

# Construction and validation of an instrument for the assessment of stress among nursing students

CONSTRUÇÃO E VALIDAÇÃO DE INSTRUMENTO PARA AVALIAÇÃO DE ESTRESSE EM ESTUDANTES DE ENFERMAGEM (AEEE)

CONSTRUCCIÓN Y VALIDACIÓN DE INSTRUMENTO PARA EVALUACIÓN DE ESTRÉS EN ESTUDIANTES DE ENFERMERÍA

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## ABSTRACT

Stress is increasingly evident among nursing students. This article reports a quantitative methodological development research that aimed to construct and validate an instrument to assess the stress factors among nursing students. The construction of the instrument followed the Pasquali's model and the stress theoretical framework of Lazarus and Folkman. The instrument was composed of 30 items grouped into six domains: Performance of practical activities; Professional communication; Time management; Environment; Professional education; and Theoretical activities. The factor analysis confirmed that the conceptual model was acceptable and adjusted. The internal consistency of the domains estimated by Cronbach's alpha ranged from 0.71 to 0.87. Four cutoff points have been established for each domain. The instrument can be used to evaluate the intensity of the most frequent stress factors among these students.

## KEY WORDS

Stress.  
Students, nursing.  
Psychometrics.  
Reproducibility of results.  
Validation studies.

## RESUMO

O estresse tem sido evidenciado de maneira significativa entre os estudantes de Enfermagem. Este artigo descreve uma pesquisa quantitativa, de desenvolvimento metodológico que teve como objetivo construir e validar um instrumento para avaliar os fatores de estresse em estudantes de enfermagem. A construção dos itens baseou-se no modelo de Pasquali e o referencial teórico de estresse foi o de Lazarus e Folkman. O instrumento ficou composto por 30 itens, agrupados em seis domínios: Realização das atividades práticas; Comunicação profissional; Gerenciamento do tempo; Ambiente; Formação profissional; Atividade teórica. A análise fatorial confirmou o modelo conceitual e os domínios propostos. A consistência interna dos domínios estimada pelo alfa de Cronbach variou de 0,71 a 0,87. Foram criados 4 pontos de corte para os escores de cada domínio. O instrumento poderá ser utilizado para avaliar a intensidade dos fatores de estresse entre os estudantes de enfermagem.

## DESCRIPTORIOS

Estresse.  
Estudantes de enfermagem.  
Psicometria.  
Reprodutibilidade dos testes.  
Estudos de validação.

## RESUMEN

El estrés ha sido evidenciado de manera significativa entre los estudiantes de Enfermería. Este artículo describe una investigación cuantitativa, de desenvolvimiento metodológico que tuvo como objetivo construir y validar un instrumento para evaluar los factores de estrés en estudiantes de enfermería. La construcción de los ítems se fundamentó en el modelo de Pasquali y la referencia teórica de estrés fue de Lazarus y Folkman. El instrumento fue compuesto por 30 ítems, agrupados en seis dominios: Realización de las actividades prácticas; Comunicación profesional; Gerenciamiento del tiempo; Ambiente; Formación profesional; Actividad teórica. El análisis factorial confirmó el modelo conceptual y los dominios propuestos. La consistencia interna de los dominios estimada por el alfa de Cronbach varió de 0,71 a 0,87. Fueron creados 4 puntos de corte para los escores de cada dominio. Se concluyó que el instrumento podrá ser utilizado para evaluar la intensidad de los factores de estrés entre los estudiantes de enfermería.

## DESCRIPTORIOS

Estrés.  
Estudiantes de enfermería.  
Psicometría.  
Reproducibilidad de resultados.  
Estudios de validación.

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## INTRODUCTION

Research shows that nursing is a high stress level occupation. Various aspects of nursing have been studied around the world in recent decades. Some research recognizes that stress is also present during nursing education, where the student faces challenging situations that often influence both his learning process and health conditions<sup>(1-4)</sup>.

