Anxiety and depression symptoms in the academic environment: a cross-sectional study

Sintomas de ansiedade e depressão no ambiente acadêmico: um estudo transversal

Síntomas de ansiedad y depresión en el ambiente académico: un estudio transversal

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Abstract

Objective: To identify the prevalence of anxiety and depression symptoms and to verify the sociodemographic, academic and health factors associated with their occurrence in undergraduate nursing students.

Methods: This is a cross-sectional study, carried out in Fortaleza - CE between June and September 2019, with 199 students from a public university, regularly enrolled in the course. A sociodemographic questionnaire was applied, the BECK Depression Inventory - II, in addition to the BECK Anxiety Inventory. The analysis of the association between predictor variables and outcomes was performed using Pearson's chi-square test, considering p-values less than 0.05 as statistically significant. Ethical aspects were respected.

Results: The prevalence of severe anxiety and minimal depression symptoms was 119 (62%) and 59 (29.6%), respectively. A statistically significant association was observed between severe anxiety symptoms and the variables: age up to 21 years, absence of religion, non-heterosexuals, concern about the future, not having time for leisure and psychotropic drug use. Regarding depression symptoms, an association was observed with the variables age up to 21 years, lack of leisure time, dissatisfaction with leisure time, physical inactivity, insomnia and psychotropic drug use.

Conclusion: It is concluded that the conditions associated with anxiety and depression symptoms were more related to academic and health variables. In this way, the importance of early identification and devising strategies related to the symptoms observed is perceived.

Resumo

Objetivo: Identificar a prevalência de sintomas de ansiedade e depressão e verificar os fatores sociodemográficos, acadêmicos e de saúde associados à ocorrência desses em estudantes de graduação em Enfermagem.

Métodos: Estudo transversal, realizado em Fortaleza - CE entre os meses de junho a setembro do ano de 2019, com 199 alunos de uma universidade pública, regularmente matriculados no curso. Foi aplicado um questionário sociodemográfico, o Inventário de Depressão de BECK – II, além do Inventário de Ansiedade de BECK. A análise da associação entre as variáveis preditoras e os desfechos foi realizada por meio do teste de Qui-quadrado de Pearson, considerando significância estatística os valores de p menores que 0,05. Os aspectos éticos foram respeitados.

Resultados: A prevalência de sintomas de ansiedade grave e depressão mínima foi de 119 (62%) e 59 (29,6%), respectivamente. Foi observado associação estatística significativa entre sintomas de ansiedade grave e as variáveis: idade até 21 anos, ausência de religião, não heterossexuais, preocupação com o futuro, não ter tempo para lazer e uso de psicotrópicos. Com relação aos sintomas de depressão, percebeu-se

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associação com as variáveis idade até 21 anos, ausência de tempo para lazer, insatisfação com o tempo de lazer, inatividade física, insônia e uso de psicotrópicos.

Conclusão: Conclui-se que as condições associadas aos sintomas de ansiedade e depressão estiveram mais relacionadas às variáveis acadêmicas e de saúde. Dessa forma, percebe-se a importância de identificar precocemente e traçar estratégias relacionadas aos sintomas observados.

Resumen

Objetivo: Identificar la prevalencia de síntomas de ansiedad y depresión y verificar los factores sociodemográficos, académicos y de salud asociados a estos episodios en estudiantes de Enfermería.

Métodos: Estudio transversal, realizado en Fortaleza, estado de Ceará, entre los meses de junio y septiembre del año 2019, con 199 alumnos de una universidad pública, regularmente matriculados en la carrera. Se aplicó un cuestionario sociodemográfico, el Inventario de Depresión de Beck – II, además del Inventario de Ansiedad de BECK. El análisis de relación entre las variables predictoras y de resultado fue realizado por medio de la prueba ² de Pearson, en el que se consideró significación estadística los valores de p menores que 0,05. Los aspectos éticos fueron respetados.

