

DOI: <https://doi.org/10.36489/saudecoletiva.2021v11i60p4762-4773>

Comparison of trace and state of anxiety among nursing students

Comparación de rastreo y estado de ansiedad entre estudiantes de enfermería

Comparaçãõ de rastreamento e estado de ansiedade entre estudantes de enfermagem

ABSTRACT

Objective: To compare the levels of anxiety among students in the first and last year of undergraduate nursing studies at the Center for Health Sciences of the Federal University of Pernambuco. **Method:** Descriptive, exploratory study, with a quantitative approach. Data collection was performed through a personal interview and online platform, in addition to the State Trait Anxiety Inventory (IDATE). **Results:** The majority of students, both at the beginning and at the end of graduation, showed predominantly moderate anxiety, trait and state. **Conclusion:** In this sample there were no significant differences in the anxiety or state trait between the variables studied.

DESCRIPTORS: Anxiety; Nursing students; Quality of life.

RESUMEN

Objetivo: Comparar los niveles de ansiedad entre los estudiantes en el primer y último año de estudios de pregrado en enfermería en el Centro de Ciencias de la Salud de la Universidad Federal de Pernambuco. **Método:** Estudio descriptivo, exploratorio con abordaje cuantitativo. La recolección de datos se realizó a través de una entrevista personal y plataforma en línea, además como el Inventario de ansiedad por rasgos estatales (STAI). **Resultados:** La mayoría de los estudiantes, tanto al comienzo de la graduación como al final, presentaron ansiedad, rasgos y estado predominantemente moderados. **Conclusión:** En esta muestra no hubo diferencias significativas en el rasgo de ansiedad o estado entre las variables estudiadas.

DESCRIPTORES: Ansiedad; Estudiantes de enfermería; Calidad de vida.

RESUMO

Objetivo: Comparar os níveis de ansiedade entre estudantes do primeiro e último ano do curso de graduação em enfermagem do Centro de Ciências da Saúde da Universidade Federal de Pernambuco. **Método:** Estudo descritivo, exploratório, com abordagem quantitativa. A coleta de dados foi realizada por meio de entrevista pessoal e plataforma online, além do Inventario de Ansiedade Traço Estadual (IDATE). **Resultados:** A maioria dos alunos, tanto no início quanto no final da graduação, apresentou ansiedade, traço e estado predominantemente moderados. **Conclusão:** Nesta amostra não houve diferenças significativas no traço de ansiedade ou estado entre as variáveis estudadas.

DESCRIPTORES: Ansiedade; Estudantes de enfermagem; Qualidade de vida.

RECEIVED ON: 09/30/2020 APPROVED ON: 10/23/2020

Thayná Karollyne Carvalho Silva

Nursing student at the Federal University of Pernambuco, Brazil – UFPE.
ORCID: 0000-0002-4848-1208

Thassia Thame de Moura Silva

Nurse, Doctoral Student of the Nursing Department at the Federal University of Pernambuco, Brazil – UFPE.
ORCID: 0000-0003-1067-7421

Raquel da Silva Menezes

Nursing student at the Federal University of Pernambuco, Brazil – UFPE.
ORCID: 0000-0001-8797-7233

Iracema da Silva Frazão

Nurse, Professor of Nursing at the Federal University of Pernambuco, Brazil – UFPE.
ORCID:0000-0002-4690-3753

Cândida Maria dos Santos

Nurse, Professor, Department of Nursing, Federal University of Pernambuco, Brazil – UFPE.
ORCID: 0000-0003-4196-7413

Ana Maria Gonçalves da Silva

Nurse, Graduated from the Nursing department at the Federal University of Pernambuco, Brazil – UFPE.
ORCID: 0000-0001-6057-2105

Luana Maria de Santana Gomes

Nurse, Graduated from the Nursing department at the Federal University of Pernambuco, Brazil – UFPE.
ORCID: 0000-0002-0482-7772

INTRODUCTION

Anxious behaviors and anxiety disorders (AD) are increasing. They are seen by many experts as the evil of the century and can be caused by important changes in terms of the cultural, social and economic environment in which individuals are inserted.¹ Data from the World Health Organization (WHO) indicate that the prevalence of ED in the world is 3,6%. In the American continent, this mental disorder reaches greater proportions and affects 5,6% of the population, with emphasis on Brazil, where ED is present in 9,3% of the population, having the highest number of cases of anxiety among all countries in the world.²

There are two types of anxiety: trait and state, the first is related to an individual disposition, relatively stable in response to a circumstance considered stressful by the individual, in which he has a greater tendency to perceive situations as threatening. The second, on the other hand, is defined as a transient emotional state that can change over time, in which the person has subjective feelings of tension.^{3,4}

Anxiety can be portrayed as a natural emotion, in which it works as an impulse for the human being to reach his goals. This emotional state can become excessive and thus, unhealthy, negatively impacting the individual's life, favoring the difficulty of the ability to adapt and cope.^{5,6}

Data from the World Health Organization (WHO) indicate that the prevalence of ED in the world is 3,6%. In the American continent, this mental disorder reaches greater proportions and affects 5,6% of the population.