At graduation, students face a new environment, different and distant from their life context; they need to adapt to different demands and obligations that contribute to stress and neuroendocrine alterations<sup>(5)</sup>. Nursing education focuses the students' professional education on patient assistance which may cause the student-nurse-patient relationship to be based upon intense emotional stimuli. For example, intimate contact with the pain and the suffering of others, assistance to patients in terminal stages, difficulty of dealing with complaining patients under altered emotional conditions, close personal contact, and other factors may create an adaptation period inherent in their education<sup>(6)</sup>. For a better comprehension of the multidimensionality and subjectivity of stress, research must be well-designed and carefully conducted. Assessment instruments have to present adequate psychometric properties for correct identification of the phenomenon among students.

Taking into account that the manifestation of stress is an interactive response between the individual and his environment, stress assessment must encompass its social, economic and cultural characteristics. Some stress assessment instruments are developed for the general population, and are not specific to nursing students<sup>(7-8)</sup>. However, those that do address nursing students' assessment were developed by researchers in the context of realities that differ from the Brazilian environment. This makes it very difficult to adapt and apply the instrument in a new and different context<sup>(9-10)</sup>.

This article reports on the development of a stress assessment instrument for nursing students which encompasses common factors faced by these students. The research aims to make the instrument suitable for both research and teaching. The study also describes the theoretical conceptual model that was the basis for the instrument's construction, as well as the procedures and results of its validation and reliability assessments.

## THEORETICAL-METHODOLOGICAL BASIS FOR THE CONSTRUCTION OF THE INSTRUMENT

It is hard to measure the phenomenon of stress. In clinical assessments it can be identified by hormone alterations in the neuroendocrine system; in day-to-day practice, it can be represented by observable behaviors, that is, either by factors that can release psychoneuro-endocrine alterations or by the effects of these chemical alterations in the person's behavior.

The instrument was developed based on the transactional model of Lazarus and Folkman<sup>(11)</sup>. In this model, stress is connected to the relationship between the individual and his environment. This type of study requires people to be assessed within their life context, in their relationship with the surrounding environment, and considering their attribution of meaning to given events.

In the process of assessing events, organic and emotional manifestations of stress may appear according to an individual's ability to perceive and control the occurrences. Psychological differences influence an individual's response to the event; therefore, it is quite a difficult task to predict a response based only on the related situation<sup>(12)</sup>.

Aiming to create a numeric representation for stress in nursing students - a psychosocial variable - psychometric principles and techniques were applied in order to develop an instrument that could be used to operationalize the variable<sup>(13)</sup>.

## METHODOLOGY

The current study was based on the psychometric model advocated by Pasquali<sup>(13)</sup>, and consists of theoretical, empirical and analytical procedures.

### *Theoretical procedures*

This stage focuses on the theoretical issues of the construct to which a measurement instrument is to be elaborated. The conceptual structure must be clear and accurate in order to facilitate construction of the items comprising the measurement instrument. The development of the stress scale specific to nursing students creates the operationalization of an itemized construct, aimed at showing the latent trait and the representative behaviors of the given latent trait. In order to operationalize the itemized construct, and based on related literature, the study's subject concept (stress) was defined. The creation of the items was based on the opinion of 28 students of a public nursing university institution (seven students from each year of the program) regarding the most common stress factors they had experienced during the baccalaureate period. Opinions were gathered by means of self-applicable questionnaires composed of four open questions about the meaning of stress for the respondent, as well as the most stressful situations he/she experienced during his graduation period.

Responses to the questionnaire were read and re-read, focusing on the stress factors reported by students regarding their professional education. Responses were grouped into categories through a cutting, ranking and ordering process of ideas or factors, in accordance with their similarity<sup>(14-15)</sup>. Besides the students' opinions, the items of the SNSI<sup>(10)</sup> - Student Nurse Stress Index - were also considered in the construction of the items.

