



Perceptions of the nursing students on stress-generating factors during the graduation

Percepções de discentes de enfermagem sobre fatores geradores de estresse durante a graduação

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Objective: to understand, according to the perceptions of the nursing students, the stress-generating factors during graduation. **Methods:** this is a qualitative study, developed with 236 undergraduate nursing students, in a Higher Education Institution. The production of information was carried out by a semi-structured instrument, processed by the Software Interface for Multidimensional Analyzes of Textes et de Questionnaires and submitted to Bardin content analysis. **Results:** six classes were created: the type of activity carried out, the amount of activity, the period to develop them, the infrastructure, the pedagogical organization of the course and the professors. **Conclusion:** the study identified as potential source of stress stimuli in the activities that involve performance and concentration of efforts performed in constant and increasing study routines.

Descriptors: Nursing; Students, Nursing; Stress, Psychological; Higher Education Institutions; Perception.

Objetivo: compreender, conforme percepções de estudantes de enfermagem, os fatores geradores de estresse durante a graduação. **Métodos:** estudo qualitativo, desenvolvido com 236 graduandos em enfermagem, em Instituição de Ensino Superior. Produção de informação realizada por instrumento semiestruturado, processada pelo software *Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires* e submetida à análise de conteúdo de Bardin. **Resultados:** originaram-se seis classes: o tipo de atividade realizada, a quantidade de atividade, o prazo para desenvolvê-las, a infraestrutura, a organização pedagógica do curso e os professores. **Conclusão:** o estudo identificou como fonte potencial de estímulos estressores as atividades que envolvem desempenho e concentração de esforços realizados em rotinas de estudos constantes e crescentes.

Descritores: Enfermagem; Estudantes de Enfermagem; Estresse Psicológico; Instituições de Ensino Superior; Percepção.

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Introduction

Stress is a broad theme that occupies a prominent place in several media, both in everyday language and in the scientific literature, by subjectivity and multifactorial. Therefore, it is considered a predisposing, triggering or coadjuvant factor of multiple diseases⁽¹⁻²⁾.

The term stress used initially by Seyle, is defined as the body's response to any demand that forces it to adapt to a change. Thus, when exposed to an effort caused by a stimulus interpreted as threatening, whether physical, chemical, biological or psychosocial, an organism shows a tendency to react, involving the whole body⁽³⁾.

Among the increasing use of the word stress in several contexts, it is evident the existence of research that recognizes the presence of stress in the period of professional training, among nursing students of higher education⁽¹⁾.

When the student enters in a Higher Education Institution, there is a new environment, often different and far from the student's life context, which raises innumerable positive expectations, as well as a series of fears and difficulties, characterizing the multidimensional process of institutional, relational and vocational aspects^(2,4).

Also, the high daily burden of different tasks makes the nurses' professional training process a challenge and, at different moments, the excess of activities causes inability to attend to the demands, generating tension and stress^(1,4).

The main implications of stress on the students are low school performance, the reduced cognitive functioning, impaired coping and incompleteness of graduation. Also, there may be physical and psychological symptoms, such as headache, development of hypertension, heart disease, and immunodeficiency disorders, as well as anxiety, changes in sleep pattern and appetite^(1,5).

Thus, due to the characteristics of their activities, nursing students faced situations of risk for stress. In this context, the recognition of the predisposing factors to stress becomes important, as it enables the construction of preventive actions and strategies that reduce them, minimizing consequences for the health and performance of daily activities. When considering the mentioned situations, the study aimed to understand, according to the perceptions of nursing students, the factors that generate stress during graduation.

Methods

This is a qualitative study, developed in Higher Education Institution, in the Brazilian Northeast, from September to November 2013. The participants of the study were 236 undergraduates of the Nursing Course, out of a total of 244 students enrolled. The aim was to contemplate a greater universe of experiences reported, as well as the expressive participation of the students. The inclusion criteria were: to be a student of the undergraduate nursing course of any period. Students on health leave, withdrawn or taking a time in the course were excluded.

The production of information was through a semistructured instrument, with an open question, answered in writing, allowing the student to express freely and spontaneously, using his own language and expressing opinions.