Resultados: La prevalencia de síntomas de ansiedad grave fue de 119 (62 %) y de depresión mínima 59 (29,6 %). Se observó relación estadística significativa entre los síntomas de ansiedad grave y las variables: edad hasta 21 años, ausencia de religión, no heterosexuales, preocupación con el futuro, no tener tiempo de ocio y uso de psicotrópicos. Con relación a los síntomas de depresión, se percibió relación con las variables: edad hasta 21 años, ausencia de tiempo de ocio, insatisfacción con el tiempo de ocio, inactividad física, insomnio y uso de psicotrópicos.

Conclusión: Se concluye que las condiciones asociadas a los síntomas de ansiedad y depresión estuvieron más relacionadas con las variables académicas y de salud. De esta forma, se percibe la importancia de una identificación temprana y la elaboración de estrategias relacionadas con los síntomas observados.

Introduction

According to the World Health Organization (WHO), the global proportion of people with anxiety disorder (AD) and depression in the world is 3.6% and 4.4%, respectively. In Brazil, this proportion rises to 9.3% and 5.8%, respectively, having the population with the highest number of cases of AD in the world.[1]

According to the classification of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V), anxiety is an anticipation of future threat and is related to vigilance in preparation for future dangers and constant avoidance behaviors.[2] In turn, depressive syndromes present sad mood and discouragement as the most predominant elements.[3]

In this context, anxiety and depression are characterized as conditions that can manifest at different stages of human life, especially in adolescence. Among the changes that occurred during this phase, university life stands out. The literature shows that 15 to 25% of university students have some psychiatric disorder, the majority being AD and depression.[4] It is observed that in the academic environment, the student, still very young, is faced with new requirements, teaching methods, cultures and habits that will require a change in behavior that can lead to the experience of various conflicts.[5]

Moreover, the concern about the need to enter the job market in the future becomes constant, and often leads students to experience a double workday: employment and academic career. The fulfillment of an extensive workload and the participation in different projects, such as research groups, extension projects, monitoring, events and courses, are also stressors that can lead students to physical and mental fatigue and, consequently, the limitation of free time, both for personal life and for leisure, which can compromise individuals' quality of life and lead to the appearance of anxiety and depressive symptoms.[6]

Studies indicate that continuous stress situations related to limited contact with pleasurable moments can generate feelings related to anxiety and depression, in addition to influencing the impulse to use illegal substances.[7.8]

A survey carried out with 205 nursing students from a public university in northeastern Brazil with the objective of identifying the prevalence of anxious and depressive symptoms showed that 30.2% had depression symptoms. Also, more than half of the sample reported having sleep disorders and little time for leisure, factors that may be interconnected with the severity of depression and anxiety symptoms. There was also an association between the level of depressive symptoms and the exercise of work activities, which may be related to the physical or mental effort used to perform such activities.[9]

Among students in the health area, it is believed that the prevalence of these symptoms is higher, due

to factors that are still poorly understood. However, some studies indicate that nursing students, when compared to students from other courses, have additional factors that can lead to the development of anxiety and depression symptoms due to insecurity in clinical practice, lack of skill in the relationship with patients, fear of making mistakes, psychological distress and situations in which they must deal with the imminence of death.[9,10]

In view of this, there is a need for studies with nursing students, in line with the world discussions about the importance of mental health, especially regarding the emergence of anxiety and depression symptoms, because these students deal with different situations at the university and in their personal lives that can lead to the emergence of these symptoms. In addition to this, these studies can highlight the importance of knowing the sociodemographic, academic and health factors that are associated with the emergence of anxiety and depression symptoms. In this regard, from the situational diagnosis carried out in the present study, it is possible to develop strategies that promote an academic environment sensitive to mental health issues that help students to cope with personal and academic situations and allow care also to students.

That said, the study aims to identify the prevalence of anxiety and depression symptoms and verify sociodemographic, academic and health factors associated with their occurrence in undergraduate nursing students.

