting mainly children and adolescents, regardless of social stratum and regions of our country (Villatoro-Velázquez, J. A. et al., 2014). Where the trends of this social phenomenon of alcohol consumption mention that adolescents reproduce models of high levels of consumption like adults, and there is less difference between adolescent men and women than between adult men and women. The prevalence of alcohol consumption, in 2011, is 51.4% (men 62.7% and women 40.8%), there is also alcohol dependence in the total population of 6.2% (men 10.8% and women 1.8%) (ENA, 2011). .

In relation to tobacco, the National Survey of Drug, Alcohol and Tobacco Consumption 2016 shows that 11.4% (1.5 million) of active smokers have high levels of addiction, of which 12.6%

are men and 8.6% are women. 12.3% (1.7 million) of adolescents are active smokers, of which 16.4% (1.1 million) are men and 8.1% (539 thousand) are women. The average age of tobacco consumption initiation is reported to be 14.1 years, similar for men and women (ENCODAT 2016-2017).

Material and method

This study was quantitative, cross-sectional, and prospective, of a causal correlation type. A systematic measurement was carried out and the statistical software Stata Intercooled version 13.1 was used for the analysis of the data obtained.

The acceptance or rejection of the hypotheses of interest was carried out under the analysis of the variables: alcohol and tobacco consumption, and mental health (depression and anxiety) through a multiple logistic regression, through which the ratio of odds (OR) as a measure of risk.

Population and sample

The study population was made up of 5,382 students who are studying a nursing degree in one of the three academic units of the Autonomous University of Sinaloa. The distribution by academic unit is: Mazatlán with an enrollment of 1,372 students, Culiacán with 2,260 students, and Los Mochis with 1,750 students.

To calculate the sample size, the formula for finite samples was used, resulting in a sample of 277 students. A 5% significance level was used, a maximum difference of 5%, an expected ratio of 20%, and adjusted for 15% loss. The sample was estimated for each academic unit according to its proportion of students. For Mazatlán, the sample was 71 students, for Culiacán it was 116 and for Los Mochis it was 90 students. The selection of the students was carried out by means of a probabilistic random sampling in each academic unit.

Study variables

For this phase of the study, four main variables were identified:

- Alcohol consumption
- Tobacco use
- Depression
- Anxiety

  In addition, the following sociodemographic variables were analyzed:
- Age.

- Sex.
- Civil status.
- Work activity.
- School grade.

These variables allowed to achieve the planned objectives. To estimate the prevalence of the main variables, validated instruments were used. For alcohol consumption, the AUDIT questionnaire was used; for tobacco use, FAGERSTROM; for depression, CES-D; and for anxiety the scale of HAMILTON (Babor F et al., 2001), (Vázquez E, Becoña FL, 1998), (Hamilton M, 1969), (González-Forteza et al., 2012).

Results

Sociodemographic results

The sample was made up of 277 students from three Nursing academic units of the Autonomous University of Sinaloa. 41.5% (n=115) corresponded to Nursing students from Culiacán, 32.5% (n=90) from Los Mochis, and the rest from Mazatlán. 72.9% (n=202, 95% CI: 67.3 – 78.1) of the participants were women. The average age of the students was 20.4 years (95% CI: 20.2-20.6). Regarding marital status, 83% (n=230) of the students indicated being single, however, approximately 15% (n=41) of the total number of participants mentioned being married or in a free union (Mazatlán, 11.1% ; Los Mochis, 14.5% and Culiacán, 17.4%).

Of the total number of participants in the study, 76.9% live with both parents, while 69% reported a monthly salary ranging between 200 and 3,000 pesos. Regarding the education of the parents, the majority have a high school level, with 32.5% for mothers and 31% for fathers. When asked if any family member regularly consumes alcohol or tobacco, 35.7% of the parents answered affirmatively for alcohol consumption, and 20.9% for tobacco consumption.

15.5% and 11.6% of the participants have tried to stop using alcohol and tobacco, respectively, which indicates that the majority of students are not interested in giving up these practices. In addition, the percentage of concern of a friend or relative for the consumption of alcohol or tobacco in this study group is very low, with 15.9% for alcohol consumption and 11.6% for tobacco consumption, that is, few people in this group carry out the consumption of these substances.

