


ASSESSMENT OF ANXIETY AND DEPRESSION AMONG NURSING STUDENTS OVER A YEAR

 <https://doi.org/10.56238/arev6n3-014>

Submitted on: 04/10/2024

Publication date: 04/11/2024

Ariana R. S. Carvalho¹, Carolina Pasinato², Tarcisio V. A. Lordani³ and Reginaldo P. dos Santos⁴

ABSTRACT

Introduction: Anxiety and depression observed in young people are associated with poor quality of life during the university period, not only with regard to poor eating and life habits, but also the inability to deal with problems associated with college and their future profession. Each stage of life, with its due concerns and questions, interferes with the level of overload and the demand among university students. **Objective:** This study aimed to investigate the levels of anxiety and depression among nursing students at a public university in the interior of Paraná, Brazil, at three different times, during one year. **Method:** This is a study with a quantitative, descriptive, exploratory approach, with a longitudinal cut. Data collection took place at three different times throughout the year (March, July and November) of 2019, using the Hospital Anxiety and Depression Scale (HADS), validated for Brazil for the assessment of anxiety and depression, as well as an instrument for the sociodemographic and academic characterization of the subjects, constructed and validated (face, content and semantics) for this study by specialists in the field of education and mental health. Descriptive and inferential analyses were performed for the variables of interest, as well as the calculation of Cronbach's alpha to assess the internal consistency of the items on the HADS scale. Student's t-test, Analysis of Variance (ANOVA) and one-way ANOVA with repeated measures were used to compare measures of anxiety and depression, as well as sociodemographic and academic variables among the students, throughout the three evaluations. **Results:** Among the 77 participating academics, 92.2% were women with an average age of 21 years; 15.4% married; 74.6% declared themselves Catholic; 65.8% declare themselves as good students. Age and dependence on some subject were considered statistically significant when compared between the years of the course. Mean anxiety in the three measures, respectively, for general nursing: 10.0; 9.9; and 9.5, which were not considered statistically significant. And for depression: 7.1; 7.4; 7.1 being statistically significant for the third evaluation. There was no statistically significant variation between the assessment of anxiety and depression levels in the three measures. **Conclusion:** The levels of anxiety and depression assessed by the HADS in the General Nursing group were not so quantitatively expressive, and are still higher than other studies involving nursing and/or health students. Data from the study indicated that there was no

¹ Professor, Nursing Collegiate, Unioeste, Cascavel campus, PR
Dr. in Sciences from EERP/ USP

² Nurse

Graduated and post-graduated from Unioeste, Cascavel campus, PR

³ Professor, Nursing Collegiate, Unioeste, Cascavel campus, PR

Dr. in Biosciences and Pathophysiology at the State University of Maringá – UEM

⁴ Clinical Nurse at HUOP – Unioeste

Master in Biosciences and Health from PPG-BCS – Unioeste

difference in the levels of anxiety and depression at different times throughout the year. Not having reached the population of students of the course in question, as a whole, in the evaluations carried out, was one of the limitations of the study. New studies are being carried out to try to explain the variations in the levels of anxiety and depression of the students of the Nursing course in question, with methodological approaches that allow giving voice to the subject studied.

Keywords: Health Evaluation. Diagnosis of the Health Situation. Nursing Students. Anxiety. Depression.

INTRODUCTION

It is essential to realize that the world is in constant evolution and transformation, which directly and indirectly affects the individuals who make up modern society. However, we perceive a negative factor involved in this process, associated with the factor of mental illness, which today we know is beyond the physical, visible and palpable, and precisely for this reason that it is something complex, which goes unnoticed by other people and sometimes treated with neglect and disbelief. Among the clinical conditions raised, we can mention anxiety and depression, two disorders that are very evident, especially with regard to young people and those still in the academic university phase; fundamentally associated by the difficulty of adapting to new challenges (Melo, 2019).

According to what Velázquez (1999) says in his study, anxiety is an important indicator of stress, which is a means of personal exhaustion that insidiously interferes in the individual's life; and when at high levels it characterizes pathological anxiety, the more it manifests, the greater the implications for the individual's normal life.

The anxious condition is an illness present in everyday life, and can be translated as an unpleasant feeling of fear, apprehension, tension or discomfort derived from the anticipation of danger, of something unknown or strange (Castillo *et al.*, 2000). Some of the symptoms of anxiety are the feeling of suffocation and oppression, difficulty breathing, tachycardia, insomnia, procrastination and difficulties in concentrating (Cabral; Nard, 2012). This factor evidences the fact that anxiety does not only have psychological implications, but also conditions that limit the daily life of life; bringing serious losses that need specialized attention.

Anxiety is said to be non-pathological or normal, which manifests itself according to the body's responses, which is the driving force for the performance of all the proposed activities; that is, it acts in a physiological way, preparing the body and mind for future situations, as a defense mechanism of the body, thus being favorable and/or innocuous to the human being (Maneti; Marziale, 2007). Antagonistic to this fact, we can describe the intensification of the anxious condition, which causes harm to the individual; not matching in proportion to the reason that triggers it. This type of anxiety causes mental suffering, causing the affected person to avoid common everyday situations that refer to this feeling (Braga *et al.*, 2010). According to Maneti; Marziale (2007), one of the factors in evidence about the pathological causality of anxiety is the growing advance of the modern world, in which routine demands agility and demands from the individual that he keep up with the

current rhythm, without the possibility of making mistakes, which makes man an prisoner of his own daily life, at the mercy of immediacy and perfection.

Another condition that can be associated with and allied to anxiety is depression. Scientific evidence shows that there are several triggering factors associated with depression, such as brain chemical imbalances, personality characteristics, genetic vulnerability and situational events (Carneiro; Baptista, 2012). Depression is a serious mental health problem, which impairs the individual's quality of life, bringing emotional symptoms and psychomotor changes; affecting professional, family, academic and social life (Coutinho, 2013).

Students, in general, are exposed to a very high level of stress that is associated with risk factors such as entering university, separation from family life, financial constraints and the pressure placed on the level of learning and their academic performance (Coutinho, 2013). Another factor of vulnerability to psychic and mental health problems of these students is focused on issues such as: pressure from teachers and family members, tests, lack of leisure time, sleep deprivation, expectations regarding the future (Carneiro; Baptista, 2012).

