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Perceived self-esteem, resilience and stress of students entering a nursing degree

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ABSTRACT. This study aimed to evaluate perceived self-esteem, resilience and stress of students entering a nursing degree. Cross-sectional study with 122 students (104 women and 18 men) of the first semester of a private institution in Distrito Federal. Evaluations were performed in March 2019. Rosenberg Self-Esteem Scale, Resilience in Higher Education and Perceived Stress, as well as a socio-economic questionnaire were used. All procedures were carried out using the software Statistical Package for the Social Sciences (SPSS) and GraphPad Prism 6. The comparison of perceived stress between groups demonstrated that less stressed individuals were younger (19.1 ± 1.9 years old vs 22.5 ± 7.4 ; $p = 0.030$) and presented higher resilience scores (147.0 ± 16.3 vs 125.0 ± 22.5 ; $p < 0.001$). The comparison of self-esteem tertiles showed that individuals with better self-esteem were more resilient (146.0 ± 17.65 vs 133.85 ± 24.84 ; $p = 0.037$). Spearman's correlation demonstrated a negative relation between resilience score and perceived stress ($r = -0.415$ $p = < 0.001$). Students had already entered university presenting psychical deficits, such as increased stress and low self-esteem and resilience.

Keywords: nursing students; psychological resilience; self-esteem.

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Introduction

University experience brings some drastic changes to students, demanding adaptation and implying lifestyle alteration (Maier & Mattos, 2016). Concomitantly with academic demands, there is encouragement to seek professional excellence, resulting in competitiveness increase, in which individuals increasingly crave high profile professional training and raise the probability of developing psychological and social problems, especially when there is a decrease in resilience and self-esteem (Maier & Mattos, 2016).

According to the Diagnostic and Statistical Manual of Mental Disorders (Manual Diagnóstico e Estatístico de Transtornos Mentais – DSM-5, 2014), a mental disorder is a syndrome characterized by a clinically significant disturbance in an individual's cognition, emotional regulation or behavior that reflects a dysfunction in psychological, biological or developmental processes underlying mental functioning. Mental disorders are frequently associated with significant distress or disability that affect social, professional and other important activities.

Concerning Nursing, according to a study conducted by Fundação Oswaldo Cruz (2015), the difficulty of finding a job was reported by 65.9% of professionals. This field is already experiencing open unemployment, with 10.1% of the interviewed professionals reporting unemployment in the last 12 months.

Nursing is a profession that aims at care and well-being of people's life, and because of it, it is necessary that nursing students under training also take care of themselves, so that they are able to take care of others (Fontana & Lariane, 2012). According to Cestari, Barbosa, Florêncio, Pessoa and Moreira (2017), the biopsychosocial oppressions are responsible for causing imbalance in the individual, which can bring about decrease in performance in different situations.

According to Lourenço and Parreira (2010), due to the complexity of care in nursing, the classroom learning, in addition to the mandatory internship that generates direct contact between student and patient, studies demonstrated that nursing students are more exposed to stressors if compared with other degrees. Such aggravating factors are responsible for causing feelings of fear, tension or threat which can

result in thoughts of inability to perform tasks demanded by the course, due to the double shift, significantly raising self-demand (Lourenço & Parreira, 2010).

In academic environments, this topic is still generally rarely addressed. There are several factors that can have a relevant impact on students' life, and they can interfere in their well-being and stress. The sum of financial and domestic obligations to the moments of relaxation and tension in university life, in addition to extra-class papers and in the case of nursing, mandatory internships with direct contact with patients, are examples of variables influencing these factors (Fontana & Lariane, 2012).

Another important aspect for mental health is self-esteem, which according to Potter and Perry (2018) it is determined according to the own individuals' assessment about themselves, based on their emotions, beliefs, knowledge and social connections that can occur positively (acceptance) or negatively (depreciation). When self-esteem is positive, individuals are happier with themselves, tending to see the good in things and being able to cope with more complicated situations more effectively. For those having low self-esteem, they find it difficult to perceive their importance to the world, and tend to have negative thoughts and have a deficit in coping issues (Lima & Souza, 2019).