The instrument enabled to obtain the information about gender, age, marital status and, also, period of the course. The guiding question was used to identify the factors that cause stress in the nursing course: what causes you stress in the course? Its application was unique, in the institution's classroom, by visits to the classes, during class time, during the academic period, with an average duration of 30 minutes. The material produced was submitted to the three phases of thematic content analysis: pre-analysis, material

exploration, and treatment of results (inference and interpretation)⁽⁶⁾.

The pre-analysis was the moment in which there were the floating readings resulting from the transcripts of the answers and the junction, which composed the corpus of this study. This phase contemplated completeness, with reading and re-reading of each transcribed material to ensure that all written material was contemplated, without omission⁽⁶⁾.

The representativeness was guaranteed, with the participation of almost 100.0% of the course students; the homogeneity was attended, in which all the individuals belonged to the same category within the University, they went through the same process of the production of information and participation criteria; the pertinence occurred with the selection of the content that responded to the research objective; and exclusivity resulted from classification in six categories related to stress-generating factors⁽⁶⁾.

In the second phase, defined as the material exploration phase, the coding units were defined, using the software IRAMUTEQ (Interface of Multidimensional Analyzes of Textes et de Questionnaires)⁽⁷⁾.

The information was processed and classes of analysis that resulted in the identification of the stable and definitive units of meaning were originated. For textual analysis, the method of descending hierarchical classification was defined, in which the texts are classified according to the respective words, whose set of them is divided by the frequency of the reduced forms, from matrices that cross segments of texts and words (repeated chi-square- X^2 tests)⁽⁷⁾.

The dendrogram identifies the expressions of the participants, allowing them to be analyzed from places and social insertions, and to obtain classes of text segments, with vocabulary similar to each other and different from the text segments of the other classes⁽⁷⁾. The software recognized the separation of the

corpus in 229 Elementary Context Units (ECU), using 75.5% of it.

In the third phase, the results were treated in the search for meanings, through inference and interpretation. Thus, the textual domains, interpretation of meanings and, later, classes grouping defined by the software were identified, which represent the categories⁽⁶⁾.

The invited participants were written and verbally oriented on the objectives and development of the study. The answers were identified with the letter S, representing student, followed by the number of the questionnaire to preserve the anonymity of the participants.

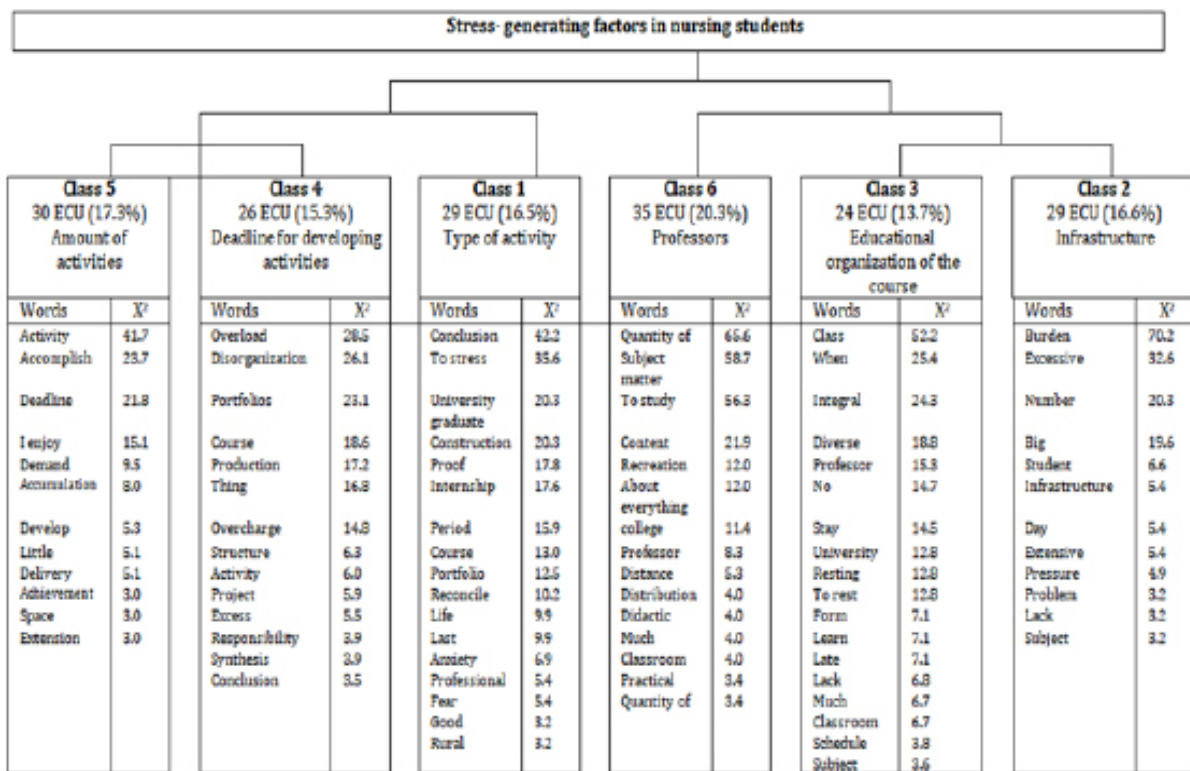
The research was approved by the Research Ethics Committee, through the opinion n^o 355.134, and Certificate of Presentation for Ethical Appreciation, under n^o 16071013.3.0000.5013, being conducted according to the ethical standards required.