The built items were organized into six theoretical domains defined by research, and based on literature. These were later submitted for validation by a committee of judges that assessed each item concerning its semantic adjustment, content, and pertinence to the previously defined domains.

This phase also set the type of response required for the constructed items.

### **Empirical procedures**

In this stage, the researcher approached students in their classrooms, explaining the goals of the study so that they could voluntarily choose to take part in the research. The instrument was applied in a sample of 160 nursing graduation students in the city of São Paulo, Brazil. The course's eight-semester long program receives 80 students annually by means of a selective process carried out by the FUVEST (University's Foundation for the Brazilian Entrance Examination). The valid curriculum at the time of the research comprehended a total timetable of 4,305 hours divided into 44 compulsory subjects, four elective optional subjects, and 37 free optional subjects. The course is composed of a theoretical content, and also has a practical content in several field training activities. Students are also exposed to theoretical-practical activities both in the nursing laboratory and in the curricular training period. Following these activities, students must develop a monograph concerning one of the programs offered by the various departments at the School of Nursing of the University of Sao Paulo.

A desirable Cronbach's alpha higher than 0.8 (good internal consistency) and lower than 0.9 (non-redundant) was taken into account for alpha risk  $\geq 0.05$  and beta risk  $\leq 0.20$  in order to calculate the sample size. For a power greater than 0.9 was calculated a sample size of 160 students.

### **Analytical procedures**

The data collected in the above-mentioned phase were submitted to statistical analyses and tests aimed at validating the instrument. This step assessed the constructed instrument's validation and reliability, and settled the instrument's normalization. In the process of developing the constructed instruments, the normalization process offers the criteria for the interpretation of the scores obtained from the responses to an instrument or test<sup>(13)</sup>.

The selection of items towards the subsequent analyses of validation and reliability was based both on the distribution of responses to each item and on the relevance of the item to its respective domain. In order to verify the importance of each item within each domain, the Pearson's Chi-Square univariate nonparametric test was applied in order to decide whether or not some items should be eliminated, according to the most adequate distribution in

the proportion of responses<sup>(16)</sup>. Items with non-significant ( $p \geq 0,05$ ) or negative correlation indexes were excluded.

The internal consistency of each domain was assessed by the Cronbach's alpha, which also guided the analysis of each item within its respective domain. In case the exclusion of one item considerably enhanced the domain's total alpha, the item would be excluded.

The Confirmatory Factorial Analysis (CFA) was carried out in order to verify whether or not the configuration of the theoretically defined domains could be empirically confirmed, that is to say, if the responses of the sample to the instrument backed up the theory. The LISREL program carried out the CFA in order to confirm the adjustment of the final model achieved after the internal consistency analysis. Adjusted Goodness of Fit Index (AGFI) higher than 0.90 and Non-Normed Fit Index (NFI) higher than 0.80<sup>(17)</sup> were the confirmation criteria. Additionally, the Comparative Fit Index (CFI) of the model and the normed Chi-Square measurement were analyzed in order to verify to what extent the empirical data confirmed the proposed theory regarding the stress model's domains among nursing students<sup>(18)</sup>.

## **RESULTS**

### **Building the items**

Counting on a broad bibliographic review, it was possible to establish the concept of the study's subject (stress), as well as the constitutive and operational attributes that guided the development of the instrument, so that the behavior construct (items) could be operationalized.

The construct's theoretical domain was based on the theoretical model of Lazarus and Folkman<sup>(11)</sup>, who define stress as an interactionist model; in other words, they consider any event whatsoever stemming from the internal or external environment that exceeds the individual's capacity to adapt to the situation. The authors of this model consider subjectivity as a factor that determines the gravity of the stressor agent. A stressor stimulus is understood as those situations in which the individual activates organic systems that produce physical, mental and behavioral reactions whenever exposed to a threatening condition. Stressor stimuli unleash a break in the organic homeostasis and involve an overload of adaptive energy that causes the individual to cope with the stressing situation.