The signs and symptoms of anxiety can present themselves in psychological and somatic forms. Some psychological symptoms of anxiety in academics include feelings of nervousness before class, panic, forgetfulness during a learning assessment, a feeling of helplessness when doing academic work or a lack of inte-

rest in a difficult subject, for example. Somatic symptoms include cold, sweaty palms, tachycardia, tachypnea, stomach pain and tremors.⁷ Anxiety can become long-lasting with manifestations such as phobias, conversion disorder, dissociative states, obsessions or compulsions.⁸

When the exacerbated anxious reaction negatively affects the individual's behavior due to the frequency, severity or even persistence of these symptoms, it becomes dysfunctional and is characterized as anxiety disorder (AD).⁹ Anxiety disorders are the most serious due to the longer duration and complexity of the anxiety symptoms, being dysfunctional and accompanied by impairment.¹⁰ In general, studies indicate that university students, and in particular those in the health field, have high levels of stress and anxiety. High levels of these emotions cause losses in the individual's quality of life and personal and professional performance.^{11,12}

Thus, to improve the quality of academic training of university students, it is important to know the risk factors for the development of this disorder. In this perspective, this study aimed to compare the levels of anxiety among students of the first and last year of undergraduate nursing in a Public University.

METHOD

The study was a descriptive, exploratory study with a quantitative approach.

ach. It was carried out at the Nursing Department, linked to the Federal University of Pernambuco (UFPE), in the city of Recife/PE. The population consisted of 154 nursing students. The eligibility criteria for the study were: being students of the first and last year of graduation, corresponding to the classes of the 1st, 2nd, 9th and 10th

periods of the course, being regularly enrolled and with active frequency in the academy or mandatory curricular internships, for senior students.

The total number of academics enrolled in the aforementioned classes was included in the survey. Students who were not in the classroom at the time of data collection, who were not

found after three attempts at telephone contact and who had previously been enrolled in the same subject were excluded, as we understand that the experience they had already experienced could change the results; people dropping out of the course, as well as underage academics. The collection took place from December 2018 to April 2019 and took place in person in the 1st academic year classes within the classrooms. With the last year classes, for presenting themselves in curricular internship, it was carried out through the Google Online Form. Participated: 21 students from the 1st period; 25 students from the 2nd term, 26 from the 9th and 10th periods. Thus, it resulted in a total sample of 98 participating students.

A socio-demographic questionnaire and the Trait anxiety inventories (STAI-T) and State (STAI-E) were used. The first instrument consisted of socio-demographic issues, health characteristics and academic information. STAI is an instrument used to quantify subjective components related to anxiety.¹³

The collected data were entered into the Epi Info™ software version 7.2.3.1 and a database was created in an Excel® spreadsheet, and subsequently analyzed using the statistical software SPSS®, version IBM Statistics 21 through the application of Chi-square and Fisher's exact p-value. The data collection was authorized by the committee through the consubstantiated opinion number 3.012.179 and CAAE: 99564718.0.0000.5208 In which the participants were informed about the objectives of the study and requested their signature in the Informed Consent Form.

RESULTS

The sociodemographic data of the research participants are described in Table 1.

It was found that 92,85% of students do not have a chronic disease.

Table 1 - Sociodemographic characteristics of students in the 1st, 2nd, 9th and 10th periods. Recife, 2019.

CARACTERÍSTICAS SOCIODEMOGRÁFICAS		
SEXO	n	%
Feminino	88	89,9
Masculino	10	10,2
TOTAL	98	100
IDADE		
18 a 22	62	63,26
23 a 27	31	31,63
28 a 32	05	5,10
TOTAL	98	100
ESTADO CIVIL		
Solteiro (a)	95	96,94
Casado (a)	3	3,06
TOTAL	98	100
LOCAL ONDE RESIDE ATUALMENTE		
Casa dos pais	70	71,43
Apartamento ou casa alugada com amigos	9	9,18
Casa do estudante	3	3,06
Casa de parentes	8	8,16
Outros	8	8,16
TOTAL	98	100
RENDA FAMILIAR		
Menos de 1 salário mínimo	5	5,15
1 salário mínimo	12	12,37
Até 2 salários mínimos	34	35,05
Mais de 2 salários mínimos	46	47,42
TOTAL	98	100
POSSUI FILHOS		
Sim	2	2,04
Não	96	97,85
TOTAL	98	100

Source: Authors.