Resilience results from the sum of external and internal factors, including emotional, socio-cultural, environmental and cognitive factors that interact and allow individuals to deal, overcome adversities and stress, and become stronger, that is, it refers to the human being ability to face and respond positively to experiences that have an elevated potential of risk for their health and development (García-Izquierdo, Ríos-Risquez, Carrillo-García, & Sabuco-Tebar, 2018; Thomas & Asselin, 2018).

The relevance of monitoring such variables is highlighted, in order to promote mental health actions of nursing students. Therefore, the aim of this study was to verify the stress, self-esteem and resilience levels of students entering the Nursing degree.

Material e methods

Quantitative cross-sectional study, with 122 students (104 women and 18 men) of the first semester of Nursing degree in a private institution in Distrito Federal. Evaluation was carried out in March 2019, with students from three classes of the first term (morning and night) in which questionnaires were used to assess stress, resilience and self-esteem, in addition to a socio-economic questionnaire (age, sex, monthly family income, marital status and race).

Questionnaires were applied between classes by trained health researches, in a room with capacity for 60 students, so that they kept some distance from each other allowing privacy of answers, thus, after filling it, it was placed in an envelope only identified by classes and shift. Filling in the questionnaires took 20 minutes on average.

Before handing out the questionnaire together with the Informed Consent Form (ICF) in classes, the researchers introduced themselves to the responsible professor, who was previously explained the research objectives and methodology. Afterwards, the researchers introduced themselves to the class and explained the objectives, methodology, and the importance of this study, and invited them to participate in the research. Collection was carried out after signing the Informed Consent Form.

Rosenberg self-esteem scale was used to evaluate self-esteem, validated in Brazil by Hutz and Zanon (2011), allowing a unidimensional evaluation constituted of ten statements related to a group of feelings of self-esteem and self-acceptance that assess global self-esteem. The ten items are answered in a four-point Likert scale varying between totally agree, agree, disagree and totally disagree.

Resilience was evaluated through the scale proposed by Oliveira and Machado (2011), with 25 items, in which for each alternative it was answered by a seven-point Likert scale (value 1 corresponded to 'totally disagree', value 4 'neither agree nor disagree', value 7 meaning the individual 'totally agrees' with the statement). After adding, the result may be between 25 to 175. A result below 121 is considered by the original authors as an indicative of 'decreased resilience'; a result between 121 and 145 is considered as 'moderate resilience', and above 145 is considered 'moderately increased' to 'increased resilience'.

Perceived stress was verified through the questionnaire called – Perceived Stress Scale PSS10, made up of 10 questions, with a four-point Likert scale, in which: 0 for 'never', 1 for 'hardly ever', 2 for 'sometimes', 3 for 'frequently' and 4 for 'very frequently'. Participants should choose the alternative that best fitted their situation.

It was used descriptive statistics for the general characteristics of sampling (mean, standard deviation, absolute and relative frequency). Shapiro-Wilk and Levene's were used to test normality and homogeneity,

respectively. In order to compare the variables of perceived stress, self-esteem and resilience were divided in tertiles and the two extremes were used for comparison through a t-test for independent samples. Spearman's rank correlation coefficient was used for the correlation between the participants variables. The adopted significance level was of $p < 0.05$. All procedures were performed using the software Statistical Package for the Social Sciences (SPSS) and GraphPad Prism 6.

This study followed the guidelines of Resolution n° 466/2012 of the National Health Council and was approved by the Research Ethics Committee of Centro Universitário do Distrito Federal – UDF, under approval (CAAE: 59713316.0.0000.5650).

