Stress, anxiety and depression in Portuguese nursing students

Stresse, ansiedade e depressão em estudantes de enfermagem portugueses

Estrés, ansiedad y depresión en estudiantes de enfermería portugueses

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ABSTRACT

BACKGROUND: The demands of the Nursing degree and the experience of undergraduate nursing students lead to the occurrence of stress, anxiety and depression

AIM: To determine the prevalence of stress, anxiety and depression amongst Portuguese undergraduate nursing students.

METHODS: A cross-sectional and descriptive study. Two hundred and fifty-three nursing students from two private schools and two public schools participated in this study. The data collection instrument consisted of sociodemographic and health behavior variables as well as, the Depression Anxiety and Stress Scale (DASS-21)-Short Form. The cut-off scores have been developed for defining mild/moderate/severe/extremely severe scores for each DASS-21 scale. The sociodemographic variables were analyzed using Pearson chi-

square analysis for dichotomous data. This study was approved by the Ethics Committee of the two Nursing schools.

RESULTS: The prevalence of depression is 43.2%, anxiety 54.2% and stress 45.1%. Depression was classified as mild in 12.3% of the sample, moderate in 13.8%, severe in 7.5% and extremely severe in 9.5%. Anxiety was mild in 18.2%, moderate in 12.3%, severe in 9.5% and extremely severe in 14.2%. Stress was classified as mild in 14.2%, moderate in 11.5%, severe in 13% and extremely severe in 6.3%. A Pearson Chi-Square's analysis revealed a significant relationship between depression and working students; anxiety showed significant relationships with the type of education, working students, marital status and age; stress revealed a significant relation between working students and marital status.

CONCLUSIONS: Depression, anxiety and stress are highly prevalent in Portuguese nursing students. It is suggested the use of some interventions that can improve the mental health of nursing students.

Keywords: Nursing Students; Depression; Anxiety; Stress**.**

RESUMO

CONTEXTO: As exigências do curso de enfermagem e a experiência de estudantes de enfermagem levam à ocorrência de stresse, ansiedade e depressão.

OBJETIVO(S): Determinar a prevalência de stresse, ansiedade e depressão entre estudantes de licenciatura em enfermagem.

MÉTODOS: Estudo transversal e descritivo. Duzentos e cinquenta e três estudantes de enfermagem de duas escolas privadas e duas públicas participaram neste estudo. O instrumento de colheita de dados consistiu em variáveis sociodemográficas e comportamentais de saúde e a Escala de Ansiedade, Stresse e Depressão (DASS-21) - Short-Form (Pais-Ribeiro, Honrado, & Leal, 2004). Os scores de corte foram desenvolvidos para definir os scores leve / moderado / severo / extremamente grave para cada escala DASS-21. As variáveis sociodemográficas foram analisadas pela análise qui-quadrado de Pearson para dados dicotómicos. Este estudo foi aprovado pela Comissão de Ética de duas escolas de enfermagem.

RESULTADOS: A prevalência de depressão é de 43,1%, ansiedade de 54,2% e stresse de 45,1%. A depressão foi classificada como leve em 12,3% da amostra, moderada em 13,8%, severa em 7,5% e extremamente severa em 9,5%. A ansiedade foi leve em 18,2%, moderada em 12,3%, severa em 9,5% e extremamente severa em 14,2%. O stresse foi classificado como leve em 14,2%, moderado em 11,5%, severo em 13% e extremamente severo em 6,3%. A análise pelo qui-quadrado de Pearson revelou uma associação estatisticamente significativa entre a variável depressão e trabalhador estudante; a ansiedade mostrou associações

significativas com o tipo de escolaridade, estudante, estado civil e idade; o stresse revelou associações significativas com as variáveis trabalhadores estudantes e estado civil.

CONCLUSÕES: Depressão, ansiedade e stresse são muito prevalentes nos estudantes de enfermagem portugueses. De acordo com nossos resultados, sugere-se a realização de intervenções de apoio aos estudantes de enfermagem que promovam uma melhor saúde mental.

Palavras-Chave: Estudantes de Enfermagem; Depressão; Ansiedade; Stresse

RESUMEN

CONTEXTO: Las exigencias del curso de enfermería y la experiencia de estudiantes de enfermería llevan a la ocurrencia de estrés, ansiedad y depresión.