In this context, the present study questions whether there is a difference in the level of Anxiety and Depression of nursing students over the course of a year; and understands that anxiety can be an aspect experienced among nursing students that can lead to difficulties in daily life and a decrease in the individual's quality of life; being accentuated in the period of greatest academic overload in the academic year, the months of July and August. Thus, it aims to recognize the conditions of nursing students in the face of the impacts of daily life, with regard to anxiety and depression, as well as to survey the levels of anxiety and depression between the different years of the Nursing course at a public university in western Paraná.

OBJECTIVES

OBJECTIVE: To investigate the levels of anxiety and depression among nursing students of a public university in the interior of Paraná, Brazil, at three different times, during one year.

METHOD

This is a quantitative, descriptive, longitudinal study with the aim of investigating the level of anxiety and depression among the study participants, at three different times in one year.

The present study involved all students enrolled in the Nursing course at a public university in the interior of Paraná, at three different times, namely: at the beginning (March to April), middle (July to August) and end (November to December) of the year 2019.

The study population consisted of all nursing students at the university in question, over 18 years of age, who were duly enrolled and attending classes.

The number of students enrolled per year was identified through the Academic Secretariat of the university in question. The student was considered enrolled in that grade in which he was taking the largest number of subjects. At the beginning of 2019, 177 students were enrolled in the nursing course at the university in question, distributed as follows: 39 in the 1st year, 53 in the 2nd year, 38 in the 3rd year, 22 in the 4th year and 25 in the 5th and final year.

All regulations of Resolution 466/2012 of the National Health Council (Brasil, 2012) were met. The present study is part of a matrix study called *"Health-related quality of life and its aspects: investigation of the positive and negative impact on the daily life of human beings"*, approved by the institutionalized Ethics Committee, under CAAE number 84505918.6.0000.0107, Opinion No. 2.588.565 of April 9, 2018. The Informed Consent Form was signed and it was clarified to each participant that their privacy would be ensured during the study, guaranteeing their anonymity and their right to withdraw from participation at any time, without any harm of any kind.

The first data collection took place in the months of March to April, the second in July to August, and the last collection was applied during the months of November to December 2019.

In the first data collection, the researchers contacted undergraduate students of the Nursing course at the University in question to arrange the most appropriate time and place with each class, so that the data collection instruments could be applied in person. The instruments were used in their self-administered form, after due guidance. If the student was absent on the agreed day and place, but was still interested in participating in the study, the researcher scheduled another period for his or her participation. From the second

data collection onwards, access to the instrument occurred digitally, through the "Google form" tool.

Sociodemographic characterization and the students' perception of the stress of academic life was constructed based on the literature and expertise of the researchers in this study and validated (appearance and content) *a posteriori* by specialists in the field of mental health and nursing education.

To assess anxiety and depression among the participants, the Hospital Anxiety *and Depression Scale* (HADS) (Zigmond; Snaith, 1983; Marcolino *et al.*, 2007), in its translated and validated version into Brazilian Portuguese (Botega *et al.*, 1995).

The HADS was chosen because it is easy to understand, quick to apply and with a small number of items. It addresses the variables of interest (anxiety and depression) and has demonstrated good psychometric characteristics among individuals with different types of pathologies (Zigmond; Snaith, 1983; Olsson *et al.*, 2005; Castro *et al.*, 2006) and high sensitivity and specificity when compared to other instruments for assessing anxiety and depression (Olsson *et al.*, 2005). Although it was initially proposed for outpatients in the detection of depressive and anxiety states, it can be applied in various contexts, and has currently been used to diagnose anxiety and depression in psychiatric or non-psychiatric patients (Botega *et al.*, 1998). Respondents take about two to five minutes on average to complete the scale, and it is well accepted among the population for which it was developed (Snaith, 2003).

The HADS scale performs well in assessing the severity of anxiety and depression disorders, consisting of a simple method for their recognition in health services, both in the hospital environment and in primary care (Snaith, 2003). Although it was initially proposed for outpatients in the detection of depressive and anxiety states, it can be applied in various contexts, and has currently been used for many other populations, including health students (Vasconcelos *et al.*, 2015). Respondents take about two to five minutes on average to complete the scale (Snaith, 2003).

The HADS performs well in assessing the severity of anxiety and depression disorders, consisting of a simple method for their recognition in health services, both in the hospital environment and in primary care (Snaith, 2003). It is a scale composed of 14 items, subdivided into two subscales with seven items each, aiming to assess anxiety and depression. Each item can score from zero (absence of symptoms) to three (presence of severe symptoms). A total score greater than seven in each subscale indicates the

presence of signs of anxiety or depression, depending on the scale scored (Bjelland *et al.*, 2002).

The interpretation of the results obtained in each subscale, considering the possible range from zero to 21, has the highest values indicating the greater presence of anxiety and depression symptoms. The cut-off point of eight can be used in studies that require the inclusion of individuals who may or may not suffer from mood disorders (Zigmond; Snaith, 1983).

For the present study, we opted for evaluation by means of scores and each of the series, with the intention of clarifying the data on anxiety and depression in a comparative and descriptive way. The evaluation of the score obtained through the averages of each year of the course and the general nursing data was used, as well as by the evaluation in two categories: from zero to seven (no symptoms) and eight or more (with symptoms) in each of the subscales (Bjelland *et al.*, 2002).

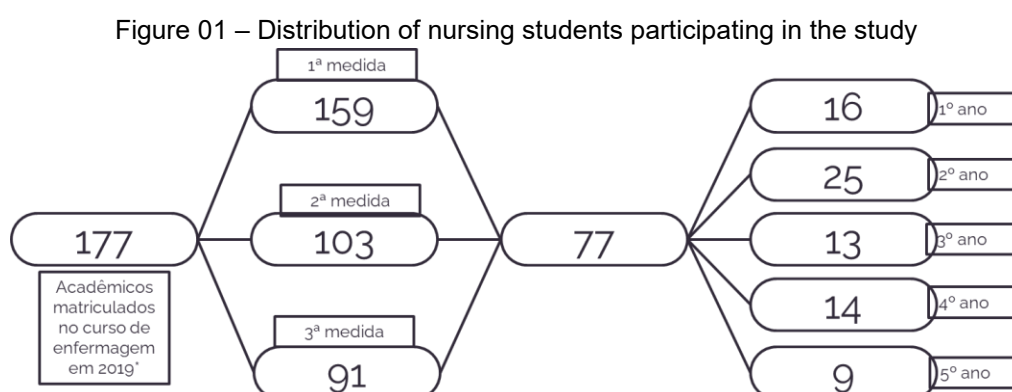
The collected data were compiled in Microsoft® Excel 2010 spreadsheets and later processed and analyzed using *the Statistical Package for the Social Sciences* (SPSS) version 23.0. The assumptions of the variables were tested using the normality (Shapiro-Wilk) and homoscedasticity (Levene test) tests.