26.7% (n=74) of the total number of participants mentioned working, and the distribution by shifts (morning and evening) was equal. (Table 1)

Table 1. Percentage distribution of participants according to sociodemographic variables by academic unit

School	Sex		Civil Statud		Works	
	Male f. (%)	Female f. (%)	Single f. (%)	Other f. (%)	yes f. (%)	Not f. (%)
Mazatlán	20 (27.80)	52 (72.20)	62 (86.10)	10 (13.90)	21 (29.20)	51 (70.80)
Culiacán	29 (25.20)	86 (74.80)	93 (80.90)	22 (19.10)	28 (24.30)	87 (75.70)
Los Mochis	26 (28.90)	64 (71.10)	75 (83.30)	15 (16.70)	25 (27.80)	65 (72.20)
Total	75 (27.10)	202 (72.90)	230 (83.00)	47 (17.00)	74 (26.70)	203 (73.30)

Source: Tejada Rangel, E. (2016).

Regarding the academic degree, the Mazatlán school was the one with the lowest percentage of participants, followed by the Los Mochis academic unit and, finally, Culiacán. This is due to its population proportion in current enrollment (Figure 1).

Figure 1. Percentage distribution of students by school grade in each school
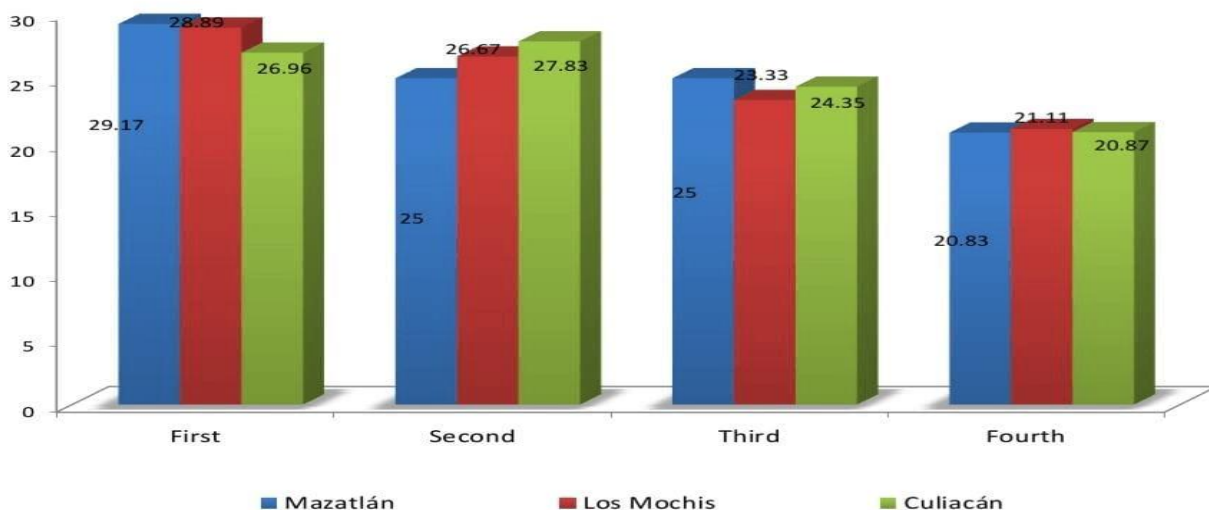
Source: Tejada Rangel, E. (2016)

Mazatlán was the school with the highest percentage of working students, with 29.2%, followed by Los Mochis (28.1%), and with a lower percentage in Culiacán, with 24.4%. No statistically significant evidence was found (p=0.729). It is worth mentioning that 9.5% of the 74 students who stated that they work have jobs as waiters, an activity that could put alcohol and tobacco consumption at risk. Both Mazatlán and Culiacán are the academic units with the highest number of students who work as waiters (Table 2).

Table 2. Percentage distribution of students by school and work performed

SCHOOL	FAMILY BUSINESS f (%)	SERVICE PROVIDER	WAITER f (%)	RELATED NURSING f (%)	TOTAL f (%)
Mazatlán	5 (23.80)		3 (14.30)	3 (14.30)	9 (42.90)
Culiacán	11 (33.30)		4 (12.10)	11 (33.30)	4 (12.10)
Los Mochis	9 (32.10)		2 (7.10)	2 (7.10)	9 (32.10)

Source: Tejada Rangel, E. (2016).