In the Lazarus and Folkman's model, the individual's assessment process of the event undergoes the following levels: primary - assessing the meaning of a situation and whether or not this situation will interfere in his welfare; secondary - maintaining the situation and assessing the available cognitive resources; reassessment - in case the situation is kept steady and the available resources are not satisfactory, organic and psychical processes of stress are released, generating severe consequences to the individual's health status<sup>(11)</sup>.

The adopted elements of the theory<sup>(11)</sup>, the result of the nursing students' opinions on the stress factors during their graduation level, literature data, and the SNSI items<sup>(10)</sup> were the sources used to build the present instrument's items.

According to their similarity, 62 items were elaborated and grouped into six areas or domains, namely: Domain 1 - Performance of Practical Activities; Domain 2 - Professional Communication; Domain 3 - Time Management; Domain 4 - Environment; Domain 5 - Professional Education; and Domain 6 - Theoretical Activity.

All 62 items were submitted to the committee of judges for semantic analysis, content analysis, and pertinence of the items within each previously defined domain. The most relevant suggestions regarded the relationship of the items with their allocation in each domain. The 62 items were reallocated in the domains in accordance with the judges' suggestions and inserted into the instrument for empirical tests.

Finally, in order to format the instrument, it was defined that each item that depicted a possible stress situation would be responded to by means of a four-score Likert-type scale, ranging from zero to three according to the intensity. The scores for each item can be as follows: zero (0), applied when the student did not experience stress at the situation depicted in the item; one (1), when stress level is regarded as low by the student in the presented situation; two (2), when the situation presents a moderate stress level; and three (3), when the student perceives a high stress level in the situation.

It was defined that the instrument's scores in each domain would be achieved by the sum of scores assigned to each one of the items that compose the domain; the higher the score, the stronger the intensity of stress perceived by the student.

This research started from the premise that the concept of stress is multidimensional, dynamic and subjective;

therefore, the study chose a domain-based concept's operationalization and interpretation.

Following the allocation of items by the judges, six domains were organized, namely: Environment, Performance of Practical Activities, Professional Communication, Time Management, Professional Education, and Theoretical Activity.

### **Reliability and validation**

The instrument's responses from 160 nursing students comprising the 62 remaining items after the implementation of the theoretical procedures were calculated and submitted to an analytical process that selected the best items and assessed the instrument's validation and reliability.

The age of the students ranged from 18 to 32 (average =  $21.8 \pm 3.1$ ). As per the gender, 147 (91%) were female. As per the period of the nursing course, 44 students out of 316 (12.7%) were taking the first year; 42 (13.3%), the second year; 36 (11.4%), the third year; and 38 (12%), the fourth and final year.

From the 62 items submitted to the empirical procedures, 32 were excluded due to at least one of the following reasons: unbalanced distribution among the response categories; and non-significant, negative, very high or very low correlation coefficients.

After eliminating the items, the remainder 30 were submitted to an internal consistency analysis, according to the domains in which they were allocated. The results are shown in Table 1. It can be observed that the values between brackets at the end of each item's description are the numbers that the items were given for the data analysis. These numbers will be useful to the observation of the Confirmatory Factorial Analysis results presented later on. The scale was titled *Instrument for the Assessment of Stress in Nursing Students* (ASNS) (Appendix).

...the concept  
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**Table 1** - Analysis of the internal consistency of the ASNS instrument's domains - São Paulo - 2008