OBJETIVO(S): Determinar la prevalencia de estrés, ansiedad y depresión entre estudiantes de licenciatura en enfermería

METODOLOGÍA: Estudio transversal y descriptivo. Doscientos cincuenta y tres estudiantes de enfermería de dos escuelas privadas y dos públicas participaron en este estudio. El instrumento de recolección de datos consistió en variables sociodemográficas y comportamentales de salud y la Escala de Ansiedad, Estrés y Depresión (DASS-21) - Short-Form (Pais-Ribeiro, Honrado, & Leal, 2004). Las puntuaciones de corte se han desarrollado para definir las puntuaciones ligeras / moderado / severo / extremadamente grave para cada escala DASS-21. Las variables sociodemográficas fueron analizadas por el análisis qui-cuadrado de Pearson para datos dicotómicos. Este estudio fue aprobado por la Comisión de Ética de dos escuelas de enfermería.

RESULTADOS: La prevalencia de depresión es de 43,31%, ansiedad de 54,12% y estrés del 45,1%. La depresión fue clasificada como leve en el 12,43% de la muestra, moderada en el 13,78%, severa en el 7,75% y extremadamente severa en el 9,45%. La ansiedad fue leve en el 18,2%, moderada en el 12,43%, severa en 9,45% y extremadamente severa en el 14,2%. El estrés fue clasificado como leve en el 14,2%, moderado en el 11,5%, severo en el 12,93% y extremadamente severo en el 6,43%. El análisis de Pearson qui-cuadrado reveló una asociación estadísticamente significativa entre la variable depresión y el estudiante trabajador; la ansiedad mostró diferencias significativas con el tipo de escolaridad, estudiante, estado civil y edad; el estrés reveló asociaciones significativas con las variables trabajadores estudiantes y el estado civil.

CONCLUSIONES: La depresión, la ansiedad y el estrés son muy frecuentes en los estudiantes de enfermería portuguesas. De acuerdo con nuestros resultados, se sugiere la realización de intervenciones de apoyo a los estudiantes de enfermería que promuevan una mejor salud mental.

Palabras Clave: Estudiantes de Enfermería; depresión; ansiedad; estrés

Introduction

Mental health disorders differ between social classes, sex and life stages. Stress is considered a determinant for these disorders as it is understood as an experience of tension, in which the individual faces situations that go beyond their ability to deal with them. According to Vaz-Serra (2007), a person in under stress when they realize that they have no control over an event that is relevant to them and before feeling that the demands of the event exceed their personal and social capacities and resources. Therefore, there is the feeling that they cannot control the situation, leaving themselves vulnerable. This perception of having no control over the situation can be authentic (the person does not really have the skills and resources to do so) or simply a belief (the person believes that they do not have those capabilities or resources).

According to the same author (2007), stress factors can trigger different types of response in the human being. Examples of physical reactions can be: increased sweating, muscle tension, tachycardia, hypertension, nausea, among others. Regarding psychological reactions, the individual may have manifestations of depression, anxiety, anguish, tension, insomnia, dissatisfaction, irritability and difficulty concentrating (Camelo & Angerami, 2004).

Anxiety and depression are affective dimensions considered relevant from a mental health point of view, and anxiety is usually associated with the symptoms of depression. Anxiety is a normal state in the individual that results from an ordinary reaction to something specific such as an alarm system. The difference between the normal from the pathological state is the intensity of the anxiety (Bauer, 2002). Depression is one of the most disabling mental disorders for an individual either at the personal, professional or social level (Fonseca, Fialho, Matos, & Figueira, 2013).

Admission to higher education usually occurs in a specific period of physical, cognitive, psychological and social development of the individual and may be one of the best periods of life. It is time for discoveries, freedom, choices and friendships. Nevertheless, students face the demands of academic and social life (Valadas & Gonçalves, 2002), which can lead to a homeostatic imbalance, influencing their performance.

A constant psychological and physical adaptation to situations of pressure, experienced in several moments, whether personal, social, professional or academic life is fundamental. According to Porta-Nova (2010), the process of adaptation to higher education requires the adoption of strategies that help reduce students' suffering, whether it is physical or psychological. Santos (2011) states that students' mental health is worse than that of the

general population. Also, Rathnayake and Ekanayaka, (2016) consider that stress, anxiety and depression are highly prevalent in nursing students.