Results

Among 122 students, women presented average age of 21.80 ± 6.80 and BMI of $23.25 \pm 4.65 \text{ kg m}^{-2}$, while men 24.56 ± 9.45 years of age and BMI of $23.97 \pm 4.07 \text{ kg m}^{-2}$. It was observed that 85.25% ($n = 104$) of the sample was represented by female gender; 48.40% ($n = 59$) of students worked and studied and the monthly family income of 26.2% ($n = 32$) varied between R\$ 1.801 to 2.600, and 25.4% ($n = 31$) varied between R\$ 999 to 1.800; 82% ($n = 100$) were single, 42.9% ($n = 51$) said they were brown and 16% ($n = 19$) black and 57.4% ($n = 70$) live with their parents.

The Table 1 presents data concerning self-esteem and perceived stress evaluation of nursing students.

Table 1. Results of Self-esteem, Perceived Stress scales ($n = 122$).

Scales	Age group	Sample ($n = 122$)	Mean $\pm$ sd of Sample	Indicated Mean $\pm$ sd	Gross Score	% people $\geq$ Indicated
Perceived stress	18 a 29	105 (86.07%)	22.68 ± 5.15	$21.3 \pm 0.6^*$	19 a 22	27.62% ($n = 29$)
	30 e 44	15 (12.30%)	21.67 ± 6.56	$17.8 \pm 0.4^*$	16 a 18	6.67% ($n = 1$)
	45 a 54	1.63% (02)	24 ± 1.41	$17.2 \pm 0.4^*$	17 a 18	0.00%
Self-esteem						
Women	16 a 19	60 (49.18%)	25.03 ± 3.46	$26.4 \pm 7.77^{\#}$	18 a 33	100.00%
Men	16 a 19	07 (5.74%)	24.71 ± 1.38	$29.1 \pm 6.69^{\#}$	23 a 35	100.00%
Both	20 a 30	55 (48.08%)	24.96 ± 3.46	$18.9 \pm 6.78^{\#}$	13 a 25	58.18% ($n = 32$)

*Reis and Petroski (2004). [#]Hutz (2014).

The comparison of tertiles of perceived stress between groups demonstrated that less stressed students were younger (19.16 ± 1.97 years old vs 22.58 ± 7.45 ; $p = 0.030$) (Figure 1A) and had higher resilience score (147.09 ± 16.32 vs 125.08 ± 22.50 ; $p < 0.001$) (Figure 1B).

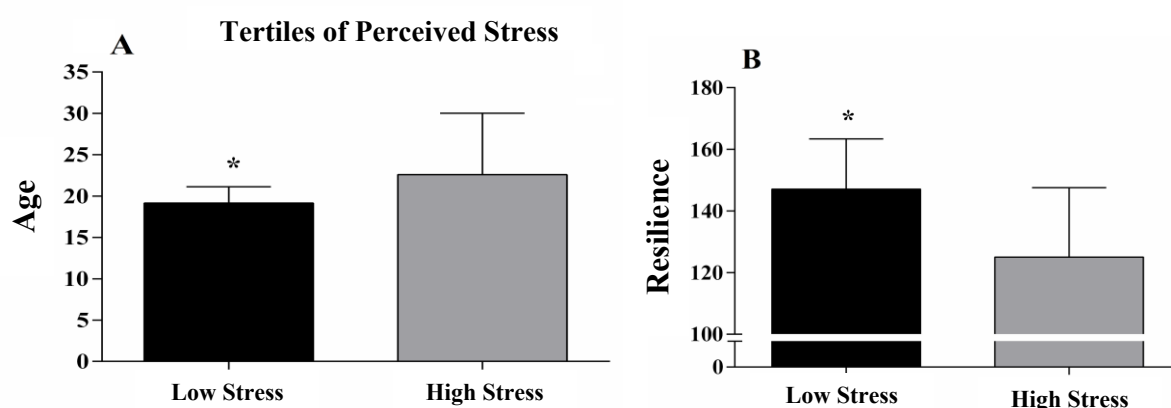


Figure 1. Comparisons between groups of tertiles of perceived stress and age (1A) and resilience score (1B).

