



Nursing Students' Stress Level and How Its Influence on Educational Praxis

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Abstract

Background: Nursing undergraduates deal with situations of emotional overload, presenting different levels of stress during this phase of life, which can influence the teaching-learning process and, therefore, educational praxis. **Aim:** Evaluate how the nursing students' stress level influences educational practice. **Methodology:** Integrative Literature Review carried out following the six stages of Ganong, through its own review protocol, with external validation. An unimpeded search for the terms stress and students, nursing was carried out in the BDNF, CINAHL, DOAJ, ERIC, LILACS, MEDLINE, OneFile, SCIE, SciELO, SSCI, Scopus and Wiley databases, composing an initial universe of 232,641 studies. Four stages of refinement were applied to select the study objects, totaling 26 articles analyzed from an approach to educational praxis, supported by Paulo Freire's framework. **Results:** Three data categories supported the organization of results: Concept of stress, Impact of stress on nursing students and Factors related to stress. **Discussion:** Regarding academic performance, studies have not addressed the repercussions of stress on student development, which permeates the cognitive and behavioral relationship. It should be noted that stress can stifle the forms of learning, as a stressed student tends to be satisfied with the teaching offered. **Conclusion:** Stressors agents are elements inherent to the formation process of nurses professionals. Anchored in Freire's educational praxis, the challenge posed is that academic performance is crossed by the experiences of nursing students' stress. Thinking about this relationship implies considering that the responsibility for the teaching-learning process is not a single path, but a process of co-responsibility.

Subject Areas

Nursing, Curriculum Development, Higher Education

Keywords

Health Education, Emotions, Nursing, Psychological Stress, Mental Health

1. Introduction

Stress is defined in the internationalist model as any situation in which the individual does not find means for adaptation and exceeds his limit, which is an individual situation that depends on relations with the external environment [1]. In this context, stress has been studied in nursing due to exposure to stressors in the work environment [2]. The experience of tension and restlessness is sometimes initiated and experienced during the graduation of the future nurse, who, upon entering the university environment, experiences different academic and social situations, considered challenging and complex. Nursing students deal with situations of emotional overload, such as responsibility for caring for others, development of a leadership role, conflict resolution in different areas, and depending on how they experience such situations, academic performance can be impaired [3], because the stress interferes self-esteem, self-efficacy, psychological well-being and physical health [4].

Thus, the academy needs to be engaged to know the students' stress levels to organize the pedagogical process, visualizing the student in its entirety. In this sense, Freire [5] emphasizes the importance of realizing that people are beings in permanent cognitive and social-historical realization, due to the affective integration between students and teachers.

In this bias, stress, as a complex, multifactorial and dynamic phenomenon, cannot be viewed in isolation. An environment, especially the pedagogical one, in which the academic presents a high level of stress and anxiety, is a reflection of a conjuncture. As Freire [5] explains, there is no teaching without learning, there is no way to dissociate the processes experienced by students from the processes that involve teachers. This reveals the importance of developing education models for social projects in favor of life, with a creative rigor committed to the reinvention of the school, taking into account educational praxis. But why does stress influence educational praxis?

Initially, it is worth clarifying the term educational praxis, as one that comprises principles and rules (postural and personal and social conduct), interlink theory and practice, vision and action [6]. Thus, educational praxis, the ground of interactivity between man and the world, is inherent to the educator-student relationship and is not opposed to theory. Therefore, it is portrayed as an immediacy education, "that does not dissolve the human in the remote that passed, nor in the presumed future that it will be. Education, not for a function, for a

doing. Education, not for delivering a doctrinal or ideological crystallized. But education for the human to the human” [6]. Thus, a practical education, really educational, critical and legitimizing thereof that can and should be legitimized, takes into account the life lived by students, without ignoring the level of stress and anxiety involved in the looking for knowledge.

There are a growing number of authors who seek to understand the stress in Nursing Graduation, given the relevance of the topic. Thus, the question addressed is: What the literature has presented about the level of stress of Nursing Undergraduates? This study aimed to describe the level of stress among nursing students and its influence on the teaching-learning process, based on an Integrative Literature Review.

2. Methodology

This is an Integrative Literature Review (ILR), a research method that includes the inclusion of studies to understand a given phenomenon with information based on methodological rigor [7]. A protocol was developed following the steps of Ganong [8]: elaboration of the research question, definition of criteria for inclusion of studies and sample selection, critical analysis of results, discussion and interpretation of results, presentation of results; linked to the PRISMA strategy (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) [9].

The collection of articles took place in June 2022 on the Research Portal of CAPES - Commission for the Improvement of Higher Education Personnel. The search terms stress AND students, nursing were used in the collections of the databases described in **Table 1**.

The second stage consisted of refining the results of the first search, based on the following strategies: scientific articles available in full, in online format published from the year 2014. Thus, from 19,641 results, a total of 6964 results were obtained, distributed as follows: BDNF (32), CINAHL (110), DOAJ (1088), ERIC (311), LILACS (71), MEDLINE (1637), OneFile (316), SCIE (1093), SciELO (114), SSCI (933), Scopus (812) e Wiley (447).