Methods

This is a cross-sectional study, carried out at a federal public university located in the capital of Ceará, between June and September 2019. The research was carried out with students of the nursing course at this institution, in order to analyze the sociodemographic, academic and health factors that interfere with the emergence of anxiety and depression symptoms, as well as to identify the prevalence of symptoms of these disorders in this group.

The selected institution has a full-time degree since 1976, lasting five years, and stands out for the excellence of the teaching offered. Students are admitted every semester, through entrance examination, in addition to transfers between universities, change of course and opening of vacancies for graduates, totaling 40 vacancies per semester.

Probabilistic, simple and stratified random sampling was used. The number of regular students in the semesters differs due to dropout, so the sample was proportional to the number of students enrolled in each semester. A lottery was carried out to indicate the study participants based on a list made available by the coordination consisting of all students enrolled in the course, per semester.

A sample size calculation was performed for finite populations with a prevalence of 50%, a sampling error of 5% and a significance level of 95%, obtaining a sample size of 194 students. However, in order to mitigate possible losses, a sample of 199 participants was adopted; however, only 192 students chose to answer the BECK Anxiety Inventory – BAI.

Students over 18 years of age and regularly enrolled in the course were included. Those unable to attend any subject, students on leave or in institutional enrollment were excluded.

Prior to data collection, the researchers applied a pre-test with 12 students and two professors in order to solve possible doubts in the questionnaire, making it more feasible and adapted to obtain the data.

Information was collected through a structured questionnaire, composed of sociodemographic, academic and health variables, which were listed as predictor variables. For assessment of anxiety and depression symptoms, considered as outcome variables, the BECK Anxiety Inventory - BAI and the BECK Depression Inventory - II were used. The BECK Anxiety Inventory – BAI[11] was adapted by Cunha[12] with a Cronbach alpha ranging from 0.71 to 0.72 and presents symptoms common to anxiety, related to the latter week. The total score is identified by the sum of the individual scores for each item. According to the Brazilian Portuguese version precepts, anxiety symptoms can be stratified into: minimal (up to 10 points), mild (from 11 to 19 points), moderate (from 20 to 30 points) and severe (from 31 to 63 points).

The Beck Depression Inventory-II (BDI-II)[13] was translated and validated for Brazil by Gorenstein,[14] with a Cronbach's alpha of 0.89. It consists of 21 groups of statements, with response items ranging from four to seven options, referring to the feeling in the current week and scores ranging from 0 to 3 for each statement. The maximum score is 63 points and the severity of depression symptoms can be classified as: minimal (from 0 to 13 points), mild (from 14 to 19 points), moderate (from 20 to 28 points) and severe (from 29 to 63 points). 63).

In the tables, to promote better interpretation and use of statistical tests, the severity of depression symptoms was organized into two groups, a minimal and mild level and another in a moderate and severe level.

The research presents students' enrollment semester as a potential for confusion, since there are differences between students' personal and academic experiences in the theoretical and practical cycle. To minimize it, this variable was used as a predictor in order to identify an association with the outcomes. Furthermore, the previous diagnosis of anxiety and depression among the selected students, the moment of data collection carried out at the end of the academic semester, when there is greater burden on students, must be considered as a potential for bias.

Variable tabulation and crossing were performed using Statistical Package for the Social Sciences - SPSS®, version 23. For descriptive statistics data, absolute and relative frequency were used. To investigate the association between categorical variables, Pearson's chi-square test was applied, and a p was considered to be statistically significant, assuming a value lower than 0.05.