Items/Domains	Alfa* (if the item is excluded)	Item total Correlation
<b>Domain: Performance of Practical Activities (Total Alpha=0,806)</b>		
1. New situations one may experience in clinical practice (5)	0.789	0.505
2. Environment at the training clinical unit (7)	0.796	0.466
3. Fear of making mistakes while assisting patients (9)	0.766	0.612
4. Feeling of not having enough knowledge for the practical test (21)	0.791	0.504
5. Performing the general assistance procedures (4)	0.759	0.634
6. Performing certain assistance procedures (12)	0.749	0.673
<b>Domain: Professional Communication (Total Alpha=0,768)</b>		
1. Communication with the other professionals at the training unit (6)	0.685	0.628
2. Communication with professionals from other sectors at the training unit (8)	0.716	0.569
3. Perception of difficulties regarding the relationship with other nursing professionals (16)	0.708	0.578
4. Identification of contradictory attitudes in other professionals (20)	0.742	0.525
<b>Domain: Time Management (Total Alpha=0,717)</b>		
1. Little time to spend with family members (18)	0.632	0.566
2. Reduced social interactions cause feelings of loneliness (3)	0.701	0.465
3. Lack of time for leisure (26)	0.627	0.605
4. Lack of time to rest (30)	0.670	0.516
5. Time demanded by the professor to prepare extra-class activities (23)	0.717	0.344
<b>Domain: Environment (Total Alpha=0,866)</b>		
1. Distance between the school and residence (11)	0.846	0.673
2. Public transportation used to go to the training place (29)	0.816	0.743
3. Public transportation used to go to school (22)	0.818	0.749
4. Distance between most training places and residences (24)	0.834	0.704
<b>Domain: Professional Education (Total Alpha=0,772)</b>		
1. Concerns about professional future (1)	0.785	0.303
2. Similarities between situations lived during the training process and those that may be lived during professional life (15)	0.719	0.589
3. Thinking of situations that may be lived during professional life (17)	0.729	0.552
4. Perceiving the professional responsibility while doing the training program (19)	0.734	0.535
5. Experiencing activities in the training field as a nursing student (25)	0.700	0.653
6. Perceiving the theoretical knowledge acquired during the course	0.751	0.465
<b>Domain: Theoretical Activity (Total Alpha=0,720)</b>		
1. Method format used to assess theoretical content (10)	0.682	0.456
2. Feeling insecurity or fear while taking theoretical exams (13)	0.659	0.513
3. Level of difficulty to do extra-class assignments (14)	0.655	0.525
4. Obligation to do extra-class assignments (2)	0.650	0.532
5. Understanding the theoretical and practical content taught in the classroom (28)	0.712	0.369

\*Cronbach's Alpha Coefficient

The Performance of Practical Activities domain has six items that refer to the instrumental knowledge acquired by the student towards the performance of the procedures, as well as to the feelings involved in the patient's care. Table 1 shows that this domain reached quite a good total alpha, and that it would be improved if all items were kept.

In the Professional Communication domain, the four items depict the difficulties felt in the individual's communication and relationship with other elements of his professional group; the domain also showed the tense situations arisen from this status. The total alpha would not be improved with the removal of items (Table 1).

The Time Management domain counted on five items and took into account the difficulties reported by students to reconcile all the core curriculum activities with their personal, emotional and social demands. The domain presented a good total alpha coefficient and the exclusion of items would not improve it (Table 1).

In the Environment domain, four items depicted the degree of difficulty felt by students regarding their access to the training field or the university, and the weariness perceived by them concerning the use of public transport. The total alpha was not very good and there was no indication that the exclusion of items would improve the domain (Table 1).

The six items of the Professional Education domain refer to the concerns of the students at the knowledge acquired in their academic education, as well as the impact of this knowledge on their future professional life. It also includes the perception of situations that they can experience in the professional field. The exclusion of the item related to the concern at the professional future would increase the total alpha from 0.772 to 0.785 (Table 1). The item was not removed because this improvement was considered as irrelevant.

The five items of the Theoretical Activity domain regard the degree of difficulty perceived by students concerning

the educational content, the developed activities, and the adopted educational methodology. The exclusion of items would not improve the domain's total alpha (Table 1).

The data achieved by the sample on the thirty items of the ASNS instrument distributed into all six domains (Table 1) were submitted to the CFA in order to verify whether or not the format of the theoretically established domains could be confirmed<sup>(18)</sup>.

Figure 1 represents the CFA results on the thirty items and the six domains. Table 1 uses numbers at the end of each item's description.