The characterization data of the participants were presented in a descriptive and inferential way. Descriptive analyses were performed for all variables, using percentage proportion measures for categorical variables; and measures of central tendency and dispersion for quantitative variables. To relate some sociodemographic variables (age, gender, marital status, religion and having children) and academic variables (identifying with the course, having current dependence, self-evaluation as a student, having free time, mental and current health classification, as well as feeling happy) between the years of the course, *Student's* t-tests were used or Analysis of Variance (ANOVA), according to the distribution of the data of each variable. The mean values of anxiety and depression, according to the HADS measure for the students of each year of the Nursing course, and of the Nursing course in general, over the course of one year, in the three evaluations were obtained through ANOVA. In addition, to obtain the mean levels of anxiety and depression (HADS) of the nursing students as a whole (n=77), according to the different evaluation moments, the one-way ANOVA with repeated measures was used. The one-way ANOVA with repeated measurements had its effect corrected by the Greenhouse-Geisser test, indicating the degrees of freedom, corrected by the degrees of freedom of the error. The

difference between these assessments, both for Anxiety and Depression, was shown by Sidak's post-hoc test. The level of significance established was 0.05. The reliability of the HADS scale was assessed by the internal consistency of its items, measured by Cronbach's Alpha Coefficient, and values above 0.70 were considered as evidence of reliability (Fayers; Machin, 2007).

RESULTS

Among the 177 students who were enrolled in the nursing course in 2019, at the beginning of this study, 159 participated in the first data collection; 103 of the second collection; and 91 from the third collection. Among them, 77 (43.5%) nursing students participated in the three evaluations, forming the present sample: 16 enrolled in the first year of the course, 25 in the second, 13 in the third, 14 in the fourth year and 9 in the fifth year of graduation (Figure 1).



Source: Constructed by the researcher based on data provided by the Academic Secretariat of the University in question in the study, 2019.

The results that will be presented in the tables, in general, will bring information about the nursing students by year (from the 1st to the 5th year), as well as the distribution of the variables analyzing the course as a whole, which was called "General Nursing - EG".

The mean age of the participants was 21 years, with a mean age of 18.5 to 23.1 years, which was considered statistically significant between the years of the nursing course in question ($p < 0.001$) (Table 1).

There was a predominance of females in all years of the course, that is, 92.2% of the EG. The largest male contingent was found in the first year ($n=3$), followed by the second ($n=2$) and the fourth years ($n=1$). In the third and fifth years, there were no male participants in the respective groups. In addition, the sample indicated a majority of single people

(90.9%), representatives of the Catholic religion (74.6%), and 5.2% of the EG reported having children. These variables were not considered with statistically significant differences between the years of the course (Table 1).

Table 1 - Social profile of the students of each year of the Nursing course, as well as of the course in general (n=77). Cascavel, 2019

		Year 1	Year 2	Year 3	4th year	Year 5	EG	p
		<u>Average± D.P.</u>	<u>Average± D.P.</u>	<u>Average± D.P.</u>	<u>Average± D.P.</u>	<u>Average± D.P.</u>	<u>Average± D.P.</u>	
Age		18.5±0.7 0	20.3±2.2	22.4±3.2	22.6±1.7	23.1±1.1	21±2,6	<0,0 01*
		n (%)	n (%)	n (%)	n (%)	n (%)	n (%)	
Sex	Female	13 (81,3)	24 (96,0)	13 (100,0)	12 (85,7)	9 (100,0)	71 (92,2)	0,210 **
	Male	3 (18,8)	1 (4,0)	0 (0,0)	2 (14,3)	0 (0,0)	6 (7,8)	
Marital status	Single	15 (93,8)	23 (92,0)	10 (76,9)	14 (100,0)	8 (88,9)	70 (90,9)	0,475 **
	Married/conse nsual union	1 (6,3)	2 (8,0)	2 (15,4)	0 (0,0)	1 (11,1)	6 (7,8)	
	Other	0 (0,0)	0 (0,0)	1 (7,7)	0 (0,0)	0 (0,0)	1 (1,3)	
Religi on (n=71)	Catholic	10 (66,7)	21 (87,5)	8 (66,7)	8 (66,7)	6 (75,0)	53 (74,6)	0,658 **
	Evangelical	1 (6,7)	1 (4,2)	2 (16,7)	0 (0,0)	0 (0,0)	4 (5,6)	
	Spiritist	1 (6,7)	0 (0,0)	1 (8,3)	1 (8,3)	0 (0,0)	3 (4,2)	
	There is no religion	3 (20,0)	1 (4,2)	1 (8,3)	3 (25,0)	2 (22,2)	10 (14,1)	
He has childr en	Yes		1 (1,3)	1 (1,3)	1 (1,3)	1 (1,3)	4 (5,2)	0,761 **

Source: survey data. EG=General nursing; D.P.=Standard Deviation
*p=p value obtained by ANOVA; ** p value obtained by the chi-square test

When asked about their identification with the nursing course, the express majority (94.8%) reported identifying with the course; 3 (3.9%) students said they did not identify with the current course, and 2 of these were enrolled in the fourth year of the course, with no statistical difference between the years of the course (Table 2).

Regarding having failed in disciplines, in the academic year they were in, 84.0% said they did not have any current dependence, however 8 (32.0%) students in the second year

of the course mentioned having dependence currently, a statistically significant fact between the years of the course ($p=0.034$) (Table 2).

When asked how each student classified themselves as students, 65.8% said they were a "good" student; 3.9%, "excellent" student; 27.6%, "regular", 2.6% considered themselves as "bad" students, with no statistical difference between the years of the course ($p=0.306$) (Table 2).

When asked about the amount of free time they had available in their routines, 72.4% of the EG contingent said they had little free time; with emphasis on the second year of the course, with 75% of students having little free time. The 1st year was the one who reported having more free time (6.3%). The differences were not considered statistically significant ($p=0.081$) (Table 2).