This study arises from our concerns as nursing professors which are, per se, research questions, such as: how is the mental health of nursing students (more specifically, from four higher education institutions, two private and two public Nursing schools)?; what is the association between stress, anxiety and depression with sociodemographic and health behavior variables?; what is the prevalence of stress, anxiety and depression amongst undergraduate nursing students?

Our target population is nursing students from two public nursing schools and two private nursing schools because, it is known that the nursing degree requirements and the experience in Clinical Teaching can lead to situations of stress, anxiety and depression (Cestari, Barbosa, Florêncio, Pessoa & Moreira, 2017; Claudino & Cordeiro, 2016; Viegas, Cruz, Pinto, Almeida & Aleluia, 2016). Therefore, this study aims to determine the prevalence of stress, anxiety and depression amongst undergraduate Nursing students.

Methods

This is a cross-sectional and descriptive study. Two hundred and thirty-three nursing students from two private nursing schools and two public nursing schools participated in the research. Inclusion criteria were as following: attending the Nursing Degree in the 2017/2018 academic year; belong to the selected nursing schools and accept to participate in the study by completing the questionnaire sent by e-mail. The data collection instrument consisted of sociodemographic and health behavior variables and the Depression Anxiety and Stress Scale (DASS-21)-Short Form (Lovibond & Lovibond,1995; Pais-Ribeiro, Honrado, & Leal, 2004).

The DASS 21 consists of 21 items distributed in equal numbers by three subscales, Depression, Anxiety and Stress. The depression subscale evaluates the following concepts: depression and dysphoria (one item); discouragement, (one item); devaluation of life (one item); self-depreciation (one item); lack of interest or involvement (one item); anedonia (one item); inertia (one item); the anxiety subscale consists in the following concepts: anxiety and excitation of the autonomous system (three items); musculoskeletal effects (one item); situational anxiety (one item); subjective experiences of anxiety (two items); lastly, the stress subscale refers to the concepts: difficulty in relaxing two items); nervous excitement (one item); easily shaken / upset (one item); irritable / exaggerated reaction (two items); and impatience (one item). The three scales consist of seven items each, out of a total of 21 items.

Respondents should assess the extent to which they have experienced each symptom during the last week on a Likert scale of four points of severity or frequency: "1=Did not apply" until "3=applied most of the time". The results of each subscale are obtained by adding the results of the seven items. Each subscale provides three classifications, which can range from zero to 21. The highest scores on each scale refer to more negative affective states (Lovibond & Lovibond,1995; Pais-Ribeiro *et al.*, 2004).

The internal reliability in this study for each subscale was: Depression (α=0.92), Anxiety (α=0.80) and Stress (α=0.87).

The cut-off scores have been developed for defining mild/moderate/severe/extremely severe scores for each DASS scale (Lovibond & Lovibond,1995).

Table 1 - Scores for DASS-21

	DEPRESSION	ANXIETY	STRESS
NORMAL	0-4	0-3	0-7
MILD	5-6	4-5	8-9
MODERATE	7-10	6-7	10-12
SEVERE	11-13	8-9	13-16
EXTREMELY SEVERE	14+	10+	17+

Source: Lovibond e Lovibond (1995)

A Pearson Chi-Square analysis for dichotomous data was conducted to test the associations between DASS subscales and the sociodemographic variables. This study was approved by the Ethics Committee of two nursing's schools.

Results

The sample consisted of 253 students from four polytechnic schools (two public and two private), of which the majority were female (83.23%), single (96.4%) attending public schools (80%). Concerning their working context, 80.2% claim to be students in ordinary situation and 19.8% claim to be working students.

As for the year of attendance, students distribute themselves as following: 23.3% in 1st year; 20.2% in 2nd year; 25.3% in 3rd year and 31.2% in 4th year.

Concerning risk behaviours, the majority do not smoke (85%) and do not usually consume alcoholic drinks (85.4%).

Of the total sample, depression prevalence is 43.1%, anxiety 54.2% and stress 45.1%. In order to rate the sample in function of the cut-off points of depression, anxiety and stress, the frequencies and percentages for each classification are presented in Table 2.