The exclusion criteria were applied in the third refinement step, performed manually, since the platform of some adopted databases does not have technology that refines the search result, excluding duplicate texts and texts of some modalities (editorials, letters, opinion, comments, article in event proceedings, preprint, essays, management reports, descriptive summary in article format and epidemiological reports in article format). Therefore, the reading of the abstracts at this stage was used to exclude texts that were not in accordance with the scope of this review, that is, articles that did not deal with the interesting topic for this study. From the abstracts, in this third stage, 412 texts were selected for reading the full text.

The fourth stage of refinement consisted of the floating reading of the 412 articles in full. Moment when the collected material undergoes a complete reading, without identifying details of the text, but allowing the researcher to develop his

Table 1. Editors, databases and results. First stage of the integrative review on stress in nursing students. Florianópolis (SC), Brazil. 202. (N = 19,641).

Editor/Database/Collection	n
BIREME/BVS	
BDENF	83
SciELO	316
LILACS	137
Clarivate Analytics - Web of Science	
Science Citation Index Expanded	2724
Social Sciences Citation Index	2632
CrossRef	
Wiley	1088
DOAJ	
Directory of Open Access Journals	1379
EBSCO	
CINAHL	390
Elsevier	
Scopus	3049
GALE	
OneFile	2657
NLM	
MEDLINE/PubMed	4168
U.S. Dept. of Education	
ERIC	1018
Total	19,641

hypothesis, even if temporary [10]. 56 were excluded due to inconsistent methodology, 113 were excluded because they did not specifically address the investigated public (nursing student), 217 because they touched on the theme without significantly contributing to this present RIL (Figure 1).

After selecting the objects of study, an in-depth content analysis of the findings was carried out, which included: pre-analysis, analytical description and inferential interpretation [11]. This step was carried out from an approach to educational praxis, supported by Paulo Freire's framework.

3. Results

The present work innovation was analyzed the concept of stress and academic stress among the selected articles, point out the stress related factors and how the stress impact on nursing students.

Within the criteria a total of 26 articles that contemplate the research objective.

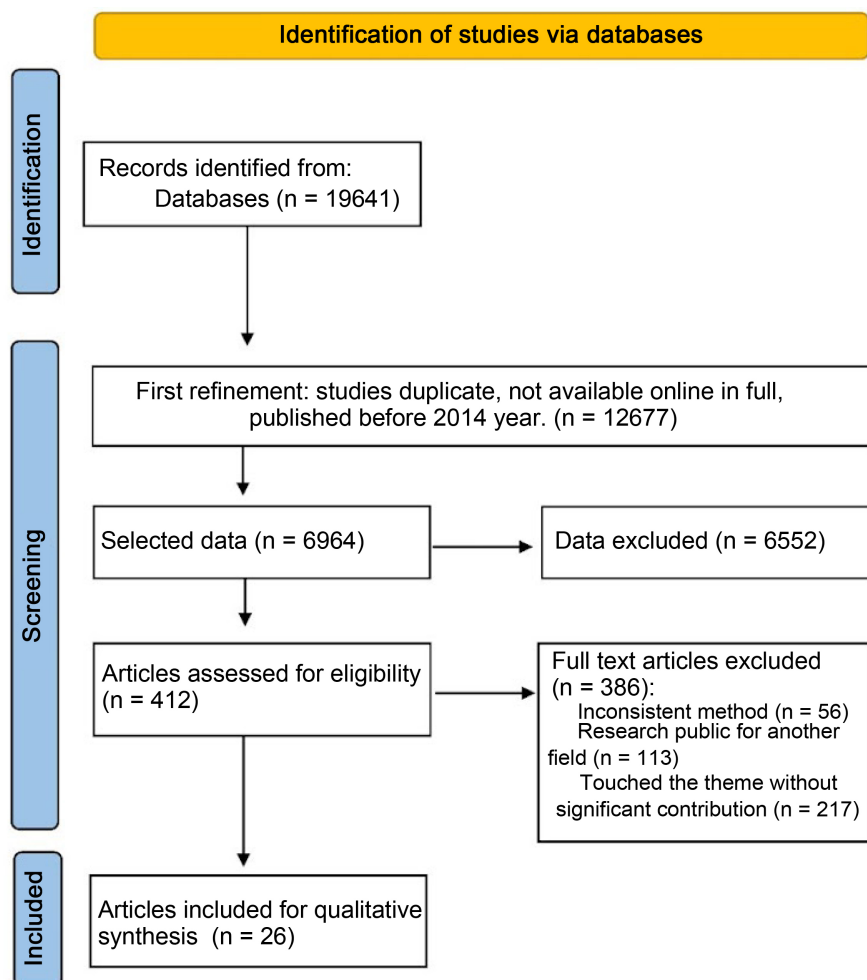


Figure 1. Flowchart, according to PRISMA, for the identification, selection, eligibility and inclusion of studies in the Integrative Review about the level of stress among nursing students. Florianópolis, SC, Brasil, 2019 (n = 19,641).