Results

The 236 undergraduate nursing students who participated in the study belonged to the age group of 17 to 40 years old, 201 (85.2%) were female and 220 (93.2%) were single.

The analyzed corpus contained elements that represented stress factors in undergraduate nursing, under the perceptions of undergraduate students investigated (Figure 1).

The class layout revealed that the corpus had consecutive parts in two axes: related to the activities developed in the course - type of activity (class 1), term to develop activities (class 4) and amount of activities (class 5); related to the Institution of Higher Education - infrastructure (class 2), pedagogical organization of the course (class 3) and professor (class 6).



ECU: Elementary Context Units

Figure 1 – Dendrogram of descending hierarchical rank

Axis 1: Related to the activities developed in the course

Class 1 - Type of stress-generating activities in undergraduate nursing

The words in this class were responsible for 16.5% of the units of analysis. The words referred to the activities (curricular and extracurricular) developed during the nursing graduation, which are stress generators, according to the perceptions of the participating students, and complement the previous classes that signaled how these activities had occupied spaces inside and outside the classroom.

The following activities were highlighted: construction of the Course Completion Work, portfolio, tests and curricular internships (hospital and Basic Health Units of surrounding municipalities). These integrate the methodologies of learning and evaluation

proposed by the Political Pedagogical Project of the Course and often occurs concurrently in the same subject.

The activities were linked to specific graduation periods. The Course Completion Work and the curricular internship, for example, occur in the final course, whose periods are often marked by physical and emotional exhaustion, fear about the beginning of the professional career, and the difficulty of reconciling academic activities with personal life. *The fact of approaching the end of the course, along with the burden of the portfolios, Course Completion Work, extracurricular activities, projects and monitoring (S6). Many syntheses, extension project, and research, many activities (S52). The Course Completion Work, which is always worrying in any course, especially when we already have a certain physical and emotional exhaustion that is at the end of the course (S127). The challenge of trying to reconcile evidence, work, internship and excessive burden in some subjects with the Course Completion Work and the curriculum internship (S214).*

Class 4 - Deadline for development of activities during the nursing graduation

This class was a complement to the previous one, when bringing words that showed the result of great demand of contents, and resulted in burden, considering the time of the students to attend it. The time to produce portfolios, projects, summaries, attending classes, is considered short, generating a sense of billing and pressure to meet academic requirements.

