

Anxiety Level and Associated Factors: Pharmacy Students from a Private College

Nível de ansiedade e fatores associados: Estudantes de Farmácia de uma faculdade privada

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RESUMO

Objetivo: Avaliar o perfil de ansiedade de estudantes do curso de Farmácia em uma Instituição particular do Distrito Federal e verificar fatores associados. **Método:** Trata-se de um estudo transversal, realizado, entre novembro de 2018 a abril de 2019, com 200 estudantes de graduação do curso de Farmácia de uma faculdade particular do Distrito Federal. O instrumento utilizado foi o Inventário de Ansiedade de Beck (BAI), validado no Brasil, composto por 21 perguntas de múltipla escolha, referentes ao estado emocional, fisiológico e cognitivo da última semana. Foram também avaliados dados sociodemográficos e hábitos de vida. **Resultados:** A amostra foi constituída por maioria mulheres (76%), sem companheiro (64%), com baixa classe econômica (62%), baixa ingestão de álcool (59%), estado nutricional (56% sobrepeso), inatividade física (66%) e percepção de saúde regular (32%). A maioria dos estudantes apresentaram elevado nível de ansiedade, sendo relacionado com sexo ($p=0,02$), estado civil ($p=0,04$), etilismo ($0<0,01$) e atividade física ($p=0,03$). Os estudantes que apresentaram o maior nível de ansiedade foram os etilistas, os inativos fisicamente e com sobrepeso. **Conclusão:** Os alunos de farmácia apresentaram elevados níveis de ansiedade e hábitos de vida inadequados. Assim, são necessárias intervenções que propiciem uma melhora desses níveis, impactando positivamente a formação acadêmica e a qualidade de vida dos estudantes. **Descritores:** Ansiedade; Farmácia; Universidade.

ABSTRACT

Objective: To evaluate the anxiety profile of students of the Pharmacy course in a private institution of the Federal District and to verify associated factors. **Methods:** This is a cross-sectional study, carried out between November 2018 and April 2019, with 200 undergraduate students of the Pharmacy course of a private college in the Federal District. The instrument used was the Beck Anxiety Inventory (BAI), validated in Brazil, composed of 21 multiple-choice questions concerning the emotional, physiological and cognitive state of last week. Sociodemographic data and life habits were also evaluated. **Results:** The sample consisted of a majority of women (76%), with no partner (64%), low economic class (62%), low alcohol intake (59%), nutritional status (56% overweight), physical inactivity 66%) and regular health perception (32%). ($P = 0.02$), marital status ($p = 0.04$), alcoholism ($0 < 0.01$) and physical activity ($p = 0.03$). The students who presented the highest level of anxiety were the alcoholics, the physically inactive and overweight. **Conclusion:** Pharmacy students presented high levels of anxiety and inadequate life habits. Thus, interventions are necessary to improve these levels, positively impacting the academic formation and quality of life of the students. **Descriptors:** Anxiety; Pharmacy; University.

ORIGINAL

Introduction

Anxiety has been manifested in a significant way in the last century and this is related to occurred change on the economical, social and cultural sphere, once such change end up requiring that the population is adapted to a new rythm, which we are not used to, making the 20th century known as the “anxiety era”.¹

Anxiety is an emotional condition related to side effects.² In adequate levels, anxiety is beneficial, stimulant, propelling and motivating and ends up becoming an important element to obtain satisfactory results in the daily life of the individual.³

The word anxiety originates from the Greek *anshein*, that means to strangle, suffocate, oppress. Hence one of the most striking symptoms of anxious processes: difficulty breathing.⁴ Other related symptoms are chest pains, palpitations, sleep disorders, xerostomia, muscle tension, fatigue, restlessness and difficulty concentrating.⁵

The admission period as a student in higher education institutions is usually a phase of maturational physiological, neurological and psychological transformations, arising from the transition from adolescence to adulthood, where young people experience a period of crisis due to the adapt to the new social role.⁶ In college, students are subjected to a great deal of stress due to long hours of study and personal collections of teachers and family members.⁷

Academic life in health courses is stressing due to requirements done throughout the course, activities and evaluations, increase of psychological pressure, mental fatigue and expectation in the job market.⁸

The financial and social requirements that the university environment imposes are also related to the increase of the rates of psychological morbidity, being detected by several instruments.⁹ Added to these characteristics, there is also the influence of society, which generates enormous pressure on the individual, through exacerbated demands, dictated socioeconomic patterns and determinations which all must fit.¹⁰