Chart 1 shows the distribution of selected studies according to identification code (ID), year of publication and article title, in the original language.

3.1. Study Characterization

Considering the total number of publications, 17 are national studies (65.4%) and nine (34.6%) are international (Spain: 1, Portugal: 1, Singapore: 1, Pakistan: 1, China: 1, Israel: 1, Italy: 1, Thailand: 1 and 1 held in three different countries (Philippines, Greece and Nigeria), as present in **Table 2**. The journals included: *Investigación y Educación en Enfermería* (4), *Revista da Escola de Enfermagem da USP* (3), *Nurse Education Today* (3), *International Journal of Nursing Studies* (1), *Revista Eletrônica Acervo Saúde* (1), *Revista Eletrônica Saúde Mental Álcool e Drogas* (1), *Revista para Ciências Contemporânea Aplicadas* (1), *Brazilian Journal of Health Review* (1), *Comunicação em Ciências da Saúde* (1), *International Council of Nurse* (1), *Acta Paulista de Enfermagem* (1), *John Wiley & Sons Ltd.* (1), *Psychiatric Rehabilitation Journal* (1), *Revista Portuguesa de*

Chart 1. Study distribution according to identification (ID), publication year and article title. Florianópolis (SC), Brasil, 2019. (N = 26).

ID	Year	Article title
A1	2018	Reliability and validity of the student stress inventory-stress manifestations questionnaire and its association with personal and academic factors in university students.
A2	2017	Biosocial-academic profile and stress in first- and fourth-year nursing students.
A3	2018	Academic stress and active learning of nursing students: A cross-sectional study.
A4	2018	Nursing students' stress and satisfaction in clinical practice along different stages: a cross-sectional study.
A5	2017	A cross-country comparative study on stress and quality of life in nursing students.
A6	2016	The impact of professional identity on role stress in nursing students: A cross-sectional study.
A7	2017	Stressors affecting nursing students in Pakistan.
A8	2016	Stressors and expectations of undergraduate nursing students during clinical practice in Singapore.
A9	2016	Stressful situations and factors in students of nursing in clinical practice.
A10	2014	The mediating effects of coping on the stress and health relationships among nursing students: a structural equation modelling approach.
A11	2017	Situações indutoras de stress e Burnout em estudantes de enfermagem nos ensinos clínicos.
A12	2014	Assessment of stress in the inclusion of nursing students in hospital practice.
A13	2015	Preditores do estresse e estratégias de coping utilizadas por estudantes de Enfermagem.
A14	2016	Association Between Nursing students' academic and sociodemographic characteristics and stress.
A15	2016	Stress among nursing undergraduate students of a Brazilian public university.
A16	2018	Perceptions of the nursing students on stress-generating factors during the graduation.
A17	2019	Comparison of stress in freshman and senior nursing students.
A18	2019	Estresse e sobrepeso/obesidade em estudantes de enfermagem.
A19	2019	Estresse em acadêmicos de enfermagem: importância de identificar o agente estressor.
A20	2018	O estudante de graduação e a vivência em rodas de terapia comunitária.
A21	2019	Alterações de saúde em estudantes de enfermagem um ano depois do ingresso no curso de Graduação.
A22	2019	Vida de estudante: a relação entre estresse e atenção em universitários.
A23	2018	Estresse percebido em graduandos de enfermagem.
A24	2019	Depressão entre acadêmicos de enfermagem e os fatores sociodemográficos associados.
A25	2019	Dificuldades vivenciadas pelos estudantes de enfermagem durante a sua formação.
A26	2018	Toque terapêutico como estratégia para redução de estresse em estudantes de enfermagem.

Enfermagem de Saúde Mental (1), Texto Contexto Enfermagem (1), Revista Rene (1), International Journal of Nursing Practice (1), Revista de Enfermagem e Atenção à Saúde (1), The Journal of Nursing Administration (1).

Regarding the period of publication, the articles corresponded to the years 2014 to 2019, distributed in ascending order, three in 2014, one in 2015, two in 2016, five in 2017, five in 2018 and ten in 2019.

Table 2. Study characterization (N = 26).

Number of publications (%)	Study nationality
17 (64.4%)	Brazil
1 (3.8%)	Spain
1 (3.8%)	Portugal
1 (3.8%)	Singapore
1 (3.8%)	Pakistan
1 (3.8%)	China
1 (3.8%)	Israel
1 (3.8%)	Italy
1 (3.8%)	Thailand
1 (3.8%)	Philippines, Greece and Nigeria

Accounting the methodological design, 4 qualitative articles, 20 quantitative articles, 1 mixed study and 1 case-control study were identified; 23 used some type of instrument for data collection. In 6 publications, the objective was to identify the level of stress, using the following scales: NSSS: Nursing Students Stress Scale (A4, A8, A12, A13, A14, A15, A17, A18, A21 and A26), SM: Stress Manifestations Scale (A1), DCS: Demand-control Support Questionnaire (A3); PSS: Perceived Stress Scale (A5), RSS: Role Stress Scale (A6), and SINS: Stressors in Nursing Students (A7).