The research was approved by the *Universidade Federal do Ceará* committee, under Opinion 3,284,038, in compliance with the principles of Resolution 466/12 established by the Brazilian National Health Council (*Conselho Nacional de Saúde*).[15]

Results

The participant profile in relation to age varied from 17 to 47 years and the range from 20 to 24 years rep-

resented the majority of respondents, 137 (68.8%) students. Regarding marital status, most students reported being single, 183 (92%). Those who consider themselves non-white accounted for 150 (75.4%) respondents. The most prevalent gender identity was heterosexual, 164 (82.4%), and having a religion presented 167 (83.9%) reports. Regarding income, 112 (63.6%) reported having income greater than two minimum wages and 180 (90.5%) said they did not have a job. Furthermore, the female gender was the most prevalent, 164 (82.4%).

With regard to academic variables, 190 (95.5%) reported not having withdrawn from enrollment, among the 9 who had withdrawn, and 162 (81.4%) responded that they had not failed during the course. Regarding the course, 180 (90.9%) reported being satisfied with the course, although 146 (73.4%) said they did not have time to study. As for complementary academic activities, 165 (82.9%) reported performing extra activities and 107 (54%) did not have an academic scholarship. In addition, 183 (92.9%) responded that they were concerned for the future.

Furthermore, it is noteworthy that the students' semester was considered as a potential for confusion. Thus, 24 (12.1%) of students were enrolled in the first semester, 23 (11.6%), in the second, 23 (11.6%), in the third, 21 (10.6%), in the fourth, 16 (8%), in the fifth, 14 (7%), in the sixth, 20 (10.1%), in the seventh, 19 (9.5%), in the eighth, 19 (9.5%), in the ninth, 20 (10.1%), in the tenth, 91 (45.7%), in the basic cycle, and 108 (54.3%), in the practical cycle.

Regarding health variables, the majority reported having time available for leisure, 170 (85.4%). However, 130 (71.4%) did not demonstrate satisfaction with this time for leisure, 126 (64.3%) reported not having insomnia.

With regard to life habits, 100 (50.3%) denied using licit drugs. However, unlike these, 96 (48.2%) reported using alcohol and 3 (1.5%) using cigarettes. When analyzing illegal drug use, 175 (87.9%) denied consumption.

Regarding anxiety symptoms, there was a prevalence of moderate anxiety levels 73 (38%) and 119 (62%) severe and none of the students had mini-

mal and mild anxiety levels. As for the prevalence of depression symptoms, 59 (29.6%) had the minimum level. Levels of mild 39 (19.6%), moderate 53 (26.6%) and severe 48 (24.1%) depression were also observed in the students.

Table 1 presents the data referring to the association between sociodemographic variables and nursing students' anxiety levels.

Table 1. Association of sociodemographic variables with nursing students' anxiety levels

Variables (n=192)	Moderate BAI n(%)	Severe BAI n(%)	rawOR	95% CI	p-value*
Age					0.006*
Up to 21 years	28(28.6)	70(71.4)	0.436	0.240-0.791	
Above 21 years	45(47.9)	49(52.1)			
Gender identity					0.906*
Female	60(38.2)	97(61.8)			
Others	13(37.1)	22(62.9)			
Ethnicity					0.440*
White	16(33.3)	32(66.7)			
Others	57(39.6)	87(60.4)			
Partner					0.788*
No spouse	68(37.8)	112(62.2)			
With spouse	5(41.7)	7(58.3)			
Religion					0.019*
With religion	67(41.6)	94(58.4)	2.970	1.155-7.637	
No religion	6(19.4)	25(80.6)			
Sexual orientation					0.005*
Heterosexual	67(42.7)	90(57.3)	3.598	1.414-9.158	
Others	6(17.1)	29(82.9)			
Housing					0.854*
Living alone	5(35.7)	9(64.3)			
Not living alone	68(38.2)	110(61.8)			
Income					0.393*
Up to R$2,000.00	29(34.1)	56(65.9)			
> R$2,000.00	34(40.5)	50(59.5)			
Health insurance					0.974*
Yes	32(38.1)	52(61.9)			
No	39(37.9)	64(62.1)			

*Pearson's chi-square.