When the student reports these difficulties, he reveals that the activities that are part of the teaching-learning process end up being perceived as stressors. Their overload, in a short time, conditions the academic to adapt schedules, not leaving time for leisure and family, resulting in a new stressful situation. *The excess of activities and jobs that require a lot of time in my life with college, restricting leisure time with family and friends (S15). The fact that the course is comprehensive, due to many subjects to be studied in a short period of time, and practices outside of college, there is little time left to dedicate to leisure, wellbeing, and constant pressure on the student (S176). Many work to be done and subjects to be studied for the tests, in a very short time interval, little time to sleep and excessive academic activities (S199).*

Class 5 – Amount of activities during the nursing graduation

The words in this class refer to the great demand for activities developed in the course, which are requested by the professors of the subjects, in the process of teaching and evaluation, or carried out by the students to complement and complete a “good curriculum” such as extension activities, research, extracurricular internships, courses, among others.

The students’ perceptions are often linked to the course burden, the free time and interest in finding new spaces of theoretical and practical knowledge. Thus, a student who has many assignments often said he is “stressed.” *The amount of subjects given, the way they are passed and in the short period of time. I know it is a vast amount of subjects. However, deadlines are delimited that do not respect the*

available time of the students (S5). I think the workload is excessive in relation to the work and, furthermore, it has to develop research and extension activities. Besides the curricular stage that requires many activities (S8). Having to make more than one portfolio per semester, the concern with the Course Completion Work, having to reconcile work with internship and still do not have time to stay with the boyfriend, with total absence of social life (S78). Reconcile curricular activities with extracurricular activities required to build a good curriculum (S162).

Axis 2: Related to the Institution of Higher Education

Class 2 - Infrastructure of the Institution of Higher Education

Factors such as the structure of the teaching unit, availability of study materials, lack of communication between students, professors, and course coordination, are seen as obstacles and end up becoming stressful conditions. *Disorganization of the subjects, lack of professors, classrooms, and variability of class schedules. (S50). Lack of materials in the library and the course structure in general (S149).*

This class highlights the lack of spaces for co-existence and rest since classes often happen in two shifts. Also, the absence of classrooms, faced with the demand of students, classes and other activities developed in the institution. *Spending the whole day in college without adequate places of rest (S188). The lack of infrastructure of the course, classroom, professors, and place to rest (S207). Conditions for access to the University, unmotivated professors, lack of physical space for rest, hygiene and food, since we are full time at the University (S209).*

Class 3-Pedagogical organization of undergraduate nursing

This class refers to the pedagogical organization of the nursing course. In certain periods of graduation, the irregularity of the hours for the activities during the week, as well as the fulfillment of weekly workload distributed in full time, have a negative re-

percussion. *The formulated curriculum grid is not good* (S153). *The curriculum is not well distributed. We have subjects without knowing the necessary content* (S180).

The distribution of the subjects in the curriculum, the organization between them and the instability of workload at each period hinder to organize the personal lives of students who need to develop other activities in parallel with those of the University. *The confusion of hours, not enabling for me to organize my personal life* (S6). *The curriculum that is not well distributed and the difficulty of communication between professors* (S22).

Class 6- Professors in Nursing Graduation

This class demonstrates the professor's role as a stressor in graduation. The speeches showed that the amount of content addressed and the way in which the programmers distribute them in class, together with the lack of didactic skills, with "methodical subjects", generate the feeling of stress.

Also, the lacks of flexibility regarding the schedules by the professors, considering the distance of the University to the respective residences of the students are highlighted. *Professors have difficulty facilitating subject exchange and are very arrogant* (S5). *Professors who are late and do not admit student to be late* (S38). *Professors who do not program their classes productively and are very demanding* (S40). *Lack of tolerance and understanding of professors in the unforeseen events* (S134).

The course uses active and participative methodologies in the subjects focused on nursing professional practice. However, according to students, professors lack the ability to use them. *The lack of ability that some professors have to go over the subjects* (S9). *Professors who have difficulty teaching, with difficulty in teaching methods* (S17).

Discussion

The qualitative approach, the intentional sampling, and the research in a single Higher Education Institution are pointed out as some limitations of the study, which hinders the generalization of the results.

The contribution of the results of this study refers to the possibility of identifying stressors in undergraduate students in nursing and to subsidize the Higher Education Institutions to recognize and deal with this problem through psychological and pedagogical support in the development of strategies and revaluation of formative processes, preparing students to overcome academic every day.