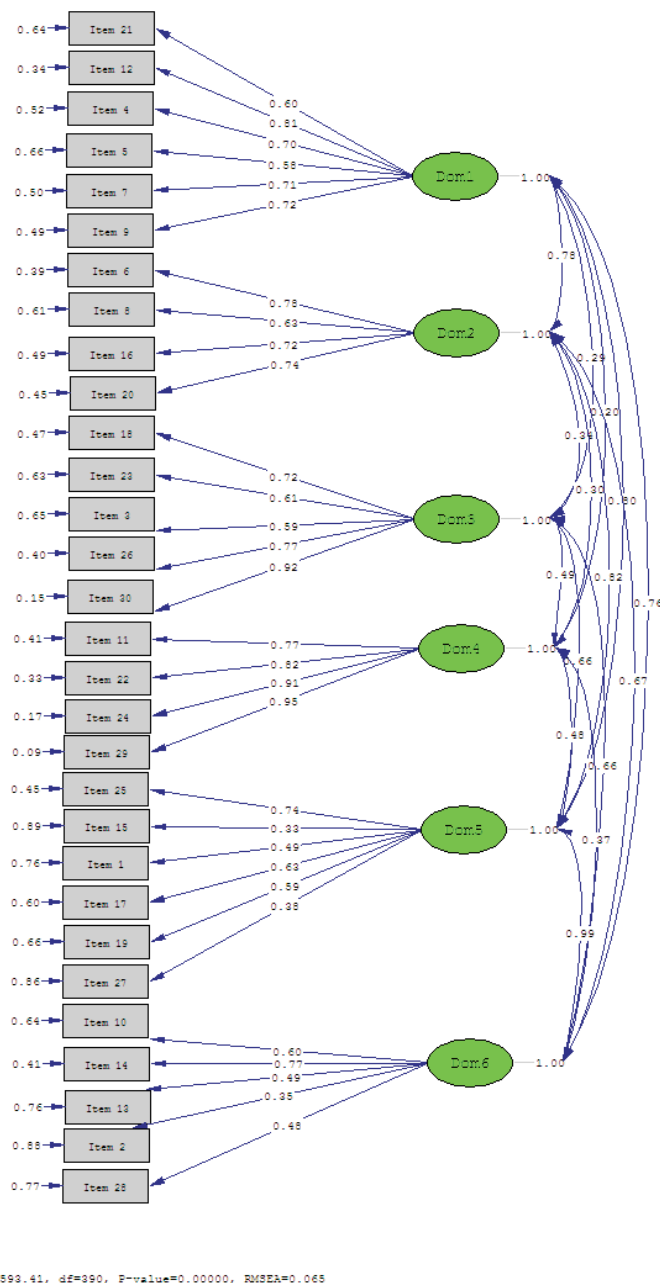


Figure 1 – Confirmatory Factorial Analysis (CFA) of the ASNS instrument

The CFA showed the existence of meaningful correlations between the ASNS items and domains. The values shown on the left of the items are, in their vast majority, very low, indicating that the items presented low error variance.

The ASNS items displayed factorial loads in the respective domains whose magnitude ranged from moderate to high (0.33 to 0.95). Factorial loads varied from 0.58 to 0.81 (moderate to strong) in Domain 1 - Performance of Practical Activities; from 0.63 to 0.78 (strong) in Domain 2 - Professional Communication; from 0.59 to 0.92 (moderate to strong) in Domain 3 - Time Management; from 0.77 to 0.95 (strong) in Domain 4 - Environment; from 0.33 to 0.74 (moderate to strong) in Domain 5 - Professional Education; and from 0.35 to 0.77 (moderate to strong) in Domain 6 - Theoretical Activity.

As per the correlations among domains, it was observed that the Performance of Practical Activities domain presented the lowest interactive value among all others; the  $r=0.29$  was compared with the Time Management domain and the  $r=0.20$  with the Environment domain.