When alcohol consumption was considered in two categories, according to the AUDIT classification, it was not statistically different between the students of the three schools, p=0.909. (Table 3).

Table 3. Alcohol consumption by academic unit.

ACADEMIC UNIT	I DO NOT CONSUME F (%)	YES CONSUMPTION F (%)	TOTAL
Mazatlán	30 (24.10)	41 (26.60)	71
Culiacán	52 (42.30)	64 (41.60)	116
Los Mochis	41 (33.30)	49 (31.80)	90
Total	123 (44.40)	154 (55.60)	277

Source: Tejada Rangel, E. (2016).

When tobacco use was considered in two categories, according to the FAGESTROM classification, it was not statistically different between the students of the schools, p=0.447. (Table 4).

Table 4. Distribución del nivel de consumo de consumo de tabaco por escuela

SCHOOL	TOBACCO USE		
	Not f (%)	Yes f (%)	Total f (%)
Mazatlán	71 (98.61)	1 (1.39)	72
Culiacán	111 (96.52)	4 (3.48)	115
Los Mochis	89 (98.89)	1 (1.11)	90
Total	271 (97.83)	6 (2.14)	277

Source: Tejada Rangel, E. (2016)

Depression prevalence results

When depression was considered in two categories, according to the CES-D classification, it was statistically different among the students of the three academic units, p=0.015. (Table 5).

Table 5. Distribution of the level of depression in two categories by academic unit

ACADEMIC UNIT	DEPRESSIÓN				
	Not f (%)	Yesi f (%)	RM	IC95%	Value p
Culiacán	92 (79.31)	24 (20.69)	1.00		
Mazatlán	55 (77.46)	16 (22.54)	1.12	0.55 – 2.28	0.765
Los Mochis	56 (62.22)	34 (37.78)	2.31	1.25 – 4.32	0.007*
Total	203 (73.30)	74 (26.70)			

RM ≡ Odd Ratio, IC95% ≡ Confidence Interval 95%. *Statistically significant 5%.

Source: Tejada Rangel, E. (2016)

Anxiety prevalence results

When anxiety was considered in two categories, according to the HAMILTON classification, it was not statistically different among the students of the three academic units, p=0.476. (Table 6).

Table 6. Distribution of the Anxiety level in two categories by academic unit

SCHOOL	ANXIETY	
	Not f (%)	Yes f (%)
Mazatlán	61 (85.90)	10 (14.10)
Culiacán	101 (87.10)	15 (12.90)
Los Mochis	73 (81.10)	17 (18.90)
Total	235 (84.80)	42 (15.20)

Source: Tejada Rangel, E. (2016).

Associations between main variables

When evaluating the association between alcohol consumption and tobacco in 2 categories, this was statistically significant, p=0.035, it is observed that 2.2% of the students who reported consuming tobacco also consume alcohol; On the other hand, approximately 50% of the students who consume alcohol reported consuming tobacco (Table 7).

Table 7. Association of alcohol and tobacco consumption in 2 categories

ALCOHOL	TOBACCO	
	I do not consume f (%)	If l Consume f (%)
I do not consume	123 (44.40)	0 (0.00)
If l Consume	148 (53.40)	6 (2.20)
Total	271 (97.80)	6 (2.20)

Source: Tejada Rangel, E. (2016).

When alcohol use and anxiety were classified into two categories, insufficient evidence was found in the data to indicate a significant association (p = 0.867) (Table 8).

Table 8. Percentage distribution of alcohol consumption and anxiety

Alcohol Consumption	No Anxiety f (%)	With Anxiety f (%)	Total f (%)
I do not consume	105 (37.91)	18 (6.50)	123 (44.40)
If l Consume	130 (46.90)	24 (8.70)	154 (55.60)
Total	235 (84.84)	42 (15.20)	277

Source: Tejada Rangel, E. (2016).

In the analysis of alcohol consumption and its association with depression in students, using Pearson's chi-square test, statistically significant evidence indicating an association was found, p = 0.012 (Figure 2).