When asked about their current health, 67.5% said they had average or poor health, with emphasis again on the second-year class, representing 84% of this total percentage ($n=21$). Regarding current mental health, the second-year class was identified as the protagonist in the "poor mental health" item, with 28.0% of its students meeting this criterion. Regarding the fact that they feel happy, 12 (16.4%) say they do not feel happy, especially in the 4th grade ($n=4$; 30.8%). It is worth mentioning that, among the fifth-year students, there was a percentage of 100% who called themselves happy. These characteristics did not present statistical differences (Table 2).

Table 2 - Characterization of the opinion of the students of each year of the Nursing course, as well as of the course in general, about the course and about themselves ($n=77$). Cascavel, 2019

		Year 1 n (%)	Year 2 n (%)	Year 3 n (%)	4th year n (%)	Year 5 n (%)	EG	<i>p</i>
Identifies with the course ($n=76$)	Yes	15 (93,8)	24 (96,0)	13 (100,0)	12 (85,7)	9 (100,0)	73 (94,8)	0,117
	No	1 (6,3)	0 (0,0)	0 (0,0)	2 (14,3)	0 (0,0)	3 (3,9)	
	Perhaps	0 (0,0)	1 (4,0)	0 (0,0)	0 (0,0)	0 (0,0)	1 (1,3)	
Current dependency ($n=75$)	Yes	0 (0,0)	8 (32,0)	3 (23,1)	1 (7,1)	0 (0,0)	12 (16,0)	0,034
	No	14 (100,0)	17 (68,0)	10 (69,0)	13 (92,9)	9 (100,0)	63 (84,0)	
Student ($n=76$)	Spacious	0 (0,0)	2 (8,3)	3 (23,1)	0 (0,0)	0 (0,0)	2 (2,6)	0,306

	Regular	6 (37,5)	8 (33,3)	2 (15,4)	5 (35,7)	0 (0,0)	21 (27,6)	
	Good	9 (56,3)	14 (58,3)	11 (45,8)	8 (57,1)	8 (88,9)	50 (65,8)	
	Very bad	1 (6,3)	0 (0,0)	0 (0,0)	1 (7,1)	1 (11,1)	3 (3,9)	
continuation...								
Free time (n=76)	None	0 (0,0)	0 (0,0)	0 (0,0)	3 (21,4)	0 (0,0)	3 (3,9)	0,081
	Little	10 (62,5)	18 (75,0)	10 (76,9)	9 (64,3)	8 (88,9)	5 (72,4)	
	Some	5 (31,3)	6 (25,0)	3 (23,1)	2 (14,3)	1 (11,1)	17 (22,4)	
	Very much	1 (6,3)	0 (0,0)	0 (0,0)	0 (0,0)	0 (0,0)	1 (1,3)	
Current health	Good	7 (43,8)	4 (16,0)	4 (30,8)	4 (28,6)	6 (66,7)	25 (32,5)	0,262
	Median	9 (56,3)	19 (76,0)	8 (61,5)	9 (64,3)	3 (33,3)	48 (62,3)	
	Spacious	0 (0,0)	2 (8,0)	1 (7,7)	1 (7,1)	0 (0,0)	4 (5,2)	
Mental health	Good	3 (18,8)	2 (8,0)	3 (23,1)	3 (21,4)	5 (55,6)	16 (20,8)	0,177
	Median	11 (68,8)	16 (64,0)	8 (61,5)	9 (64,3)	4 (44,4)	48 (62,3)	
	Spacious	2 (12,5)	7 (28,0)	2 (15,4)	2 (14,3)	0 (0,0)	13 (16,9)	
Happy (n=73)	Yes	12 (75,0)	17 (77,3)	10 (76,9)	8 (61,5)	9 (100,0)	56 (76,7)	0,084
	No	4 (25,0)	4 (18,2)	0 (0,0)	4 (30,8)	0 (0,0)	12 (16,4)	
	Sometimes	0 (0,0)	1 (4,5)	3 (23,1)	1 (7,7)	0 (0,0)	5 (6,8)	
Source: survey data. EG= General Nursing; <i>p</i> value obtained by the chi-square test								

Tables 3 present data from the evaluation of anxiety and depression levels among the research participants, respectively, in the first (March), second (July) and third (November) collections of the study. Higher values for HADS indicate a greater presence of symptoms of anxiety and depression. The HADS scale offers more than one form of analysis for the assessment of anxiety and depression levels. In the present study, the evaluation was performed by the descriptive form of the anxiety and depression

components, in which the results obtained in each subscale consider the possible range from zero to 21, with higher values indicating a greater presence of symptoms.

In the first data collection, the mean levels of anxiety were higher (10.0 ± 3.7) than those of depression (7.1 ± 3.7) among nursing students in general, with significant Cronbach's alpha of 0.75 and 0.80, respectively. This standard was maintained in all the other years of the course. The highest anxiety index was presented among students enrolled in the fourth year of the course (11.1 ± 4.3), while the highest level of depression in the second year (7.8 ± 3.4). The best evaluations of anxiety and depression, that is, the lowest averages, were present among the students of the 5th year of the course, with an average anxiety of 7.2 ± 4.0 ($\alpha=0.88$) and depression of 4.6 ± 3.5 ($\alpha=0.86$).

In the second data collection, the pattern of higher levels of anxiety (9.9 ± 4.1) over depression (7.4 ± 3.9) was repeated, with even higher Cronbach's alpha, 0.82 and 0.84, respectively. The highest levels of anxiety and depression were maintained in the 4th and 2nd grade classes, which may show an increase in the levels for the respective classes of 11.6 ± 4.3 and 8.5 ± 3.4 . The lowest levels of anxiety and depression were also among the fifth-year participants, also with a slight increase in anxiety levels (8.1 ± 5.0) with $\alpha=0.9$ and depression (5.1 ± 4.1) with $\alpha=0.85$.

And in the third collection, the pattern is maintained with a decrease in the levels of anxiety (9.5 ± 4.0) and depression (7.1 ± 3.7) for EG. The worst evaluations for anxiety and depression were with students in the 2nd year of the course, with an average anxiety score of 10.3 ± 3.2 ($\alpha=0.69$) and depression of 8.8 ± 3.2 ($\alpha=0.72$). This time, the lowest anxiety rates were with the third-year class, with an average of 7.9 ± 3.9 ($\alpha=0.79$). And the lowest rates of depression remained with students in the fifth year of the course, with an average of 4.6 ± 3.5 ($\alpha=0.86$).