Symptoms considered as severe anxiety levels were observed in students aged up to 21 years (71.4%), non-religious (80.6%) and non-heterosexual (82.9%) participants, with statistical significance. There was a greater chance of developing severe anxiety symptoms: students up to 21 years old (43% greater chance), students with religion (2.97 times greater), and heterosexuals (3.59 times greater).

Table 2 presents the association of academic and clinical variables with the moderate and severe anxiety levels in nursing students.

Table 2. Association of academic and clinical variables with nursing students' anxiety levels

Variables (n=192)	Moderate n(%)	Severe n(%)	rawOR	95% CI	p-value*
Semester					0.269*
Basic cycle	29(33.7)	57(66.3)			
Practical cycle	44(41.5)	62(58.5)			
Subject failure					0.790*
Yes	14(40)	21(60)			
No	59(37.6)	98(62.4)			
Concern for the future					0.008*
Yes	63(35.8)	113(64.2)	0.223	0.067-0.740	
No	10(71.4)	4(28.6)			
Satisfaction with the course					0.986*
Satisfied	66(37.7)	109(62.3)			
Dissatisfied	6(37.5)	10(62.5)			
Leisure time					0.001*
Yes	71(42.8)	95(57.2)	8.968	2.052-39.197	
No	2(7.7)	24(92.3)			
Satisfaction with leisure time					0.052*
Yes	26(51)	25(49)			
No	44(35.2)	81(64.8)			
Physical activity					0.121*
Yes	34(44.7)	42(55.3)			
No	39(33.6)	77(66.4)			
Insomnia					0.069*
Yes	19(29.2)	46(70.8)			
No	53(42.7)	71(57.3)			
Legal drug use					0.102*
Yes	31(32.3)	65(67.7)			
No	42(43.8)	54(56.3)			
Illegal drug use					0.613*
Yes	8(33.3)	16(66.7)			
No	65(38.7)	103(61.3)			
Psychotropic drug use					0.027*
Yes	6(20)	24(80)	0.354	0.137-0.914	
No	67(41.4)	95(58.6)			

*Pearson's chi-square.

Severe anxiety level symptoms related to concern for the future, lack of time for leisure and psychotropic drug use were found, with statistical significance. The chance of developing symptoms with a severe anxiety level was 22% higher among students who were concerned about the future, almost 9 times higher among those who did not have time for leisure and 35% higher among participants who claimed to use psychotropic drugs. Table 3 presents the result of the associations between sociodemographic variables and depression levels in nursing students.

More severe depression symptoms were observed in students aged up to 21 years, with statistical significance. It was evidenced that students up to 21 years of age were 41% more likely to de-

Table 3. Association of sociodemographic variables with nursing students' depression levels

Variables (n=199)	Minimal and mild depression n(%)	Moderate and severe depression n(%)	rawOR	95% CI	p-value*
Age					0.002*
Up to 21 years	40(38.8)	63(61.2)*	0.416	0.235-0.735	
> 21 years	58(60.4)	39.6(39.6)			
Gender identity					0.303*
Female	78(47.6)	86(52.4)			
Others	20(57.1)	15(42.9)			
Ethnicity					0.483*
White	22(44.9)	27(55.1)			
Others	76(50.7)	74(49.3)			
Partner					0.516*
No partner	91(48.7)	96(51.3)			
With partner	7(58.3)	5(41.7)			
Religion					0.066*
With religion	87(52.1)	80(47.9)			
No religion	11(34.4)	21(65.6)			
Sexual orientation					0.228*
Heterosexual	84(51.2)	80(48.8)			
Others	14(40)	21(60)			
Housing					0.540*
Living alone	8(57.1)	6(42.9)			
Not living alone	90(48.6)	95(51.4)			
Income					0.663*
Up to R$2,000.00	41(45.6)	49(54.4)			
> R$2,000.00	42(48.8)	44(51.2)			
Health insurance					0.574*
Yes	45(51.7)	42(48.3)			
No	51(47.7)	56(52.3)			

*Pearson's chi-square test.