Among the other instruments used, 11 tried to understand the perception of health and quality of life, depression, clinical learning environment, coping mechanisms and the degree of satisfaction, as follows: Student Stress Inventory - Stress Manifestations (SSI-SM; A1), Nurses Work Functioning Questionnaire (NWFQ; A3), Quality of Life Evaluation Skill (QOLES; A5), Professional Identity Questionnaire for Nursing Students (PIQNS; A6), Clinical Learning Environment Inventory (CLEI; A8), General Health Questionnaire (GHQ; A10), Jallowiec's Coping Scale (JCS; A10), Center for Epidemiologic Studies Depression Scale (CES-D; A21), Pittsburgh Sleep Quality Index (PSQI; A21), Focused Attention Test (FAT; A22), Beck Depression Inventory (BDI; A24).

From the analysis of the articles, the data were organized into three categories: Concept of stress, Impact of stress on nursing students and Stress related factors.

3.2. Concept of Stress and Academic Stress

Analyzing the selected articles, 12 articles were identified evidencing the concept of stress in a biological perspective using the terms chronic stress or the concept of the World Health Organization (WHO), 4 articles used an internationalist perspective, 2 articles adopted the concept of psychological stress, 1 article conceptualizes from the biologist and internationalist models, and 7 publications there is no explicit mention of the concept (**Table 3**).

Table 3. Concept of stress and academic stress.

Number of publications	Stress concept
12	Biological perspective
4	Internationalist perspective
2	Psychological stress concept
1	Biologicist and internationalist models
7	no explicit concept mention

The articles that evidence the biological concept, approach stress as a necessary process, at adequate levels. A reaction that depends on it to face and determine new possibilities of adaptation. However, when exposure happens at high levels, stress results in a series of feelings that can be expressed through physical symptoms (A1, A5, A6, A7, A8, A9, A10, A12, A15, A16, A19).

The individual's internal determinants and the relationship with the environment can generate a series of physical, emotional, psychological and behavioral changes. These physiological changes can lead to the general adaptation syndrome, which is an organism adaptation process in face of stressful events (A13).

The internationalist concept, on the other hand, is expressed by a condition of time, place, something or someone, an internal or external factor that interferes with the adaptive process, causing stress, and even constituting an individual situation, relationships, mainly with places and people, often contribute in a negatively way (A2, A11, A13, A14).

Psychological stress is strongly associated with the emotional factor, considering psychic issues. The manifestations happen through crying spells, tremors and concentration difficulty, which can lead to clinical pathologies such as anxiety, depression, panic syndrome. For undergraduate students, psychological stress causes changes in behavior, habits that are harmful to health and quality of life, which directly influences student performance, self-esteem and confidence (A4, A18).

Bringing together the main concepts, stress in nursing is highlighted as extreme circumstances that overload nurses during their daily work, which deals with the individual in his life and death process. In the educational process, daily nursing situations are added to the practical and theoretical teaching-learning process, and represent the greatest source of stress (A2, A7, A17).

3.3. Stress Related Factors

The processes established as stressors permeated sociodemographic factors and specific aspects of graduation. Sociodemographic indicators are important when associated with the level of stress, evidencing the group in which it is being investigated. That is, considering factors such as family conflicts, gender, insufficient income, extracurricular activities (non-mandatory employment or internships) are precedent information that influence the experience of stress, being

different for each person.

One dimension to be evaluated is how each student experiences the so-called “stressor” event, considering that the perception of stress is individual. Thus, each individual uses their own coping strategies and can perceive the situation as positive or not (A21, A22).

The financial issue is evidenced as a stressor, since this condition influences different aspects of life, interferes with the student’s socio-cultural relationships, brings anxieties and concerns about staying in the institution, generating a feeling of powerlessness, low self-esteem and overload (A2, A7, A19), it is noteworthy that part of the students work to pay for their studies.

Among those students fully dedicated to their studies, stress is associated with the development of extracurricular activities, highlighting the need to participate in research groups, extension projects, monitoring, events and update courses (A4).

It was observed that married students and those who live with their parents tend to have different conflicts than single students and those who live alone, since family demands are peculiar (A1, A7). However, the family presents itself as a source of social and emotional support for students (A2, A12, A15). For those who do not live with their families, being away can intensify feelings of loneliness, abandonment and isolation (A9, A25, A26).