The comparison of tertiles of self-esteem demonstrated that students with better self-esteem had better resilience (146.0 ± 17.65 vs 133.85 ± 24.84 ; $p = 0.037$) (Figure 2). Spearman's correlation showed a negative relation between resilience score and perceived stress ($r = -0.415$ $p < 0.001$) (Figure 2).

The undergraduate course becomes the training environment, and it can positively or negatively interfere in the individual's development both as a student and future professional (Numata Filho, Teixeira-Araújo, Cruz, Araújo, & Moreira, 2016). What is more, a significant number of undergraduate students experience, at the beginning of the course, the first contact with work and study balance, and start to make

decisions without their parents. Such new experiences can lead to an increase in the level of stress, due to physical activities reduction, decreased hours of sleep, which can bring about future adverse health effects (Bacchi & Licinio, 2017).

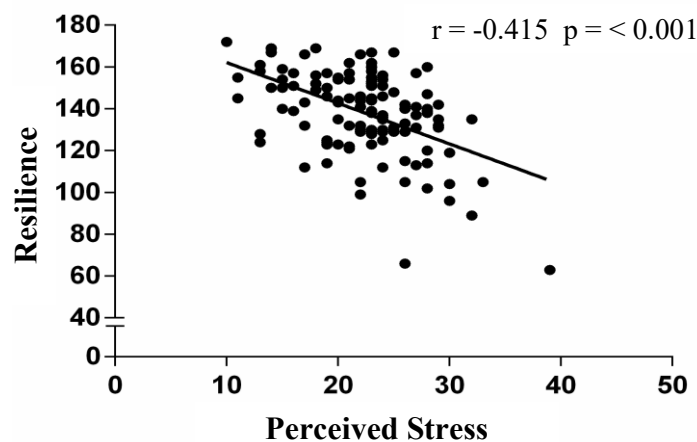


Figure 2. Correlation between resilience score and perceived stress.

Discussion

This study illustrates a prevalence of females. In spite of an increase in the number of males working in the healthcare field, such as nursing and phonoaudiology, there is still predominance of women (Bresolin et al., 2020). Corroborating this statement, a study carried out with 792 undergraduate student in the field of health, verified prevalence of women (74.6%) among students (Souza et al., 2020).

Most students had monthly family income of R\$1,801 to 2,600 and shared expenses and lived with parents. In comparison, a research conducted in Brasília verified monthly income of up to 3 minimum wages (30.7%) and between 3 and 10 minimum wages (49.8%) (Ribeiro, Bragiola, Eid, & Pompeo, 2020).

Students living with their family receive better social support and face less adaptation problems; on the other hand, students living with other students or alone, might have less social support and more responsibility, which are added to the academic commitments, factors which can influence on manifestations of stress (Bresolin et al., 2020). In addition, when individuals live with their parents, many times, responsibilities are shared.

Younger students presented lower scores concerning stress (19.16 ± 1.97 vs 22.58 ± 7.45 ; $p = 0.030$) compared with older ones. The specific reasons determining stress increase were not analyzed, therefore they can come from several causes, such as, for instance, the sum of academic stress load with work stress load. Many university students work and study, regardless of the university institution in scope. This can bring about aggravation of stress and also influence on the student's quality of life (Fontana & Lariane, 2012).

These data are similar to results of other studies with this population, which identified the prevalence of stress in older students (Lourenço & Parreira, 2010). It is noted that nursing students present psychological and physiological manifestations of stress at a higher proportion than in other fields (Barker, Howard, Villemare-Kraiden, & Galambos, 2018).

A Norwegian study with 232 students compared the pattern of increase of stress in nursing students with students of occupational therapy and physiotherapy, and analyzed that scores of stress of nursing students significantly increased throughout time, differing from others, proving that concern with stress in nursing students and its predictor sources are necessary (Nerdrum, Rustoen, & Ronnestad, 2009).