Table 4. Association of academic and clinical variables with nursing students' depression levels

Variables (n=199)	Minimal and mild depression n(%)	Moderate and severe depression n(%)	rawOR	95% CI	p-value*
Semester					0.606*
Basic cycle	43(47.3)	48(52.7)			
Practical cycle	55(50.9)	53(49.1)			
Subject failure					0.124*
Yes	14(37.8)	23(62.2)			
No	84(51.9)	78(48.1)			
Concern for the future					0.539*
Yes	89(48.6)	94(51.4)			
No	8(57.1)	6(42.9)			
Satisfaction with the course					0.163*
Satisfied	91(50.6)	89(49.4)			
Dissatisfied	6(33.3)	12(66.7)			
Leisure time					0.003*
Yes	91(53.5)	79(46.5)	3.620	1.468-8.925	
No	7(24.1)	22(75.9)			
Satisfaction with leisure time					0.001*
Yes	36(69.2)	16(30.8)	3.068	1.548-6.081	
No	55(42.3)	75(57.7)			
Physical activity					0.028*
Yes	46(59)	32(41)	1.907	1.071-3.397	
No	52(43)	69(57)			
Insomnia					0.004*
Yes	25(35.7)	45(64.3)	0.417	0.228-0.761	
No	72(57.1)	54(42.9)			
Legal drug use					0.055*
Yes	42(42.4)	57(57.6)			
No	56(56)	44(44)			
Illegal drug use					0.607*
Yes	13(54.2)	11(45.8)			
No	85(48.6)	90(51.4)			
Psychotropic use					0.004*
Yes	9(26.5)	25(73.5)	0.307	0.135-0.699	
No	89(53.1)	76(46.1)			

*Pearson's chi-square test.

velop symptoms classified as severe depression level. Regarding the other data, no significant associations were found. Table 4 presents the academic and clinical variables and their association with minimal and mild and moderate and severe depression in nursing students.

Moderate and severe depression symptoms were found among students who did not have time for leisure, who did not feel satisfied with leisure time, who did not practice physical activity, who had insomnia and who used psychotropic drugs, with statistical significance in all these associations. Students who reported not having time for leisure were 3.6 times more likely to develop moderate and severe depression symptoms, in addition to 3 times more likely to appear among those who reported not feeling satisfied with the time available for leisure, as well as a 90% greater chance among those who did not practice physical activity. Moreover, those with insomnia were 41% more likely to develop moderate and severe depression symptoms, and those who use psychotropic drugs were 30% more likely to develop depression symptoms in its moderate and severe form.

Discussion

In the present study, a prevalence of severe anxiety symptoms was observed in 62% of students and 50.7% of moderate and severe depression symptoms. The high frequency of students with psychological distress symptoms can often be related to

change in lifestyle when entering higher education, with the intensification of the study hours, the increased demand by the family and society and, in in some cases, the distance from the family and social nucleus.[9]

This is a problem referenced all over the world. Undergraduate students face daily circumstances that can be stressors and possible triggers for anguish and mental distress. Corroborating the research, a study carried out with undergraduate students in Thailand found a prevalence of depression in 19%-50% and anxiety in 26%-69% among those surveyed.[16]

In New Zealand, researchers identified the presence of depression and anxiety symptoms, respectively, in 17.3% and 19.7% of the 1,292 undergraduates who participated.[17] A study carried out with 506 students from public universities in Malaysia showed the presence of moderate and severe depression in 37.2% and moderate and severe anxiety in 63% of undergraduate students.[18] In Brazil, a research carried out with 292 students in the health area of a university in Minas Gerais observed depression and anxiety symptoms in 52.3% and 41.1% of participants, respectively.[19]