Regarding professional training, the following agents were identified in the articles as stress mobilizers: evaluation processes, performance in practical activities, professional communication, university environment, demonstration and scope of technical knowledge, inadequate training and especially time management (A1, A2, A3). It is also worth noting that the deadlines established for carrying out assignments, Course Completion Work and tests are considered short, generating feelings of charging and pressure on themselves (A9, A16). The publications analyzed show the need to reassess assessment methods on the expected knowledge and to consider a review of curricular elements (A16, A18, A21, A26).

In the practical context, the teaching-learning is carried out through the nursing practice contact, so the students show that the expectations created are not attended when they are faced with the profession clinic. Results show that students have not been satisfied with the clinical practice experience (A8), pointing out factors such as inadequate knowledge and training, insufficient resources (A4), student demands regarding responsibility for individual, family and community needs (A9), relationship with supervisor and colleagues and lack of the service structure and organization knowledge as important factors (A11), due the practical skills development, autonomy, scientific and reflective reasoning impacts (A1, A19).

3.4. Impact of Stress on Nursing Students

The various activities developed in the academic environment have an impact on

students' lives and daily lives. Concerning how students experience the consequences of stress in their lives, it was found that high levels of stress are correlated with lower quality of life (A5), worse physical health is related to psychological distress and interferes with personal and professional behavior (A9, A10).

The articles highlight the impact of stress on different dimensions of health, such as physical, psychological, emotional and/or behavioral (A10, A12, A15, A25, A26). Among the most common physical symptoms, some examples are: migraine, hypertension development (A15), heart disease (A16), immunodeficiency disorders, frequent dizziness and ulcers (A1, A10).

On the other hand, psychological symptoms, identified simultaneously with behavioral changes, are described as: depressive symptoms, anxiety attacks, insomnia and lack of appetite, which compromise this undergraduate's quality of life. The negative effects of high stress, related with academic performance pointed out on the literature, were: development of skills delay; lack of memory, concentration and ability to solve problems; low performance; reeducation of cognitive functioning; in addition to self-esteem, self-efficacy and security interference (A1, A5, A10, A16).

In studies that relate quality of life and stress, the student's perception refers that social dimensions such as strengthened social support and the nursing work capacity are seen as positive and satisfactory (A5); the physical dimension, which portrays pain, discomfort, few hours of sleep, feelings of fatigue, bad eating habits and not performing sports practices are considered harmful factors to the quality of life of students (A1, A5, A16, A18, A21).

4. Discussion

The survey conducted by the Institute of Psychology and Stress Control, with 2195 Brazilians aged 18 to 75 years, found that 34.26% of interviewees have experienced extreme stress and 54% have an average level of stress [12]. Thus, the growing need to understand the stress in its different environments has generated an impact on research related to students and the specificities experienced by them, including nursing students.

For Freire [13] there are two inseparable contexts: 1) the theoretical context, of the subjects of knowledge; 2) the concrete practical context of social reality. The educational praxis that moves in this binomial is then the practice of an anthropological and epistemological conception: it is the conscious practice of people, which implies reflection, intentionality, temporality and transcendence. Human beings can reflect on their limitations and can design action to transform the reality that conditions them. Due to the dialectical relationship between action-reflection, they affirm themselves as people, beings of relationship, in the world, with the world, and with others, through the mediation of the world-language [13].

Regarding journals, despite the research carried out being national, researchers tend to publish in international journals, due to greater visibility; the journals

that had the highest number of publications were: *Investigación y Educación en Enfermería* (4), *Revista da Escola de Enfermagem da USP* (3) and *Nurse Education Today* (3).

Among the publication periods, there is a growing search for the topic, with a greater number of publications (10) in the year 2019. These indications may be related to the alarming numbers of health professionals with excessive stress, significant depression rates and burnout syndrome. In this scenario, the student, when entering the practice still insecure, associated with little professional experience and pressured by the results, is more susceptible to environmental stress syndromes [14].

As for the design of the research, studies were presented mostly with a quantitative approach, which intend to measure the level of stress and correlate the findings with other variables. In this way, the researchers' concern to understand the phenomenon in their populations also involves research questions around the theme and is expressed in the ways that the methodological designs are organized. The scale's use seems to agree with the idea of population coverage, validated instruments use and relating data from different locations possibility. However, there still seems to be an investigative space to understand the experiences of stress in a qualitative way, such is the small number of qualitative studies included in this study.

The concepts most used in the texts analyzed in this review were those based on a biological assumption. Most of the articles that followed this concept analyzed the data regarding the impact of stress on quality of life, profession, and the onset of diseases. Silva [15] portrays that regardless of whether the individual identifies the aggressor or not, the body begins a process of adaptation to the exposed, creating a defensive physiological response, such as tachycardia, sweating, headache, changes in blood pressure and irritability.