The questioning about the use of medications or psychoactive substances, as it is a comprehensive question, it is not known whether the research participants considered alcoholic drink as a psychoactive substance; although the majority (96,98%) of the students in this sample reported not using it, (3,13%) of them reported using Sertraline and Amitriptyline.

Most students (77,55%) reported sleeping less than eight hours a night. Approximately (68,04%) answered that they did not have difficulty sleeping, and (31,96%) of them informed that they have this problem, demonstrating as prevalent causes: insomnia, anxiety symptoms, concern about the future, excessive academic activities personal problems.

It was analyzed that the majority of students (75,26%) access the university by public transport. Asked about the performance of extracurricular activities, the majority (46,39%) reported that they did not participate or do not participate in any extracurricular activity, with the majority of those who denied participating in any extracurricular activity, of the first academic year (54,3%). Around 82,47% of students reported being satisfied with the choice of the course, while 17,53% said they were not. Among the most prevalent reasons for such dissatisfaction is the failure to pass undergraduate courses that were the student's first option and the lack of identification with the nursing course.

Regarding expectations for profes-

sional life, 93,81% of students answered they had good expectations and a small portion (6,19%) reported having bad expectations. The reasons for this were: lack of desire to work in the area and low salary of the profession. There was a predominance of academics (75,26%) who reported having symptoms of anxiety. When referring to the triggering and/or maintaining factors of this self-described anxiety, the most cited were the excess of academic activities, elaboration of course completion work, uncertainties of the future and wanting to live the future in the present. According to Table 1, most women (77,3%) and men (70,0%) presented Moderate Anxiety (MA) of the Trait and State type (71,6% - women), (60,0% men)

Table 2 - Bivariate analyzes between anxiety and sociodemographic, academic and health characteristics p-value of Fisher's exact test.

Fator avaliado	Nível de ansiedade Estado			Nível de ansiedade Traço		
	Baixa	Moderada	Alta	Baixa	Moderada	Alta
Sexo de nascimento						
Feminino	23 (26,1%)	63 (71,6%)	2 (2,3%)	14 (15,9%)	68 (77,3%)	6 (6,8%)
Masculino	4 (4,0%)	6 (6,0%)	0 (0,0%)	3 (3,0%)	7 (7,0%)	0 (0,0%)
TOTAL	98		100	98		100
p-valor		0,565 ¹			0,445 ¹	
Faixa etária						
18 a 22	17 (27,4%)	45 (72,6%)	0 (0,0%)	10 (16,1%)	47 (75,8%)	5 (8,1%)
23 a 27	8 (25,8%)	21 (67,7%)	2 (6,5%)	7 (22,6%)	23 (74,2%)	1 (3,2%)
28 a 32	2 (4,0%)	3 (6,0%)	0 (0,0%)	0 (0,0%)	5 (100,0%)	0 (0,0%)
TOTAL	98		100	98		100
p-valor		0,309 ¹			0,701 ¹	
Estado civil						
Solteiro	26 (27,4%)	68 (71,6%)	1 (1,1%)	17 (17,9%)	72 (75,8%)	6 (6,03%)
Casado	1 (3,3%)	1 (3,3%)	1 (3,3%)	0 (0,0%)	3 (100%)	0 (0,0%)
TOTAL	98		100	98		100
p-valor		0,049 ¹			1,000 ¹	
Padrão de sono						
Dorme mais de 8 horas por noite	2 (6,7%)	1 (3,3%)	0 (0,0%)	0 (0,0%)	3 (100%)	0 (0,0%)
Dorme até 8 horas por noite	7 (36,8%)	11 (57,9%)	1 (5,3%)	4 (21,1%)	12 (63,2%)	3 (15,8%)
Dorme menos de 8 horas por noite	18 (23,7%)	57 (75,0%)	1 (1,3%)	13 (17,1%)	60 (78,9%)	3 (3,9%)
TOTAL	98		100	98		100

	p-valor	1,000 ¹			0,300 ¹	
Ansiiedade autodescrita						
Não	8 (33,3%)	16(66,7%)	0(0,0%)	6(25,0%)	18 (75,0%)	0(0,0%)
Sim	19(25,7%)	57(71,6 %)	2(2,7%)	1(14,9%)	57 (77,0%)	6(8,1%)
TOTAL	98		100	98		100
	p-valor	0,774 ¹			0,238 ¹	
Ano Acadêmico						
Primeiro ano	15 (32,6%)	31(67,4%)	0(0,0%)	8 (17,4%)	33 (71,7%)	5 (10,9%)
Último ano	12 (23,1%)	38(73,1%)	2(3,8%)	9 (17,3%)	42 (80,8%)	1 (1,9%)
TOTAL	98		100	98		100