Regarding sociodemographic data, a significant association was observed between individuals aged up to 21 years, without religion and of other sexual orientations with severe anxiety symptoms. This result differs from that found in a study carried out in Recife with 154 nursing students, in which no significant association was found between anxiety and age.[20] However, the presence of religion was significant, showing a protective factor for the aforementioned outcome, as religion is associated with lower rates of suicide, depression, substance abuse, among others.[21]

Young students, without religious beliefs and with a non-heterosexual orientation may be more vulnerable and difficult to adapt to everyday changes such as those that happen in the academic environment. In an integrative review that researched anxiety in sexual minorities, it was found that, in addition to being a group with higher anxiety levels and other types of mental distress, the emergence of anxiety is strongly related to lack of support and stigma from society, family and friends.[22]

In reference to academic and clinical variables, a significant association was noted between concern for the future, lack of time for leisure and psychotropic drug use with severe anxiety symptoms. Likewise, a study carried out with 476 health area students in Fortaleza/CE found a significant association between concern for the future and anxiety.[23]

The importance of having goals and desires for the future is an important factor in avoiding mental distress. Research carried out with 417 nursing students from a university in Ireland found that 60.4% of participants did not have clear goals regarding their future and their role at university, which is a predictor factor for the development of symptoms of depression and other types of mental disorders.[24]

The intense curricular workload, the overload of extracurricular activities and the inconstant schedules also reflect the lack of opportunity for leisure and recreation, which potentiates psychological stress in the university environment and is added to psychosocial stressors such as distance from home, financial difficulties and separation from the family.[25] Furthermore, the semester in which students are enrolled, which can be subdivided into a basic or practical cycle, can also be considered a trigger for the triggering of anxiety and depression symptoms, given the high emotional burden demanded in the execution of nursing care, in a way assessed by the professor, patient and family. These data corroborate a study carried out with nursing students from a public institution in Piauí that identified a significant association between depressive symptom levels and the few hours devoted to leisure.[9]

In agreement with the present study, which found an association between psychotropic drug use and the presence of severe anxiety symptoms, a survey carried out with 2,575 pharmacy students in France found a prevalence of 12.7% of psychotropic drug use among participants. of the research, and students who used these types of drugs had higher stress, anxiety and depression levels.[26]

It is worth mentioning that, despite the use of drug and severe anxiety symptoms being related, it is possible to observe that a portion of the participants in the present study presented the same anxiety symptoms, but did not use any drug. Therefore, non-compliance with drug treatment is a challenge

for health professionals and can result in the worsening of the condition and compromise students' quality of life, since the search for a psychological treatment, whether medicated or not, is still neglected by the general population.[19]

Regarding the moderate and severe depressive symptoms investigated, with regard to their association with sociodemographic data, a significant association was observed with age up to 21 years. These data are in line with a survey carried out with 181 students from a Brazilian federal university, which found higher depressive symptom levels in students aged 17-20, with a prevalence of 87.14%.[27] This factor may possibly be related to the social context in which these undergraduate students are inserted. When entering higher education, this new interpersonal environment encourages them to have more responsibilities. The first 12 months of the course, in which younger students are usually concentrated, are the ones that most contribute to increasing stress and anxiety levels.[28] Despite this, the current semester was not significant for the occurrence of anxiety and depression symptoms.

Regarding academic data and depression levels, a significant association can be noted between the absence of leisure time and dissatisfaction with leisure time with moderate and severe depression symptoms. These data are in line with a study carried out at a federal university in northeastern Brazil that analyzed anxiety and depression symptoms in nursing students and showed the relationship between little leisure time and the presence of depressive symptoms in undergraduate students.[9]

Furthermore, lack of leisure time is also related to other forms of mental distress, as evidenced in a study with 168 undergraduate students, which found a relationship between this variable and the presence of Burnout syndrome symptoms.[29] Insomnia, lack of leisure time and physical inactivity are aspects related to a higher prevalence of depression among students. The lack of leisure and rest time can generate problems such as fatigue, irritability and lack of attention. On the other hand, this free time is a greater opportunity for socializing, reducing stress and increasing the degree of satisfaction and happiness.[30]