Analyzing the phenomenon of nursing students' stress, the predominance of biological assumptions points to the necessity to search for new paradigms that perceive the person beyond a biological body, a machine, which needs to work and, once functioning, learns what is taught at school. In this sense, creative praxis and aesthetics, combined with ethics, are part of Freire's ideas. In the educational field, these ideas support the search for new cultural and educational paradigms, from the point of view of esthesia and aesthetic experience in the daily life of the school space, as well as its specificity [13]. The school environment, as a living space for young people, is increasingly standardized and distanced from the aesthetics of existence. It is possible to perceive this aesthetic dimension as a possibility to "permeate, sew the lost, denied or forgotten parts, from the praxis-man, the social-man, to the poiesis-subject, happiness-subject, memory-subject, experience-subject" [16].

For Morin [17]: "each human being is a cosmos, each individual is an effervescence of virtual personalities, each secret psyche is a proliferation of ghosts, dreams, ideas. Each one lives, from birth to death, an unfathomable tragedy, marked by cries of suffering, of pleasure, by laughter, tears, discouragement,

greatness and misery. Each one carries within itself treasures, deficiencies, failures, abysses. Each carries within itself the possibility of love and devotion, of hatred and resentment, of revenge and forgiveness. Recognizing this is also recognizing human identity. The principle of identity is *unitas multiplex*, the multiple unity, both biologically and culturally and individually point of view”.

Studies that used international and psychological concepts identified inducing situations, exposed environment, considering that each person reacts to the stressor differently, but when exposed to the same stressor, experiences can be similar. A research carried out with 141 nurses that working in clinical inpatient units of public hospitals, in which it was found that the domains related to working conditions and personnel management were associated with the most impacting stressors, while night nurses presented dissatisfaction with the work scheme adopted [18]. Another study carried out with students in the first and fourth semesters of a university in the São Paulo state identified that, when comparing the stress level of students from different semesters, an oscillation is perceived in their perception, since they are exposed to different factors [1].

The texts analyzed in the review show multiple stress determinants (financial situation, marital status, housing issues, family conflicts, personal characteristics and social context), which must be identified and investigated as how this interferes the way in which the student feels stress. Still, some sociodemographic variables can make this student vulnerable, even if no statistical association with stress is identified [19]. Thus, knowing the sociodemographic profile of students helps teachers to understand who this person-student is, in their entirety, in their historicity, in the experience and quality of being-more, and that these determinants are consistent with their preexisting knowledge.

Entering into the university, makes the student exposed to situations not previously experienced. This new environment, such as the classroom, clinical practice, laboratories, implies new learning, meanings and self-reflection, to discover how to be unfinished, relational, with a wide and deep abrangency [20].

Assessment, high theoretical demand, short-term task management and the Course Completion Work elaboration are factors listed as the most stressful by students, since they need to comply with the demands in different subjects. These findings corroborate a study carried out in Paraíba state with 40 nursing students, in which they listed these events and also pointed out the travel time to the educational institution and the learning difficulty [21]. However, it is necessary in the educational context that teachers and students recognize the difficulties and challenges of the pedagogical process, creating a dialogic space for both to create strategies that transform the inserted reality, through an educational praxis [22].

The nursing student’s learning process is strengthened from the link between theory and practice, here called: theory and praxis, since the academics start to apply the built knowledge to the inserted reality. This moment is configured as an important point of the academic trajectory, when faced with an unknown physical and organizational structure scenario, with communication noises be-

tween supervisors and colleagues, having to deal with responsibilities for another individual's care, feelings of fear, disability and insecurity can manifest. In this context, a study carried out in Maceió found that the role of the supervising teacher is to be understanding, confident and calm, because in the face of these factors, the teacher will be the conflict mediator that is hindering learning [23].

Ramos [24] identified an average level of student satisfaction at a university in southern Brazil, in terms of dimensions, relationship with the professor, personal and professional development, diversity of extracurricular activities, theory and practice relationship, evaluation system, quality of instruction received, among others domains, which comprise the institutional context as a whole. Thus, assessing the level of student satisfaction is important for the educational process, as today's student is tomorrow's nurse [5].

The literature points out that students with high levels of stress have a lower quality of life. Therefore, a survey evaluated the quality of life and stress factors of 60 students from an institution in Recife, which revealed low levels of quality of life, marked by mental and physical stress [25].

Some students' stressors during clinical training included: the urge to learn, how to learn communication, and the nature of the hospital environment. To avoid this situation of stress a study highlighted the recommendations for nursing education and clinical environments in order to ease the nursing student's stressors, such as take in account that students experience is personal and environmental stressors can be different in a student environment; therefore, was required improvement of their personal, social, professional, and coping skills; some suggestions include curriculum development deliberation and evaluation; organization of social and professional skills training sessions will help students be more powerful; nurse educators accountability for implementing the intervention to reduce stress among students, which is not only important for the students' well-being but also significant for preparing nursing professionals who can deliver a high quality of care for patient [26].

Thus, the teaching role as a pacifying mediator of the teaching-learning process encourages student inclusion, promotes teamwork and welcomes the student, understanding that stressful situations consistent with the environment can be modified [23] [27].