Few studies have been found in the literature on stress-generating factors in nursing undergraduate students' perceptions. There is greater concern regarding the identification of stress in this people through structured instruments and association with sociodemographic and behavioral factors⁽⁸⁻⁹⁾.

From the analysis of the results, it was possible to verify that, the stress-generating factors for nursing students are contemplated in the activities developed and in the aspects that make up the institution of higher education, such as the pedagogical organization of the course, the infrastructure and established relationships with the professors.

Aldo, researchers state that stress in undergraduate nursing students can involve a variety of aspects, such as academic requirements, constant assessments, reports, interpersonal relationships, including work with unknown people, related problems to professors and time limitation to fulfill multiple roles related to family, work and college⁽²⁾.

Thus, the factors that contribute to stress in nursing students assume a spiral of components, which are presented in an interconnected manner⁽¹⁰⁾.

In Class 1, which identified the types of activities developed as a stressor, the Course Completion Work is highlighted. The construction of this activity involves preexisting concepts from the beginning of graduation and it is usually associated with worry, fatigue, and burden. Difficulties begin with the choice of theme, through construction, development, and consolidation of the project, until the presentation of the work, when the student undergoes an evaluation⁽¹¹⁾. This fact can be considered worrying since the accomplishment of this work has been constituted as

an essential requirement for professional training at the higher level.

On the other hand, the activities and the timeframe to develop them, demonstrated in different classes, have been presented as a challenge, since the subjects in several nursing courses are not integrated. Thus, there is demand that must be fulfilled, obeying the programmatic content and the evaluation methods of each one⁽¹²⁾.

In this same context, there are reports with absence of communication between the subjects that can generate repetition of contents. This fact may reflect a greater appreciation of the curricular matrix than other elements that make up the Political Pedagogical Project of the courses, such as teaching-learning strategies, evaluation methods and curriculum typology⁽¹²⁾. Other sources of stress, according to the students, are the professors and the pedagogical organization of the course, as well as the teaching methodologies used.

The professor has several roles as social, historical or cultural in preparing the individual. In nursing practice, there is a search to enable the student for a future professional related to the provision of health care to the human being. Such a role becomes challenging as it deals with singular subjects with different needs⁽¹³⁾.

Problems related to professors have been evidenced and justified by professionals who are often demanding and intimidating students⁽¹⁴⁾. A Brazilian study, which evaluated nursing students' coping strategies against stress, found that 40.4% of the students considered they did not have a good relationship with the professor⁽⁹⁾.

Qualification of professors, updated methods, adequate methodologies, distribution of curricular contents and learning environment are among the main factors associated with personal satisfaction in nursing undergraduate students. The teaching method directly influences undergraduate student satis-

faction, as strategies are introduced that allow active, critical and reflective student participation, and autonomy and security are built in the development of skills relevant to the profession, in the same way as curricular inadequacies generate stress and dissatisfaction⁽⁹⁾.

In the infrastructure class, it has been related to the pedagogical organization of the course, and it is also considered a determining factor of satisfaction for students of the nursing course. The organizational structure of the higher education institution can directly reflect on academic efficiency and productivity. The lack of environments and structure necessary for pedagogical methods development can generate feelings of dissatisfaction and favor stress in these students⁽¹⁵⁾.

The presence of stress can result in deleterious symptoms such as excessive alcohol intake, eating disorders, indiscriminate use of illegal substances, sleep disorders, suicide, absenteeism and even mental disorders⁽¹³⁾.

Faced with this situation, the student's preparation for the activities should be developed during the academic training, in a gradual and detailed way, providing a subsidy for effective learning, avoiding the overload that often predisposes to stress.

Thus, considering that the well-being of students should be a concern in those who work with the professional training of these individuals, determining the stress factors means having resources to prevent the harms done, besides to providing students with reflection on the activities.

Conclusion

The study identified as potential source of stressor stimuli activities involving performance and concentration of efforts performed in constant and increasing study routines.

Collaborations

Costa CRB, Albuquerque MCS and Correia DS contributed in the design and the project. Oliveira LB and Maynart WHC help with the analysis and interpretation of the data. All the authors collaborated in the writing of the article, critical review relevant of the intellectual content and in the final approval of the version to be published.

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