Regular physical activity was also significantly associated with the presence of depression symptoms so that a sedentary lifestyle was related to moderate and severe depression levels. Similar results were found in a study that analyzed anxiety and depression levels in physical education students, in which students who did not practice any type of activity had higher depression levels.[30] Regular practice of some physical exercise is recognized for reducing anxiety levels and consequently depressive symptoms, improving quality of life, in addition to contributing to the reduction of risks related to cardiovascular and gastrointestinal diseases.[31]

Another clinical aspect analyzed was insomnia, with a significant association between its presence and symptoms that classify increased depression levels. This factor is in line with other studies that observed a correlation between depressive symptoms and lack of sleep in health area students, also indicating difficulty sleeping, irregular sleep pattern and physical inactivity.[23,31] An adequate sleep-wake cycle is also responsible for maintaining a healthy lifestyle and maintaining well-being, a factor that will influence student achievement and academic performance.

The present study found a significant association between psychotropic drug use and moderate and severe depression symptoms. A study carried out in Paraíba, Brazil, observed that almost 40% of medical students used some drug for reasons related to graduation and the university environment and related this finding and drug abuse to the presence of depression symptoms.[31] In addition to this, in a study with 292 students from health courses in the city of Minas Gerais, an association was found between psychotropic drug use and the presence of anxiety and depression symptoms and withdrawal from work practices by students.[19]

In South Africa, a study carried out with 473 medical students at a university found that 36.4% and 45.9% of students had symptoms indicative of risk for depression and anxiety, respectively, and that a quarter of all students (28.1%) were using some psychotropic drug. Of these, 16.1% used some psychotropic drug for depression and 12.1% for anxiety.[32]

Drug treatment for mental distress and the search for psychological and psychiatric support are

still permeated by resistance and prejudice by health area students, often due to issues such as fear and insecurity of showing fragility before society.[19] This factor is a barrier to mental health care, since future professionals not seeking treatment will influence their quality of life and may result in worsening of symptoms and clinical conditions.

The study has some limitations, namely: data collection instruments gathering is carried out by peers, which can lead to embarrassment in filling out the information correctly, the extension of the instruments used, which could cause inattention by participants, and the fact that the questionnaires are self-administered, generating incompleteness of some information.

Conclusion

From the present study, the high prevalence of anxiety and depression symptoms among undergraduate students can be seen, especially at moderate and severe levels, and their association with several variables, including personal characteristics, academic life and health. With regard to anxiety, it was possible to observe the influence of young age, lack of religion, non-heterosexual sexual orientation, concern for the future, lack of time for leisure and psychotropic drug use with the presence of severe symptoms. Similarly, moderate and severe depression symptoms were associated with young age, lack of leisure time and dissatisfaction, insomnia, physical inactivity and psychotropic drug use. The existence of factors that are related to the symptoms of both disorders can be explained by the fact that they represent outcomes with similar symptoms and very prevalent in the academic environment.

The findings contribute to elucidate the problem of mental health in the academic environment; however, further research needs to be carried out in order to deepen this theme, identifying other issues associated with anxiety and depression, such as suicidal ideation, non-prescription psychotropic drug use and the impact of this problem on students' quality of life. Moreover, it can sensitize the actors involved to discuss the importance of nursing students' mental health,

aiming at an improvement in teaching and learning, training professionals more prepared for the different environments and the experience of situations in the labor market.

Collaborations

Silveira GEL, Viana LG, Sena MM, Alencar MMSC, Soares, PRAL, Aquino PS, Ribeiro SG contributed to study conception and design, data analysis and interpretation, article writing and relevant critical review of the intellectual content and final approval of the version to be published.

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