When comparing the Brazilian and Norwegian teaching models, it is observed that a Norwegian student has more autonomy, because their teaching model is different from the Brazilian one, especially concerning their curriculum and academic load. While in Norway the Degree lasts 3 years and 50% of practical hours, in Brazil the course lasts 4 to 5 years and has different practical loads.

Some studies reported by Ribeiro et al. (2020) reinforce that social, economic, socio-demographic factors and gender differences can interfere in self-esteem. Thus, academic life, studies and other activities balance (be them academic or not), dedication to the course, study time, interaction with classmates and teachers,

leisure, living with family and friends, and doubts regarding being able to become a good professional can influence on the student's self-evaluation (Ribeiro et al., 2020).

Results presented based on Rosenberg self-esteem scale (Hutz & Zanon, 2011) showed that female students aging 16 to 19 years, which represent 49.18% of sampling, had scores close to average, while male students belonging to the same age group obtained results below average, characterized by 5.74%, while students of both sex aging more than 20 years presented higher scores of self-esteem, above average. It was observed that, many times, the male Nursing student feels discriminated by society or even by academic members, when the term nurses (referring to female nurses) is generalized, although it is a professional mostly constituted of women, it is made up of men and women, there are differences and inequalities, it is about female and male nurses.

It is based on the assumption that it is possible for men to develop psychological distress during the Nursing degree, due to the fact that they are the minority in the profession and in the course, to suffer from prejudice and discrimination.

It is highlighted that sampling students were entering the nursing degree and had started the semester less than a month before, a fact that shows the academic routine may not be a determining and isolated factor for the found low self-esteem, since when analyzed in the non-students table, the results presented were also below the scale average ($32.90 \pm 6,04$), implying that other factors might have influenced the results.

Stress is defined by complex reactions that the organism develops when facing a stimulus or threat established by the environment, from the biological point of view. Although stress is common nowadays, even though it has a concept based on common sense, it is still one of the problems that mostly affect people (Saleh, Camarlb, & Romo 2017).

As mentioned before, stress, self-esteem and resilience levels can be considerably modified in the university student. Stress associated with academic demands can represent, at least partly, the onset of depressive symptoms and is associated with a low level of resilience, and is also related to a decline in self-esteem (Barker et al., 2018).

According to Potter and Perry (2018) the relevant stressors for self-esteem can change throughout development and growth, and such changes can trigger the decrease of this factor in adulthood. Socio-economic issues, work and love problems are some examples of stressful conditions. Students can suffer interference from other factors, such as, issues concerning their own body image, attempts to please parents' expectations, problems with romantic relationships and economic vulnerability, which can be justified based on part of sampling having low self-esteem, such as undergraduate students ($n = 67$) and 100% of sampling being below levels considered as acceptable for non-students.

Being resilient is to expect individuals to have lower levels of stress and, consequently, less likelihood of developing disorders (Souza et al., 2020). University students, as already mentioned, receive several stressor stimuli throughout degree, which are direct influencers on resilience (Souza et al., 2020).

When correlating resilience and self-esteem in tertiles, it was observed that people having better self-esteem will have directly proportional results concerning resilience. It is justified by the influence of low resilience in coping skills, leading people to be more exposed to stress, becoming more prone to present depressive symptoms and low self-esteem (Lima & Souza, 2019).

Individuals' level of resilience varies according to their personal traits and also the social context in which they are inserted. Students with better resilience are more likely to face labor market demands and imposed challenges, as they can challenge adverse everyday situations more easily (Souza et al., 2020).

Conclusion

Considering the present changes in the applied scores and because they are students entering university with little academic experience, it is possible to conclude that the sample individuals have already started university life presenting psychical deficits, such as increased stress and low self-esteem and resilience.

It is possible to develop alternatives to minimize future adversities from stress, such as make it available and enable listening and welcoming students in order to detect stressful situations. It is also plausible to elaborate studies to structure programs focused on mental health addressing personal and impersonal resilience.

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