In this point of view, universities and clinical institutions should establish a cooperative system to reduce stress, depression and anxiety and increase major satisfaction due the effects of stress, depression, and anxiety on academic burnout have a negative effect on learning outcomes of nursing students [28]. In this sense, nursing educators should offer targeted guidance based on the stress reported during the clinical practicum and the demographic characteristics of the nursing students to encourage nursing students to adopt effective coping strategies and reduce stress [29].

Some limitations of the research were the article sample size due a great number of researches do not have consistent methodology, is not be specifically addressed to the investigated public: the nursing student nor contributing to this

thematic in a significant manner. Another aspect was the world wide coverage, so the amostral sample could not represent the reality of some students. Consequently, it is not recommended to generalize the study findings. Accordingly, the recommendation for forthcoming studies is to increase the sample size and cover a number of universities in different world regions to verify if the global stress related factors and how the stress impact on nursing students are similar or different, in an attempt to find solution strategies to enhance the learning process.

5. Conclusion

Considering the thematic relevance of stress in the professional training of nursing students, the lens of understanding of this advent was expanded, which has its factorial multiplicity both in the experiences lived by the students as in the forms of measurement and evaluation in different scenarios and countries. Thus, this study allowed us to know how the scientific literature portrays the issue of stress among nursing students in Brazil and in the World.

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Oliveira-Bosso, L., Marques-da Silva, R. and Siqueira-Cost, A.L. (2017) Biosocial-Academic Profile and Stress in First- and Fourth-Year Nursing Students. *Investigación y Educación en Enfermería*, **35**, 131-138. <https://doi.org/10.17533/udea.iee.v35n2a02>
- [2] Ribeiro, R.P., Marziale, M.H.P., Martins, J.T., Ribeiro, P.H.V., Robazzi, M.L.C.C. and Dalmas, J.C. (2015) Prevalence of Metabolic Syndrome among Nursing Personnel and Its Association with Occupational Stress, Anxiety and Depression. *Revista Latino-Americana de Enfermagem*, **23**, 435-440. <https://doi.org/10.1590/0104-1169.0383.2573>
- [3] Vilela, S.C., Pacheco, A.E. and Carlos, A.L.S. (2013) Burnout Syndrome and Stress in Graduates on Nursing. *RECOM*, **3**, 780-787. <http://www.seer.ufsj.edu.br/index.php/recom/article/view/415/524>
- [4] Fernandes Pereira, F.G., Nunes Caldini, L., Di Ciero Miranda, M. and Áfio Caetano, J. (2014) Assessment of Stress in the Inclusion of Nursing Students in Hospital Practice. *Investigación y Educación en Enfermería*, **32**, 430-437. <https://doi.org/10.17533/udea.iee.v32n3a08>
- [5] Freire, P. (1996) *Pedagogia da autonomia: saberes necessários à prática educativa*. 13th Edition, Paz e Terra Ltd., Rio de Janeiro.
- [6] Correia, W. and Carvalho, I. (2012) Educational Practice: Time, Thought and Society. *Revista Portuguesa de Educação*, **25**, 63-87. <https://doi.org/10.21814/rpe.3002>
- [7] Sousa, L.M.M., Marques-Vieira, C.M.A., Severino, S.S.P. and Antunes, A.V. (2017) Metodologia de Revisão Integrativa da Literatura em Enfermagem. *Revista Investigação Enfermagem*, **2**, 17-26. <http://hdl.handle.net/20.500.12253/1311>
- [8] Ganong, L.H. (1987) Integrative Reviews of Nursing Research. *Research in Nursing*