Anxious profiles are found mainly in front of oral presentations, observing a behavioral oscillation of students before, during and after these expositions, with feelings and states of happiness, anxiety and interest being the most prevalent.¹¹

According to some authors, psychological disorder occurs between 14% to 19% of students during academic life and that only one picture seeks professional help. In screening for anxiety levels among nursing students, 43.6% of university students with high anxiety levels and 36.6% with moderate levels.¹²⁻¹³

As a public health problem, anxiety disorders, in addition to generating onus with the treatments, which are often prolonged, are predisposing factors to the appearance of other comorbidities and situations, such as hypertension, diabetes mellitus and cases of suicide.¹⁴

Episodes of binge eating and obesity were associated with women with more marked anxious states. The study was conducted with 113 women and the instrument for determining anxiety was the Beck Anxiety Inventory.¹⁵

In view of the above, this study aimed to evaluate the anxiety profile of students of the course of Pharmacy in a private institution of the Federal District and to verify associated factors.

Method

It is a cross-sectional study, developed, between November 2018 and April 2019, with 200 undergraduate students in the Pharmacy course in a private university in the Federal District of Brazil.

All who participated in this research were invited, taking care to include in the study the students of the college who, in addition to accepting to participate, signed the Informed Consent Term (ICF).

Researchers explained to the students present the objectives and importance of the study and invited everyone to answer the questionnaires composed of questions about the level of anxiety and general characteristics of the participants.

Regarding sociodemographic issues, participants reported their gender (male, female), age (20-25 years, 26-31 and > 32 years), marital status was categorized as "unmarried" (single, separated or widowed) (yes/no), consume alcohol (yes/no), self-perception of health (excellent, very good, good, fair and poor), with which resides (parents, friends, relatives) and practiced physical activity above 150min/week.

The socioeconomic level was estimated by the questionnaire of the Brazilian Association of Research Companies - 2016, which divides the Brazilian population into 5 economic classes, in descending order of purchasing power (A1, A2, B1, B2, C1, C2, D e E). In the present study, the categories were dichotomized in the upper class (A1, A2, B1, B2) and lower class (C1, C2, D, E).

The instrument used in this study was the Beck Anxiety Inventory (BAI), validated in Brazil, composed of 21 questions regarding the emotional, physiological and cognitive state of the last week. The questions are multiple choice, each with an associated score: Not at all (0), Slightly (1), Moderately (2), and severely (3). The score varies between 0 and 63 points, being classified in the bands of anxious profile: 0-7 Minimum; 8-15 Smooth; 16-25 Moderate and 25-63 Severe (56).

To complete the BAI, the participant was previously advised that there are no right or wrong answers and that the questions are referred to the last week, including the day of the inventory. The variables were dichotomized in 2 groups: non-anxious (minimal and mild) and anxious (moderate and severe).

Data were entered and checked for possible inconsistencies. A descriptive analysis of the data was performed to verify frequencies, as well as means and standard deviation. The Chi-square test and Fisher's exact test were used to compare prevalences. All analyzes were performed in the STATA 12.0 program, and the significance level adopted was 5%. The study observed the guidelines of Resolution No. 466/2012 of the National Health Council and was

approved by the Research Ethics Committee of the University of the Federal District (UDF), receiving approval (CAAE:59713316.0.0000.5650).

Results

General characterization is presented on Table 1.

Table 1. Description of the sample according to college students characteristics.

Variable	n	%
Sex		
Female	152	76
Male	48	24
Age (years)		
20 a 25	122	61
26 a 31	60	30
≥ 32	18	9
Marital status		
With Partner	72	36
Without Partner	128	64
Self-percetion of Health		
Excelent	25	12.5
Very Good	33	16.5
Good	49	24.5
Regular	64	32.0
Bad	29	14.5
Smoking		
Yes	64	32
No	136	68
Consomes alcohol		
Yes	82	41
No	118	59
Socioeconomic level		
High class	76	38
Low class	124	62
Perform Physical Activity (≥ 150 min/week)		
Yes	68	34
No	132	66
Nutritional Status (kg/m²)		
Normal	77	38.5
Overweight	112	56.0
Obesity	11	5.5

The majority of the sample consisted of female subjects (76%), aged between 20 and 25 years (61%), who were without a partner (64%), low-income class (62%), non-smokers %, but 41% regularly drank alcohol. Regarding

nutritional status, 56% of the students were overweight, 32% classified their health as regular and 66% did not perform regular physical activity.