Figura 2. Alcohol Consumption Association AUDIT with depressión CES-D
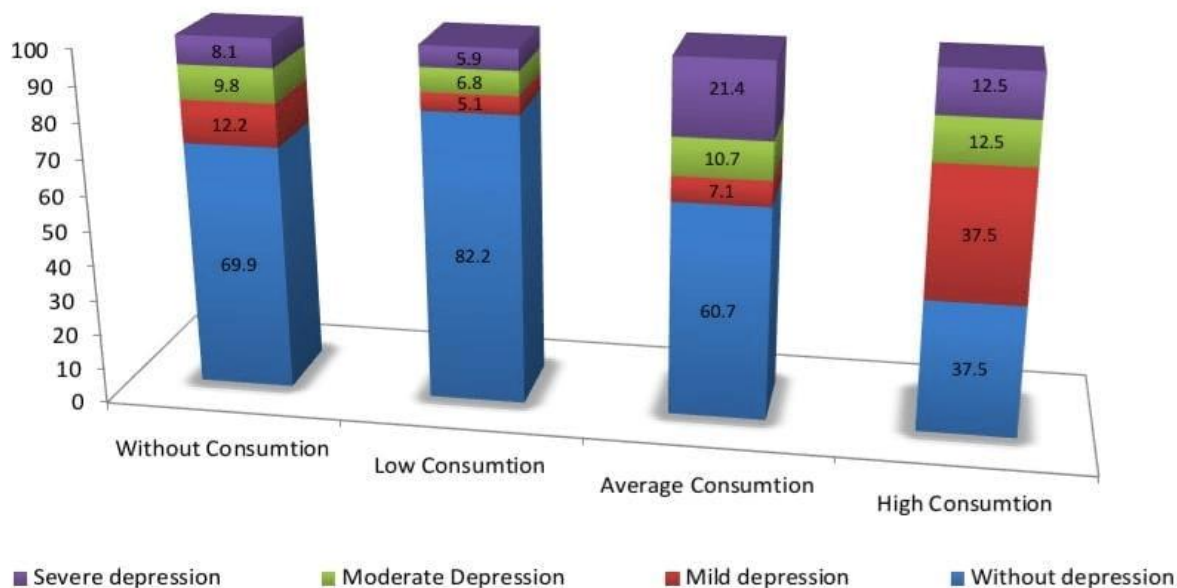
Source: Tejada Rangel, E. (2016)

In the analysis of students with depression and its association with tobacco use, in two categories through Pearson's chi-square test, no statistically significant evidence indicating an association was found, p = 0.192 (Table 9).

Table 9. Association between depression and tobacco use in two categories

CES-D (Depressión)	FAGESTROM (Tobacco)		
	I do not consume f (%)	If l Consume f (%)	Total f (%)
No Depressión	200 (98.50)	3 (1.50)	203 (73.30)
With Depressión	71 (95.90)	3 (4.10)	74 (26.70)
Total	271(97.8)	6 (2.20)	277

Source: Tejada Rangel, E. (2016)

In the analysis of anxiety and tobacco consumption in 2 categories, there is no evidence of statistical significance p= 1,000. (Table 10).

Table 10. Association of anxiety and tobacco use.

HAMILTON (Anxiety)	FAGESTROM (Tobacco)		
	I do not consume f (%)	If l Consume f (%)	Total f (%)
No Anxiety	230 (83.00)	5 (1.80)	235 (84.80)
With Anxiety	41 (14.80)	1 (0.40)	42 (15.20)
Total	271 (97.80)	6 (2.20)	277

Source: Tejada Rangel, E. (2016).

In the analysis of students with anxiety and its association with depression, through Pearson's chi-square test, statistically significant evidence indicating an association was found, p = 0.000 (Table 11).

Table 11. Association between depression and anxiety

HAMILTON (Anxiety)	CES-D (Depressión)				
	No Depressión f (%)	D. mild f (%)	D. Moderate f (%)	D. Severe f (%)	Total f (%)
No Anxiety	190 (93.60)	20 (76.90)	15 (62.50)	10 (41.70)	235 (84.80)
Anxiety. Leve	11 (5.40)	6 (23.10)	8 (33.30)	8 (33.30)	33 (11.90)
Anxiety Moderada	2 (1.00)	0 (0.00)	1 (4.20)	6 (25.00)	9 (3.20)
Total	203 (73.30)	26 (9.40)	24 (8.70)	24 (8.70)	277

Source: Tejada Rangel, E. (2016)

Logistic regression analysis to estimate the risk of alcohol consumption (AUDIT) according to the level of anxiety (HAMILTON)

In the analysis of the level of alcohol consumption and its association with anxiety in nursing students, through Pearson's chi-square test, statistically significant evidence was found (p = 0.031).