- & Health, **10**, 1-11. <https://doi.org/10.1002/nur.4770100103>
- [9] Moher, D., Liberati, A., Tetzlaff, J. and Altman, D.G. and the PRISMA Group (2015) Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. In: Galvão, T.F., Pansani, T.S.A. and Harrad, D., Trans., *Principais itens para relatar Revisões sistemáticas e meta-análises. A recomendação PRISMA*, Vol. 24, Epidemiol Serv Saude, Brasília, 335-342. <https://doi.org/10.5123/S1679-49742015000200017>
- [10] Silva, A.H. and Fossá, M.I.T. (2015) Análise de conteúdo: Exemplo de Aplicação da Técnica para Análise de Dados Qualitativos. *Qualitas Revista Eletrônica*, **17**, 1-14. <http://arquivo.revista.uepb.edu.br/index.php/qualitas/article/view/2113/0> <https://doi.org/10.18391/req.v17i1.2963>
- [11] Bardin, L. (2011) Análise de conteúdo. 4th Edition, Edições 70 Ltd., Lisboa.
- [12] Lipp, M.E.N. (2014) Manual do Inventário de Sintomas de Stress para Adultos de Lipp (ISSL). 3rd Edition, Casa do Psicólogo Ltd., São Paulo.
- [13] Freire, P. (2018) Pedagogia da Esperança: Um reencontro com a pedagogia do oprimido. 3rd Edition, Paz e Terra Ltd., Rio de Janeiro.
- [14] Passos de Sousa, M.K., da Silva Lima, V., Alves Ferreira, M.T., Rodrigues dos Santos Porto, T.N., Stanford Balduino, L., de Sousa Martins, V., Pereira Carvalho, D. and Leite Alcântara, S.M. (2019) Burnout Syndrome in Nursing Professionals. *Revista Eletrônica Acervo Saúde*, **34**, e1413. <https://doi.org/10.25248/reas.e1413.2019>
- [15] Silva, R.M., Goulart, C.T and Guido, L.A. (2018) Historical Evolution of the Stress Concept. *REVISA-Revista de Divulgação Científica Sena Aires*, **7**, 148-156. <http://revistafacesa.senaaires.com.br/index.php/revisa/article/viewFile/316/225>
- [16] Redin, M.M. (2018) Experiência técnica e memórias de escolar. Ph.D. Thesis, Vale dos Sinos University, São Leopoldo.
- [17] Morin, E. and Kern, A.B. (2005) Terra pátria. 5th Edition, Sulina Ltd., Porto Alegre.
- [18] Simonetti, S.H. and Bianchi, E.R.F. (2016) Stress of the Nurse that Works in Hospitalization Unit. *Revista de Enfermagem UFPE Online*, **10**, 4539-4546. <https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/11521/13411>
- [19] Preto, V.A., Garcia, V.P., Araujo, L.G., Flauzino, M.M., Teixeira, C.C., Parmegiane, R.S. and Cardoso, L. (2018) Perception of Stress in Nursing Academics. *Journal of Nursing UFPE/Revista de Enfermagem UFPE*, **12**, 708-715. <https://doi.org/10.5205/1981-8963-v12i3a231389p708-715-2018>
- [20] Freire, P. (2011) Educação e mudança. 34th Edition, Paz e Terra Ltd., São Paulo.
- [21] Coêlho, A.A., Braga, F.C., Sobreira, M.V.S., Rodrigues, P.A.L., Fernandes, W.O.B. and Albuquerque, K.B.M. (2019) Stress Factors between Teachers of a Higher Education Institution. *Temas em Saúde*, **19**, 175-192. <https://temasemsaude.com/wp-content/uploads/2019/09/19411.pdf>
- [22] Soares de Souza, V., Ramos Costa, M.A., Rodrigues, A.C., de Freitas Bevilacqua, J., Inoue, K.C., Campos de Oliveira, J.L. and Misue Matsuda, L. (2016) Stress among Nursing Undergraduate Students of a Brazilian Public University. *Investigación y Educación en Enfermería*, **34**, 518-527. <https://doi.org/10.17533/udea.iee.v34n3a11>
- [23] Lima, J.A., Carrilho, A.B., Santos, L.D. and Lima, U.T.S. (2016) Expectations about Hospital Internship for Nursing. *Revista de Atenção à Saúde*, **14**, 5-10. <https://doi.org/10.13037/ras.vol14n48.3372>
- [24] Ramos, A.M., Barlem, J.G.T., Lunardi, V.L., Barlem, E.L.D., Silveira, R.S. and Bordignon, S.S. (2015) Satisfaction with Academic Experience among Undergraduate Nursing Students. *Texto & Contexto Enfermagem*, **24**, 187-195.

- <https://doi.org/10.1590/0104-07072015002870013>
- [25] Freitas, A.C.M., Malheiros, R.M.M., Lourenço, B.S., Pinto, F.F., Souza, C.C. and Almeida, A.C.L. (2018) Intervening Factors in the Quality of Life of Nursing Student. *Revista de Enfermagem UFPE on Line*, **12**, 2376-2385.
<https://periodicos.ufpe.br/revistas/revistaenfermagem/article/view/230110>
<https://doi.org/10.5205/1981-8963-v12i9a230110p2376-2385-2018>
- [26] Alshowkan, A. (2022) Clinical Stress among Bachelor Nursing Students: A Qualitative Inquiry. *Open Journal of Nursing*, **12**, 305-315.
<https://doi.org/10.4236/ojn.2022.125021>
- [27] Magnavita, N. and Chiorri, C. (2018) Academic Stress and Active Learning of Nursing Students: A Cross-Sectional Study. *Nurse Education Today*, **68**, 128-133.
<https://doi.org/10.1016/j.nedt.2018.06.003>
- [28] Hwang, E. and Kim, J. (2022) Factors Affecting Academic Burnout of Nursing Students According to Clinical Practice Experience. *BMC Medical Education*, **22**, Article 346. <https://doi.org/10.1186/s12909-022-03422-7>
- [29] Liu, J., Yang, Y., Chen, J., Zhang, Y., Zeng, Y. and Li, J. (2022) Stress and Coping Styles among Nursing Students during the Initial Period of the Clinical Practicum: A Cross-Section Study. *International Journal of Nursing Sciences*, **9**, 222-229.
<https://doi.org/10.1016/j.ijnss.2022.02.004>