Cronbach's alpha values were considered adequate for all years of the course, in the three different measures, ranging from 0.75 to 0.82 for the anxiety data, and 0.80 to 0.84 in the depression data for EG. There was an exception for the 3rd year evaluation, in the first evaluation, which obtained a value of 0.56.

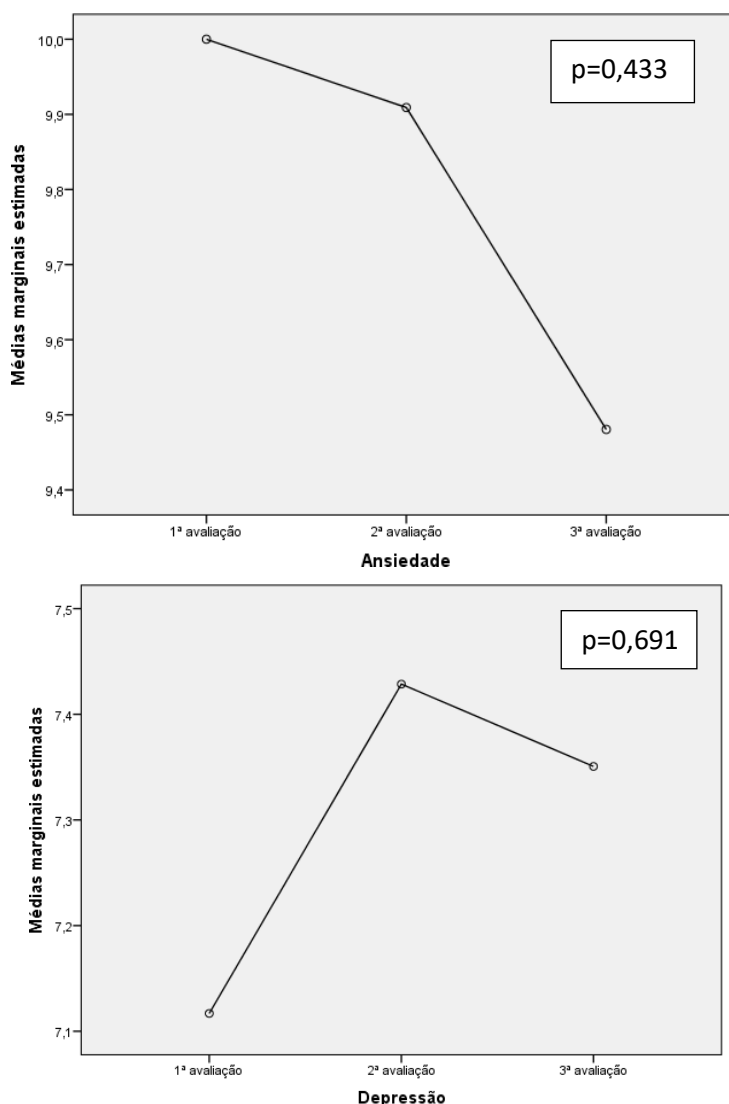
Table 3 – Mean values of anxiety, depression, according to the HADS measure for the students of each year of the Nursing course, and of the Nursing course in general, over the course of one year, in the three evaluations. Cascavel, 2019

Course year	1st review					2nd review					3rd assessment				
	Anxiety		Depression			Anxiety		Depression			Anxiety		Depression		
	n	Average ± D.P.	p	Average ± D.P.	p	Average ± D.P.	p	Average ± D.P.	p	Average ± D.P.	p	Average ± D.P.	p	Average ± D.P.	p
First series	1	9,8 ± 3,8	0,11	7,2 ± 3,7	0,200	8,9 ± 4,1	0,2	6,9 ± 3,7	0,2	9,3 ± 3,7	0,2	7,1 ± 4,3	0,0	7,1 ± 4,3	0,0
Second series	2	10,6 ± 3,5	0,20	7,8 ± 3,4	0,200	10,9 ± 3,9	0,1	8,5 ± 3,4	0,0	10,3 ± 3,2	0,0	8,8 ± 3,2	0,2	8,8 ± 3,2	0,2
Third series	1	9,8 ± 2,9	0,20	7,1 ± 3,2	0,200	8,8 ± 2,9	0,2	7,8 ± 3,8	0,2	7,9 ± 3,9	0,2	7,2 ± 3,8	0,0	7,2 ± 3,8	0,0
4th series	1	11,1 ± 4,3	0,20	7,4 ± 4,7	0,101	11,6 ± 4,3	0,2	7,4 ± 4,5	0,1	10,1 ± 3,8	0,0	6,9 ± 3,2	0,2	6,9 ± 3,2	0,2
5th series	9	7,2 ± 4,0	0,20	4,6 ± 3,5	0,188	8,1 ± 5,0	0,2	5,1 ± 4,1	0,2	9,0 ± 3,2	0,2	4,6 ± 3,5	0,1	4,6 ± 3,5	0,1
EG	7	10,0 ± 3,7	0,12	7,1 ± 3,7	0,264	9,9 ± 4,1	0,1	7,4 ± 3,9	0,2	9,5 ± 3,0	0,3	7,1 ± 3,7	0,0	7,1 ± 3,7	0,0

EG=General nursing; D.P. = standard deviation; *p*=*p* value obtained by ANOVA

The one-way ANOVA with repeated measures showed that there is an effect of the "Anxiety" factor [$F(1.85; 140.9) = 0.823$; $p=0.433$] and "Depression" [$F(2; 152) = 0.371$; $p=0.691$] for the three evaluations, among the students of the course, that is, there was a difference in the levels of evaluation of Anxiety and Depression, through the different approaches throughout the year, although it was not statistically significant. The one-way ANOVA with repeated measurements had its effect corrected by the Greenhouse-Geisser test, indicating the degrees of freedom, corrected by the degrees of freedom of the error. The difference between these assessments, both for Anxiety and Depression, was shown by Sidak's post-hoc test (Graphs 1).

Graph 1 - Mean levels of Anxiety and Depression (HADS) of nursing students as a whole (n=77), according to the different evaluation moments. Cascavel, 2019



Source: survey data.