Source: the authors.

DISCUSSION

In the sample in question, therefore, there were no significant differences when relating anxiety with the variable “sex of birth”. However, despite having presented with little representation at this level of anxiety, women showed higher anxiety both Trait and State, in relation to male participants.

Still, no disparity in anxiety levels was identified in relation to the age of the students as well as in relation to marital status, since most of them aged between 18 and 22 years old, were single and had a high rate of Moderate Anxiety (MA) both of the Dash type and the State type.

When performing the bivariate analysis between anxiety and marital status, given the small sample size of married individuals (only three out of a total of 98 participants) and no divorcee or widower, no significance was obtained. As identified, most academics sleep less than 8 hours a night, however, in this sample, this factor does not seem to represent a loss in anxiety levels.

When analyzing the percentage of students who described themselves with anxiety, in comparison with the trait-type anxiety level, whose value was 77.0%, it can be concluded that in the face of anxiogenic factors, these individuals believed they had high levels of anxiety. However, the data analysis goes against the perception of these

Still, no disparity in anxiety levels was identified in relation to the age of the students as well as in relation to marital status, since most of them aged between 18 and 22 years old, were single and had a high rate of Moderate Anxiety (MA) both of the Dash type and the State type.

students, since they are managing to deal with anxiety triggering factors in a healthy way when we realize that they have moderate anxiety.

When comparing the levels of anxiety between students of the first and last academic year, it was found that there was a predominance of the level Moderate anxiety both Trait and State in the classes, as described in table 4. Thus, it was possible to notice that a good part of the students of the first year has shown a great disposition to be anxious (with wide MA trait 71,7%), as well as they were already experiencing such a sensation, corroborated by the higher prevalence of MA Estado (67,4%), such sensation can be described as positive when we remember that this emotion is physiological and induces us to think about a possible adaptation that may be happening to these individuals.

Considering the definition of anxiety trait, according to Oliveira et al., (2016)¹¹, it can be said that most students have a moderate tendency to present elevations in anxiety levels in situations considered threatening. At appropriate levels, anxiety is beneficial, stimulating, propelling, motivating and ends up becoming an important element for obtaining satisfactory results in the individual's daily life.¹⁴

In other studies conducted with nursing students, it was observed that some aspects help the student in coping with anxiety, specifically with regard to in-

security and self-esteem. They are: the teacher's good experience in monitoring internships; existence of a psychological support service for students and good development of practical classes that allow student participation.¹⁵

CONCLUSION

According to the results, it was possible to conclude that in this sample there was

no significant difference in trait and state anxiety between the variables studied both in students at the beginning as well as at the end of graduation. However, the study about anxiety in university students is of paramount importance, as it contributes to the knowledge of the population in question, in which it can favor the development of potential, autonomy and adaptation both when entering higher education and when leaving university.

In relation to the limitations of this study, the predominance of the female gender in the sample stands out, as well as the realization in a single course in the area of health and the absence of studies that address some results found by this research. It is recommended that future studies present gender control and a large sample with the inclusion of other courses in the health area. ■