It is important to mention that the logistic regression analysis shows that the risk of consuming alcohol at medium or high levels is greater in those students who present a moderate level of anxiety. In other words, a student with moderate anxiety is 7.9 times more likely to have a medium alcohol intake, and if her depressed state is high, she is 17.5 times more likely to have a heavy alcohol intake.

Logistic regression analysis to estimate odds ratio for anxiety (HAMILTON) and Depression (CES-D)

Through the logistic regression analysis, the odds ratios were estimated, which showed that students with some level of anxiety (mild or moderate) have a higher risk of suffering from a depressed (OR=8.8) or somatic effect (OR= 31.6) compared to those without anxiety symptoms (p<0.05).

Discussion

The World Health Organization (WHO) mentions that the law establishes a specific age to be able to buy and/or consume alcoholic beverages in almost all countries where alcohol consumption has been legalized. This is because in minors this practice has repercussions on the health and development of the person. The WHO reveals another important figure of alcohol consumption worldwide in adolescents: 26%. However, in the nursing student population of this research, it is 55.6%. This is an alarming fact if we remember the repercussions for health that this practice has. In addition, the National Commission against Addictions in Mexico reports important data on alcohol consumption in the Mexican population: 51.4% of its total population (men: 62.7% and women: 40.8%). These figures are similar in the present investigation, which reports an alcohol consumption of 55.6%. In the population of nursing students in Sinaloa, consumption is higher in men. In addition, statistical evidence of association was found (p=0.005), which means that gender does have relevance in alcohol consumption. While the school grade is also relevant and is statistically associated with alcohol consumption (p=0.009), and the risk of alcohol consumption is 2.4 times higher in fourth graders compared to first graders. Meanwhile, Leyva Díaz, in Costa Rica, in her study of analysis of factors associated with the phenomenon of drugs in second and fourth year students of the nursing degree, found that it is in the second year where there is more consumption of this substance. types of substances such as tobacco and alcohol (62.2%).

Regarding tobacco consumption, the present investigation reports an association with sex (P=0.049). With this data, we can deduce that sex does determine tobacco consumption. CONADIC mentions that tobacco consumption in the population of Mexican adolescents is 12.3% (1.7 million) of adolescents who are active smokers, 16.4% are men (1.1 million) and 8.1% are women (539 thousand). In this research, tobacco use also predominates in a greater proportion in men, this being 5.3%. Regarding the consumption of these legal drugs, both alcohol and tobacco, we agree with the study by Ortega Pérez, Costa Juniors and Pereira on the epidemiological profile of drug addiction in university students, who mentions that the age of initiation of consumption is between 13 and 21 years (Ortega- Pérez CA, et al. 2011).

Depression is a common disease throughout the world; It is estimated that it affects about 350 million people. According to the WHO, it can become a serious health problem, especially when it lasts for a long time and is of moderate to severe intensity. It can also cause great suffering and alter daily activities, communication and relationships with other people, as well as academics. The worst thing is that it can lead to suicide, which is the cause of a million deaths a

year. In the present investigation, we have 26.7% of students who present depression at some of its levels, this data is below that collected by Serrano, Rojas and Ruggeiro in Mexico on depression and anxiety in 218 university students between the ages of 18 and 21, who reported 57% depression (Serrano B. et al, 2013). These numerical data give evidence of the statement of the World Federation For Mental Health (WFMH, 2012) in its article "Depression: a global crisis", which predicts that by 2030, depression will occupy the first place in the world. The "Ramón de la Fuente Muñiz" National Institute of Psychiatry mentions that, among the ten main illnesses, three are mental illnesses and depression ranks first in prevalence in Mexico. The National Survey of Psychiatric Epidemiology mentions that depressive symptoms are one of the five main factors that limit student development (ENEP, 2010).

It is important to mention that anxiety can be defined as an anticipation and symptoms of tension that, to a certain extent, is a normal emotional state in certain situations and is a habitual response in certain stressful everyday situations. That is, some degree of anxiety is normal for the demands of the day. Serrano, Rojas and Ruggeiro found that 16.6% of the population in their study in Mexico had indicators of anxiety (Serrano B. et al, 2013). Given this figure, it can be noted that there is little difference with the results obtained in the present investigation, which reports 15.2% anxiety (n=42), of which the highest prevalence leans towards the male sex in 16%, compared to women (14.9%). This figure is important, since it was previously thought that anxiety disorders were exclusive to women, according to the National Survey of Psychiatric Epidemiology (ENEP, 2010).