DISCUSSION

Among the study participants, there was a greater number of students in the second-year class of the course, a factor that can be explained due to the high number of failures in the basic subjects, usual/common in this academic year. The nursing course at the University in question is full-time, with a workload of classes and internships during the morning and afternoon.

Among the students who participated in the study, 77 (43.5%) of them participated in the three evaluations carried out, which can be mentioned: 1) the beginning of the academic year (March to April), evidencing the opening of a new cycle within the university environment, the interaction with colleagues, professors and the university body, new

disciplines and the advancement in the process of professional training; 2) the middle of the year (July to August), in which we highlight the end of the first semester of the academic year; when the activities are in progress, as well as supervised practical activities, theoretical and practical classes, and the entire academic routine is at its peak; and finally, 3) the end of the academic period (November to December), marked by the end of the cycle, last tests and evaluations, beginning of the recovery exam period, and the approach of the holidays.

Among the participants of the research, there is a predominance of women, representing 71 (92.2%) of the contingent of the course. The data was not considered statistically significant, and there is no important variation between the data, in which the vast majority is made up of the female public. This factor is not far from the Brazilian reality of the profession, according to the Federal Council of Nursing (COFEN), in 2010 registered a Brazilian share of 87% of the category. Other studies among nursing students bring the same data, the predominance of women enrolled in the course (Maltoni; Palm; Neufeld, 2019; Morais *et al.*, 2019; Cardoso; Borsa; Segabinazi, 2018; Gonçalves *et al.*, 2018; Vasconcelos *et al.*, 2015). The number of male nurses and in the process of professional training is increasing, uncoupling the outdated idea that care should be exercised only by women, no longer having the concept of vocation in nursing and focusing mainly on the labor, technical and scientific issues of the profession (Leão, 2018).

University age represents the transition between adolescence and adulthood; This passage in itself contains stressful factors that involve the creation of new responsibilities and especially the need to mature. Such factors expose the student to mental and psychic illness, fundamentally evidenced by the fear of failure (Ruz, 2018). In the present study, the mean age was considered statistically significant between the years of the course, with a mean age of 21 years for FE in 21 years, ranging from 18.5 to 23.1 years, from the first to the fifth year; with less variation between the third and fourth year classes. This factor can verify that the third-year class is composed of a population with an age above the average of the course as a whole. These values are considered statistically significant because they present an increasing variation between the years of the course. The nursing population of the University in question is mostly composed of a young public, characterized by the transition to adult life, bringing with it milestones of this phase of development.

In this same portion of the population, the third year has the highest rate of married persons or in stable cohabitation, which represents 15.4% of the class as a whole. This

data was not statistically significant. According to Silva (2019), students who are single are more likely to develop some level of mental illness compared to those who are married and/or live together. This factor is associated with the fact of having someone at home who is from outside the academic environment, to exchange experiences at the university. This data collaborates with the result of the current research, where the third year does not present the highest rates of anxiety or depression.

Among the students in the study, a small part (3.9%) reported not identifying with the course, while others (1.3%) are not sure about it [$p=0.117$]. This situation may be related to the fact that young people need to choose their professional careers very early, generating insecurity and uncertainty about their choices. Even so, 94.8% of them identify with their academic choice. Vasconcelos *et al.*, (2015) also identified about 95% of students as very satisfied or satisfied with the course. However, Ramos *et al.* (2015) identified satisfaction with the course among undergraduate nursing students in the South of the country as medium, indicating the existence of neither dissatisfaction nor satisfaction among students.

Regarding the failure rates, there was an important statistical significance of the variation of having or not dependence between the years of the course; with a high number of confirmations for the second year of the undergraduate course, representing 32% of the population of the mentioned year.

In self-evaluation, 65.8% of them considered themselves good students, in contrast to 2.6% who declared themselves bad. This data is statistically insignificant. Such factors can contribute to stressful situations in everyday life, because in addition to the challenges that the university proposes, he still needs to make an effort to adapt to a reality in which not even he himself knows for sure about the desire to remain in the face of that choice.

The vast workload of studies and the overload of academic activities can be a negative factor when dealing with quality of life among students. Among the students participating in the study, the greatest focus on general health and mental health is with second-year undergraduate students, who had the highest percentages of "poor" in both categories (8% and 28%, respectively). In a previous study carried out with university students, there were evaluations similar to this one, in which about 15% of the students mentioned the occurrence of emotional problems, that is, they answered affirmatively about having some emotional problem (Brandtner; Bardagi, 2009).

When observing the data on happiness, we obtained an important statistical value in what is consistent with the variation between the years of the course; where 73 students

answered this question, and 16.4% answered no to the data "being happy" and 6.8% say they consider themselves sometimes "happy. Kinoshita *et al.* (2020); brings in its study the concept of social happiness, as a responsibility of the public agency, and government measures are necessary in order to promote quality of life, measured by the happiness data.

The mean levels of anxiety assessed by the HADS were higher than in the first collection of the study, evaluating the data of the group as a whole (EG). However, it had its highest score with the fourth-year class of the nursing course in the second measure of the study, where the score reached an average of 11.6. For depression data, the highest index obtained in the scope of general nursing was in the second collection of the study, reaching a score of 7.4 in a subscale from 0 to 21. It reached the highest mean for depression in the third measure of the study, by the second grade class, with a score of 8.8. Regarding the EG data, the last data collection for depression was statistically significant, with $p = 0.024$; meaning greater variation between the years of the course in the last measurement for the depression data.

At the university, students are faced with a new environment, different and distant from their life context. The need to adapt to the new demands and school obligations contribute to the appearance of situations of anxiety and stress. A study conducted in India points out that depressive symptoms are more intense during the first year of the course, gradually decreasing as the course progresses (Chatterje, 2014). On the other hand, in the present study, a lower prevalence of depression was identified among students in the last year of graduation in all three measures.

It can be seen that anxiety was a more present factor among nursing students than depression, according to HADS. The students with the highest levels of anxiety and depression are those in the second and fourth grades, with a prevalence of the fourth grade in the first two measures and the second grade stands out in the last measure, with higher rates of both variables studied. Empirically, both factors can be translated due to the great academic demand in both undergraduate shifts; with its very striking distinctions: in the second year, the number of theoretical and basic disciplines in the health area is high; in turn, the fourth year has a reduced number of disciplines, but with a large workload, as they are specific nursing disciplines, and approximately 66% with an internship workload, the so-called Supervised Practical Activities (PHC), according to the course's pedagogical political project.