REFERENCES

- Costa KM, Sousa KR, Formiga PA, Silva WS, Bezerra EB. Ansiedade em universitários na área da saúde. In: II Congresso Brasileiro das Ciências da Saúde; Junho de 2017.
- Fernandes MA, Ribeiro HK, Santos JD, Monteiro CF, Costa RD, Soares RF. Prevalence of anxiety disorders as a cause of workers' absence. *Rev Bras Enferm* [Internet]. 2018;71(Suppl 5):2213-20. DOI: <http://dx.doi.org/10.1590/0034-7167-2017-0953>
- Andrade L, Gorenstein C, Vieira Filho AH, Tung TC, Artes R. Psychometric properties of the Portuguese version of the State-Trait Anxiety Inventory applied to college students: factor analysis and relation to the Beck Depression Inventory. *Brazilian Journal of Medical and Biological Research*. Março de 2001;34(3):367-74. DOI: <http://dx.doi.org/10.1590/S0100-879X2001000300011>
- Gama MM, Moura GS, Araújo RF, Teixeira-Silva F. Trait anxiety in Brazilian university students from Aracaju. *Revista de Psiquiatria do Rio Grande do Sul*. 2008 Abr;30(1):19-24. DOI: <https://doi.org/10.1590/S0101-81082008000100007>
- Alves TC de TF. Depressão e ansiedade entre estudantes da área de saúde. *Rev. Med. (São Paulo)* [Internet]. 4 de setembro de 2014 [citado 21 de outubro de 2020];93(3):101-5. Disponível em: <http://www.revistas.usp.br/revistadc/article/view/103400>
- Claudino J, Cordeiro R. Níveis de ansiedade e depressão nos alunos do curso de licenciatura em enfermagem. O caso particular dos alunos da Escola Superior de Saúde de Portalegre. *Millennium-Journal of Educational, Technologies, and Health*. [Internet]. Fevereiro de 2006 [citado 21 de outubro de 2020]; (32):197-210. Disponível em: <https://revistas.rcaap.pt/millennium/article/view/8403>
- Carvalho EA, Bertolini SM, Milani RG, Martins MC. < b> Índice de ansiedade em universitários ingressantes e concluintes de uma instituição de ensino superior/Anxiety scores in university entering and graduating students from a higher education institution< b. *Cienc. Cuid. Saúde* [Internet]. 11 de outubro de 2015 [citado 21 de outubro de 2020];14(3):1290 -1298. Disponível em: <http://periodicos.uem.br/ojs/index.php/CiencCuidSaude/article/view/23594>
- Pereira FL, Medeiros SP, Salgado RG, de Castro JN, de Oliveira AM. Anxiety signs experienced by nursing undergraduates/Manifestações de ansiedade vivenciadas por estudantes de enfermagem. *Revista de Pesquisa: Cuidado é Fundamental Online*. 1 de Julho de 2019;11(4):880-6. DOI: [10.9789/2175-5361.2019.v11i4.880-886](https://doi.org/10.9789/2175-5361.2019.v11i4.880-886)
- Hamm AO, Richter J, Pané-Farré C, Westphal D, Wittchen HU, Vossbeck-Elsebusch AN, Gerlach AL, Gloster AT, Ströhle A, Lang T, Kircher T. Panic disorder with agoraphobia from a behavioral neuroscience perspective: Applying the research principles formulated by the Research Domain Criteria (RDoC) initiative. *Psychophysiology*. Março de 2016;53(3):312-22. DOI: <https://doi.org/10.1111/psyp.12553>
- Pérez-Edgar K, Fox NA. Temperament and anxiety disorders. *Child and Adolescent Psychiatric Clinics*. 1 de Outubro de 2005;14(4):681-706. DOI:<https://doi.org/10.1016/j.chc.2005.05.008>
- Oliveira C, Varela A, Rodrigues P, Esteves J, Henriques C, Ribeiro A. Programas de prevenção para a ansiedade e depressão: avaliação da percepção dos estudantes universitários. *Interações*. 2016;12(42). DOI: <https://doi.org/10.25755/int.11815>
- Leão AM, Gomes IP, Ferreira MJ, Cavalcanti LP. Prevalência e fatores associados à depressão e ansiedade entre estudantes universitários da área da saúde de um grande centro urbano do Nordeste do Brasil. *Revista brasileira de educação médica*. Dezembro de 2018;42(4):55-65. DOI: <https://doi.org/10.1590/1981-52712015v42n4rb20180092>
- Spielberger CD, Gorsuch RL, Lushene RE. *STAI manual for the State-Trait Inventory*. Palo Alto. 1970.
- Lima BV, Trajano FM, Chaves Neto G, Alves RS, Farias JA, Braga JE. Avaliação da ansiedade e autoestima em concluintes do curso de graduação em enfermagem. *Rev. enferm. UFPE on line*. Novembro de 2017;4326-33. DOI: [10.5205/reuol.23542-49901-1-ED.1111201708](https://doi.org/10.5205/reuol.23542-49901-1-ED.1111201708)
- Santos KD, de Assis MA. Fatores que contribuem para a segurança e insegurança do graduando de enfermagem durante o estágio. *Enfermagem Brasil*. 15 de Fevereiro de 2017;16(1):4-10. DOI: <http://dx.doi.org/10.33233/eb.v16i1.898>