Table 2 - Sample rating in terms of depression, anxiety and stress

DASS-21	N	%
Depression		
Normal	144	56.9
Mild	31	12.3
Moderate	35	13.8
Severe	19	7.5
Extremely Severe	24,	9.5
Anxiety		
Normal	116	45.8
Mild	46	18.2
Moderate	31	12.3
Severe	24	9.5
Extremely Severe	36	14.2
Stress		
Normal	139	54.9
Mild	36	14.2
Moderate	29	11.5
Severe	33	13.0
Extremely Severe	16	6.3

Depression was classified as mild in 12.3% of the sample, moderate in 13.8%, severe in 7.5% and extremely severe in 9.5%. Anxiety was mild in 18.2%, moderate in 12.3%, severe in 9.5% and extremely severe in 14.2%. Stress was classified as mild in 14.2%, moderate in 11.5%, severe in 13% and extremely severe in 6.3%.

Pearson Chi-Square's analysis revealed a significant relationship between depression and working students; anxiety showed significant relationships with the type of education, working students, marital status and age; stress revealed a significant relation between working students and marital status.

Statistically significant differences were found between working and non-working students for depression (X^2=5.517; p=0.019), anxiety (X^2=11.468; p=0.001) and stress (X^2=3.861; p=0.049). Results show that working students have fewer depressive symptoms, less anxiety and less stress.

Regarding age, statistically significant differences were found for anxiety (X^2=5.370; p=0.020) and stress (X^2=6.796; p=0.009). Data show that younger people have higher scores on anxiety and stress.

When analysing anxiety, statistically significant differences were also found between marital status and the type of public or private school. The results show that single participants (X^2=5.767; p=0.016) and those who study in public schools (X^2=9.388; p=0.002) have higher scores for anxiety.

Discussion

The results show that there is a prevalence of depression, anxiety and stress among nursing students. This is in line with other studies performed on higher education students with depressive symptoms and high levels of stress (Santos, 2011; Williams *et al.*, 2014).

Concerning age, Santos (2011) states that the few existing studies show that there is some relationship between the young adult period and depressive symptomatology. In our study we found statistically significant differences where the youngest students present higher values of anxiety and stress.

Working students have fewer depressive symptoms, less anxiety and less stress. Some studies on higher education students have shown that the symptoms of depressive disorders increase as the socio-economic status declines (Bostanci *et al.*, 2005; Santos, 2011). Other variables such as employment status or financial pressures can be involved (Steptoe *et al.*, 2007). Can we speculate that if these students have less time to devote to the course, they are more resilient, or do they have lower expectations?

Public school students show higher levels of anxiety than students in private schools, which may explain the displacement of public-school students. According to Antunes (2015) displaced students are more depressed and anxious than non-displaced students. This situation may be related to social and emotional support factors, since displaced students may not receive the support they need, namely for being away from the family (Claudino & Cordeiro, 2006).

Conclusion

The results obtained allow us to know the levels of stress, anxiety and depression in this sample of students. There are some protective factors, such as attending private schools, being a working student and already belonging to an older age group, as well as, being married. It is known that the admission into higher education is a demanding process of adaptation to a new reality. This period of life transition associated with the choice of such a specific and complex course such as the nursing degree, can trigger symptoms of depression, anxiety and academic stress. This also makes nursing students a vulnerable group, presenting

the need for early mental health intervention in all its dimensions, in order to promote healthy behaviours. One of the limitations of this study is the non-probabilistic convenience sample, which may raise some reservations concerning the representativeness of the population studied.

Implications for Practice

A higher education institution must not only consider the scientific training of their students, but also, their ability to empower them towards the healthy development of the psychological dimension and its associated dimensions (biological, environmental, cultural and socio-economic), all in the perspective of global health. Studies carried out in nursing students in mental health point out the existence of tension, anxiety and depression, and the need for early action and implementation of programs of mental health promotion (Sequeira, Carvalho, Borges, & Sousa, 2013). Scientific evidence suggests that these interventions should be initiated during the undergraduate nursing degree, through the development of tools that enable students to prevent and reduce these types of symptoms. Health promotion and education programs, student participation in the promotion and prevention of healthy behaviours and mental health literacy are also suggested.

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