Persistent nursing students with symptoms of anxiety and depression are more likely to have lower academic performance and a higher rate of absenteeism, compared to students who present transitory or less intense symptoms, a factor that can favor the development of activities, as a propelling engine when presented at controlled levels; being disabling when at high levels (Ruz, 2018).

For the study participants, with regard to the three moments of data collection, in a longitudinal way, there was no statistically significant difference between these periods, which could justify variations in the levels of anxiety and depression throughout the year, whether at the beginning or end of the semester or the school year.

Machado (2019), in his investigation carried out and published in Brazil, raises hypotheses about how higher education in the country is going through dark moments, with regard to the health and quality of life of the university body; with main attention to the academic demand of students from different areas, in search of a professional qualification, improvement or maintenance of the financial quality of life, positioning in society and influence in their area of activity.

However, it is not that simple; moves towards a complex relationship of continuous coping, subject to constant pressure and overload in favor of personal and professional maturation, having as its primary foundation, good professional training. The data that draws the most attention in the study is the levels of depression within academia compared to world rates: 39% of individuals within the university environment get sick, while the percentage for the world population is 6% (Machado, 2019).

Support and follow-up measures for these students are necessary, as well as facilitating access to psychological and psychiatric care when necessary, in which the university is a bridge between the student and the mental support and reception service.

The university in question, through previous studies involving the mental health of students, has implemented a support service called Psychopedagogical Emergency Care and Integrated Health, started its activities in 2018, offering services such as: psychological care, psychopedagogical guidance, chaplaincy, nursing care, pedagogical mediation, social therapy and complementary therapies such as reiki, acupuncture, auriculotherapy, among others). The collegiate of the nursing course mobilized with the results previously presented, thus creating mechanisms for coping and, mainly, welcoming these students. One of these mechanisms is the so-called tutoring, which is nothing more than a method used to effect pedagogical interaction, a teacher volunteers that year to meet periodically to

listen to students who can talk about their academic and/or personal difficulties. This process has proven to be effective in terms of knowing the problems faced by students and not only moving the collegiate in the face of this, but also the individual movement of each student so that through dialogue measures can be found to confront and combat these evils.

It is important to note that mental health, that is, good quality of life, is a multifactorial factor, involved in several life processes; it cannot only take into account university aspects, excluding extra-academic factors, such as family life, financial condition, politics, religion, among other factors that contribute to the definition of health and/or disease.

It is necessary to promote health among young people and adolescents in the university period, corroborating with academic training in nursing, in view of the scenario of the profession, and the challenges they will face throughout their professional career; so that nurses who are new to the job market, but who are already mentally ill, are not trained.

Not having reached the population of students of the course in question, as a whole, in the evaluations carried out, was one of the limitations of the study. Still, quantitative data are too small to explain constructs as complex as anxiety and depression.

New studies are being carried out to try to explain the variations in the levels of anxiety and depression of the students of the Nursing course in question, with methodological approaches that allow giving voice to the subject studied, with the intention of better understanding the mental health-illness process, elucidating new ways of acting in the prevention of diseases during the university period.

Thus, it is believed that the objectives of the present study have been achieved, and it is hoped that the results obtained in this research can, from now on, contribute to an even more humanitarian education of the nursing course, creating in students and professors a sense of self-care and empathy with those closest to them, so that the care of the other is done effectively and vigorously, as academics and especially as nursing professionals.

CONCLUSIONS

With the data presented in this study, it is possible to characterize the population studied as predominantly formed by women, with an average age of 21 years, single, without children, practicing the Catholic religion. They report having little free time, and consider their current health and mental health to be average. Most see themselves as a happy person.

Although the levels of anxiety and depression assessed by the Hospital Anxiety and Depression Scale (HADS) in the EG group were not so high, they are values, although slightly higher than other studies involving nursing and/or health students. The best results for anxiety for FE were in the third measure of the study; and for depression, at the first moment of the research. The fifth year presented lower anxiety measures in the first and second collections, while in the third, the lowest index was with the third year. For the depression data, the fifth year obtained the lowest values in the three different measures. Meanwhile, the second year had the highest averages during the three measures of the study. The variations between the assessments of anxiety and depression were not considered statistically significant for the three different measures for the nursing students as a whole. For EG, the anxiety data showed a considerable decline over the course of a year; In other words, higher levels of anxiety among nursing students are perceived at the beginning of the academic year, with a slight decline at the end of the first semester of the year and a considerable drop at the end of the academic year. In turn, the depression data assumes a different behavior from that raised for anxiety, with lower levels for depression at the beginning of the year, with an increase in the middle of the school year, and finally decreasing again. The anxiety data was more present among nursing students than the depression data, with higher mean values. Both data were not statistically significant.

REFERENCES

1. Bjelland, I., et al. (2002). The validity of the Hospital Anxiety and Depression Scale: An updated literature review. *Journal of Psychosomatic Research*, 52, 69–77.
2. Botega, N. J., et al. (1995). Transtornos do humor em enfermaria de clínica médica e validação de escala de medida (HAD) de ansiedade e depressão. *Revista de Saúde Pública*, 29(5), 359-363. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0034-89101995000500004&lng=en&nrm=iso. Acesso em: 20 nov. 2019.
3. Braga, J. E. F. (2010). Ansiedade patológica: bases neurais e avanços na abordagem psicofarmacológica. *Revista Brasileira de Ciências da Saúde*, 14(2), 93–100.
4. Brandtner, M., & Bardagi, M. (2009). Sintomatologia de depressão e ansiedade em estudantes de uma universidade privada do Rio Grande do Sul. *Gerais: Revista Interinstitucional de Psicologia*, 2(2), 81–91.
5. Brasil, Ministério da Saúde, Conselho Nacional de Saúde. (2012). Resolução nº 466, de 12 de dezembro de 2012. Brasília: Ministério da Saúde. Disponível em: http://bvsms.saude.gov.br/bvs/saudelegis/cns/2013/res0466_12_12_2012.html. Acesso em: 07 nov. 2018.
6. Cabral, R., & Nardi, A. E. (2012). Ansiedade e inibição de ataques de pânico em contextos de pesquisa translacional e prospectiva. *Trends in Psychiatry and Psychotherapy*, 34(2), 62–72. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S2237-60892012000200004&lng=en&nrm=iso. Acesso em: 20 nov. 2019.
7. Cardoso, H. F., Borsa, J. C., & Segabinazi, J. D. (2018). Indicadores de saúde mental em jovens: fatores de risco e de proteção. *Estudos Interdisciplinares de Psicologia*, 9(3), supl. 1, 3–25. Disponível em: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S2236-64072018000400002&lng=en&nrm=iso. Acesso em: 10 nov. 2020.
8. Carneiro, A. M., & Baptista, M. N. (2012). Saúde geral e sintomas depressivos em universitários. *Salud & Sociedad*, 3(2), 166–178. Disponível em: http://pepsic.bvsalud.org/scielo.php?script=sci_arttext&pid=S0718-74752012000200004&lng=pt&nrm=iso. Acesso em: 20 nov. 2019.
9. Castillo, A. R. G. L., et al. (2000). Transtornos de ansiedade. *Revista Brasileira de Psiquiatria*, 22(supl. 2), 20–23. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1516-44462000000600006&lng=en&nrm=iso. Acesso em: 20 nov. 2019.
10. Castro, M. M. C., et al. (2006). Validade da escala hospitalar de ansiedade e depressão em pacientes com dor crônica. *Revista Brasileira de Anestesiologia*, 56, 470–477.