With the Beck Anxiety Inventory scores, 14.2% of university students with a minimum anxiety profile, 28.7% with a mild profile, 42.6% moderate and 14.5% severe (Table 2).

Table 2. Anxiety level on students

Anxiety Level	N	%
Minimal	28	14,2
Soft	57	28,7
Moderate	85	42,6
Severe	30	14,5

When the groups were dichotomized, we observed that: 85 (42.9%) were classified as non-anxious and 115 (57.1%) were anxious.

The majority of students presented a high level of anxiety, being related to sex ($p=0,02$), marital status ($p=0,04$), alcoholism ($0<0,01$) and physical activity ($p=0,03$). Students who presented the highest level of anxiety were the alcoholics, the physically inactive and overweight (Table 3).

Table 3. Association between anxious and non-anxious with sociodemographic data and lifestyle.

	Anxious	Non anxious	
Variables	N	N	p-value
Sex			
Female	88	58	
Male	27	27	0.02*
Physical activities			
No	75	57	0.04*
Marital Status			
Without partner	72	56	0.03*
Alcohol consumption			
Yes	68	14	<0.01*
Nutritional status (kg/m²)			
Overweight	81	31	<0.01*

* $p<0.05$

Discussion

The present study points a higher index of anxiety on females, as 60% suffer with anxiety.¹⁶ In a study conducted in private college, showing a 66.4% prevalence in females.

Other studies corroborate this information and investigate the factors of susceptibility related to gender, where some evidence points to genetic issues and female sex hormones.¹⁷

Regarding Self-perception of health, the study showed that 29% of students consider their life excellent and very good.

Self-perception of health is based on subjective and objective criteria, and reflects on an individual's perception, including biological, psychological and social aspects of the individual.¹⁸

With regard to alcohol consumption, most academics do not consume. Data that differ from the study with medical students, where it was observed that 81.2% of the students consumed. However, there is a preponderance of anxiety in those who consume, with 82% of these classified as anxious.¹⁹

It is noteworthy that other studies have shown that not only medical students but also undergraduates in the areas of Humanistics and Biomedicine tend to be more anxious than students in the Technological area.²⁰

In the study carried out in a University in Minas Gerais also showed that tobacco was the substance of second highest frequency of use, as far as the results of this research were observed that 31.3% of students of Pharmacy were smokers, being the alcohol the psychoactive substance most consumed among them (89,7%).²¹

Alcohol consumption and smoking are now world-class problems and constantly affect young people, bringing problems to health, whether psychic and/or physical.

A survey conducted at the State University of São Paulo (UNESP) showed that 6.5% of college students and 4.2% of college graduates frequently use drugs to reduce anxiety and stress.²² Occupying the third position among the major risk factors in the world, alcohol consumption is identified as a serious public health problem by the World Health Organization.²³

Regarding the socioeconomic level, 124 people presented low class in the study on mental health in students of higher education, where it portrays an opposite value of 43.1% of people with low socioeconomic level presenting anxiety.²⁴

Regarding the practice of physical activity in the same study, the authors describe that physical exercise tends to contribute to a mental health significantly superior to those who do not practice, exposing that 42.8% of people do not exercise and are anxious.²⁵

Regarding nutritional status, it is observed that 56% of the individuals are overweight and 72.3% of these individuals present anxiety, that is, the anxiety is higher in those who are overweight, higher values when compared to the sampling study with health students - obtained values of 53.7% people with BMI altered and not presenting anxiety.²⁶

In the evaluation of the degree of anxiety it was obtained that 14.2% of the university students presented a minimum degree; 28.7% smooth; 42.6% moderate and 14.5% severe degree of anxiety. Compared to the study by Medeiros et al. (2017), with health students, different results were observed, in which 62.7% had anxiety in a minimum degree, 27.3% in mild, 6.4% in moderate and 3.6% severe level of anxiety.

Conclusion

In view of the above, it was possible to identify high levels of anxiety and inadequate life habits in pharmacy academics.

Anxiety can be due to the overload with new and different responsibilities, these acquired upon joining a higher education institution, is worrying, as this factor contributes to the decline of academic performance, as well as reflected in the personal life of individuals.

Results also show that the level of anxiety is higher in female people, who use alcohol, do not exercise and are overweight.

In this sense, it is necessary that the faculty dedicate itself to analyzing with a holistic look the Pharmacy students, investigating factors that propitiate the development of these disorders, besides doing primary prevention, working with informative campaigns about effective measures of health promotion and healthy living habits, offering psychological support and programming strategies, thus enabling better academic development and higher quality of life.

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