This article has no limitations.

Conclusions

Alcohol is one of the most widely used psychoactive substances. Its consumption increases health risks and, among the effects it causes, are reactions that limit the development of students, such as lack of concentration, learning problems, impaired communication with peers, among others. In this group of nursing students, it is even more alarming to know the prevalence of alcohol consumption, which is over 50%, above what the WHO mentions for the adolescent population worldwide, which is 26%, and very similar to the consumption of this substance in the Mexican population, which is 51.4%, according to the National Survey of Addictions. These data make us reflect: how could a group affected by alcohol consumption serve the population to which it will provide its services, which views it as a model and which, at some point, will take charge of health programs? The problem of tobacco consumption is another of the social problems that the

Mexican population currently faces. Whoever smokes not only affects himself, but also those around him. Tobacco represents one of the greatest threats to public health that the world has had to face, since the health costs are high. Although campaigns are carried out against this practice, where the consequences of its use are made known, it has not been possible to reduce the risk of consumption, which is increasing. The WHO mentions that tobacco is one of the most addictive and easily accessible substances. If we remember that the age to buy both alcohol and tobacco in Mexico is 18 years, will we be missing this legal health policy?

The symptoms of depression are varied. Some people have not just one symptom, but more than one, such as sadness, hopelessness, lack of interest, lack of appetite, or perhaps more appetite than usual. These, among other symptoms, make up the depressive symptomatology. In this study, it was found that students present depressive traits in 26.7% of this study group, which is considered special due to its characteristics, among which those of being nursing students stand out, from whom society expects the best behavior. possible.

The "Ramón de la Fuente Muñiz" National Institute of Psychiatry, in Mexico, reports that depression ranks first in the country, affecting 20% of its population (ENEP, 2010). With this, we can realize the importance of attending to the mental health of this vulnerable group, considering the repercussions that it could have if they reach the end of their career in these depressed conditions and face the labor market, in the best of cases. But we must also take into account suicides that result from a severe depressive episode.

Within this group of mental problems, we have anxiety that, although it could be considered a natural human reaction that affects the mind and body, has an important basic survival function. It is an alarm system that is activated when a person perceives a danger or a threat. When this happens, people feel increased heart rate and breathing, muscle tension, sweating of the palms of the hands, upset stomach, tremor in the legs; All these sensations are part of the body's response to flight or fight and are mainly caused by an increase in the production of adrenaline, which allows rapid escape from danger. In this research, the Hamilton questionnaire was used to assess students' anxiety at various levels, and the results obtained indicate that 26.7% of the population studied presents anxiety at one of its levels.

Nursing students at the Autonomous University of Sinaloa present traits of anxiety, depression, alcohol and tobacco consumption, with significant evidence of association between them, as well as with some of the sociodemographic variables. An example of this is that alcohol consumption increases with the advancement of the school grade. This information is particularly useful for carrying out educational interventions in students in advanced school grades, and for carrying out

a post-intervention evaluation to assess its effectiveness. In addition, one should not stop thinking about the elaboration of programs as an educational proposal to present it in the scheduled meetings held by the three schools, in which changes are made to the programs and where the proposals could be resumed.

Future lines of research

The behavior, some feelings and reactions of the organism are related to biochemical processes, such as the discharge of adrenaline to flee or act if necessary. Sometimes these processes get out of control, and this is when anxiety and, in some cases, depression become a threat to education. This also impacts the numbers of students in terms of dropouts and low grades. Therefore, it is advisable to consider the implementation of a mental health program that allows students to redirect their mental health through the support of qualified personnel, deepen their feelings and reactions, internalize and accept help.

Human behavior and decision-making, regarding how correct and erratic it can be to direct behavior towards the consumption or not of legal drugs, is so diverse that, even knowing this social problem, human beings continue to carry it out. Therefore, it is essential to explore, from a qualitative analysis, elements such as feelings, the family environment and friendship. Undoubtedly, this review will provide very important elements for the construction of interventions aimed at this group of students, taking up the results for future research. Thus, they can be analyzed in the future, since their scope exceeds what was originally planned.

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