11. Chatterjee, S., et al. (2014). Depression among nursing students in an Indian government college. *British Journal of Nursing*, 23(6), 16–20.
12. Chaves, E. C. L., et al. (2015). Anxiety and spirituality in university students: A cross-sectional study. *Revista Brasileira de Enfermagem*, 68(3), 444–449.
13. Coutinho, F. L. (2013). Evidências de validade de critério e convergente relacionada a outras variáveis da escala Baptista de depressão para idosos (EBADEP-ID). (Dissertação de mestrado, Programa de Pós-Graduação de Psicologia, Universidade Federal do Paraná).
14. Diagnósticos de Enfermagem da NANDA-I: definições e classificação 2018-2020 [Recurso eletrônico]. (2018). Artmed.
15. Fayers, P. M., & Machin, D. (2007). *Quality of life - assessment, analysis and interpretation*. Wiley.
16. Fernandes, M. A., et al. (2018). Prevalence of anxious and depressive symptoms in college students of a public institution. *Revista Brasileira de Enfermagem*, 71, 2169–2175.
17. Gonçalves, J. R. L., et al. (2018). Religiousness is associated with lower levels of anxiety, but not depression, in medical and nursing students. *Revista Associação Médica Brasileira*, 64(6), 537–542. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0104-42302018000600537&lng=en&nrm=iso. Acesso em: 10 nov. 2020.
18. Kinoshita, R. T., et al. (2020). Atenção psicossocial e bem viver: relato de experiência de um Projeto Terapêutico Singular pelas dimensões da Felicidade Interna Bruta. *Revista Saúde Debate*, 44(e3), 320–332.
19. Leão, A. M., et al. (2018). Ansiedade entre estudantes universitários da área da saúde de um grande centro urbano do nordeste do Brasil. *Revista Brasileira de Educação Médica*, 42(4), 55–65.
20. Machado, R. P. (2019, 15 outubro). A guerra na educação piora a já frágil saúde mental nas universidades. *The Intercept Brasil*. Disponível em: <https://theintercept.com/2019/10/14/guerra-universidades-piora-saude-mental/>. Acesso em: 22 set. 2020.
21. Maltoni, J., Palma, P. de C., & Neufeld, C. B. (2019). Sintomas ansiosos e depressivos em universitários brasileiros. *Psico*, 50(1), e29213.
22. Maneti, M. L., & Marziale, M. H. P. (2007). Fatores associados à depressão relacionada ao trabalho de Enfermagem. *Estudos de Psicologia*, 12(1), 79–85.
23. Melo, I. (2019, agosto). Depressão e ansiedade de universitários: um problema em ascensão que preocupa especialistas e instituições. *Revista Gaúcha ZH*. Disponível em: <https://gauchazh.clicrbs.com.br/saude/noticia/2019/08/depressao-e-ansiedade->

de-universitarios-um-problema-em-ascensao-que-preocupa-especialistas-e-instituicoes-cjze96go8034t01pau0l8bbe2.html. Acesso em: 15 nov. 2020.

24. Moraes, B. X., et al. (2019). Dor musculoesquelética em estudantes de graduação da área da saúde: prevalência e fatores associados. *Revista da Escola de Enfermagem da USP*, 53, e03444. Disponível em: http://www.scielo.br/scielo.php?script=sci_arttext&pid=S0080-62342019000100443&lng=en&nrm=iso. Acesso em: 14 nov. 2020.
25. Olsson, C. A., et al. (2005). Associação entre genótipos 5-HTTLPR e padrões persistentes de ansiedade e uso de álcool: resultados de um estudo longitudinal de 10 anos sobre a saúde mental de adolescentes. *Molecular Psychiatry*, 10, 868–876.
26. Ramos, A. M., et al. (2015). Satisfação com a experiência acadêmica entre estudantes de graduação em enfermagem. *Texto & Contexto Enfermagem*, 24(1), 187–195.
27. Ruz, M. B. A., Al-Akash, H. Y., & Jarrah, S. (2018). Persistent anxiety and depression affected academic achievement and absenteeism in nursing students. *Open Nursing Journal*, 12, 171–179.
28. Silva, L. S., et al. (2019). Depressão entre acadêmicos de enfermagem e os fatores sociodemográficos associados. *Revista Eletrônica Acervo Saúde*, 11(17), e1524.
29. Snaith, R. P. (2003). The hospital anxiety and depression scale. *Health and Quality of Life Outcomes*, 1, 1–4.
30. Vasconcelos, T. C., et al. (2015). Prevalência de sintomas de ansiedade e depressão em estudantes de Medicina. *Revista Brasileira de Educação Médica*, 39(1), 135–142.
31. Velázquez, M. E. U., et al. (1999). Ansiedade do trabalho na equipe de enfermagem. *Atenção Primária*, 23, 107–180.
32. Zigmond, A. P., & Snaith, R. P. (1983). The Hospital Anxiety and Depression Scale. *Acta Psychiatrica Scandinavica*, 67, 361–370.