Figure 1 shows that items 15 (similarity between situations experienced in the training process and those that can be experienced in the professional life) and 27 (perceive the relationship between the theoretical model acquired in the course and the future professional performance), and item 13 of domain 6 (Feel insecurity or fear of theoretical tests) presented a lower correlation level; how-

ever, their values are still present in the moderate to strong interval.

The Goodness of Fit Index (GFI) for the proposed model reached 0.909, while the Root Mean Square Error of Approximation (RMSEA) reached 0.646, practically within the acceptable interval. These absolute adjustment measures indicate that the model proposed for the ASNS instrument is acceptable and adjusted.

When the model's incremental adjustment measures were analyzed, it was observed that the Adjustment Goodness of Fitness Index (AGFI) of 0.89 and the Normed Fit Index (NFI) of 0.894 were slightly below the desired reference of 0.90. However, the NFI and the Non-Normed Fit Index (NNFI) of 0.956 exceeded 0.80 (lower cut score), thus suggesting that the model composed of six domains and 30 items was adjusted. The model's Comparative Fit Index (CFI) reached a value of 0.96, indicating a scarce adjustment. The normed Chi-square measure ( $593,41/390 = 1.52$  - Chi-square/degree of freedom) was inserted into acceptable limits; another indication that the proposed model was adjusted.

### ASNS NORMALIZATION

The items' cut scores were based on the distribution of the students' responses. For the interpretation of the results, the intensity of the stress factors was taken into account and ranked in accordance with an equalitarian variance in risk quantile intervals in each domain (Table 2).

**Table 2** – Classification of stress intensities in accordance with risk quantified in each domain - Sao Paulo - 2008

Domains	Stress intensity rank and the corresponding quantified score			
	Low stress level (25%)	Moderate stress level (50%)	High stress level (75%)	Very high stress level (100%)
Domain 1 (6 items) 0 to 18 scores	0 - 9 scores	10 - 12 scores	13 - 14 scores	15 - 18 scores
Domain 2 (4 items) 0 to 12 scores	0 - 5 scores	6 scores	7 - 8 scores	9 - 12 scores
Domain 3 (5 items) 0 to 15 scores	0 - 10 scores	11 - 12 scores	13 - 14 scores	15 scores
Domain 4 (4 items) 0 to 12 scores	0 - 7 scores	8 - 10 scores	11 scores	12 scores
Domain 5 (6 items) 0 to 18 scores	0 - 9 scores	10 scores	11 - 12 scores	13 - 18 scores
Domain 6 (5 items) 0 to 15 scores	0 - 9 scores	10 - 11 scores	12 - 13 scores	14 - 15 scores

The analysis should not consider the domain if it presented a percentage lower than 80% of responded questions. Hence, the stress factor assessment result must take into account the intensity and the corresponding score percentage of each domain. The result will indicate the

predominance of the highest score domain, that is, the items belonging to this domain will show a more relevant stress degree, indicating the need of intervention so that the student does not develop stress neuroendocrine reactions.

Scores in one domain can be compared with scores in other domains, according to the objective of the study analysis.

## CONCLUSION

This study is justified by the scarcity of research addressing nursing students' stress. The majority of studies apply a qualitative methodology to analyze stress among students, instead of using instruments with known psychometric properties.

In the various item-construction phases the characteristics pertaining to each stage of the educational process were taken into account. Bearing that in mind, the instrument was all-embracing, allowing for its application to students from any stage of nursing education.

Counting on assessments of adequate construct validation and reliability, the ASNS is aimed at nursing students. As a newly built instrument, it is recommended that the ASNS be utilized in different samples so that the results presented here are either confirmed or adjusted accordingly. The ASNS allows for the assessment of stress among nursing students as a research variable, or it can be used for educational purposes.

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## APPENDIX

**Escala para "Avaliação de Estresse em Estudantes de Enfermagem" (AEEE), Costa, Polak, 2008.**

Leia atentamente cada item abaixo e marque com um "X" o número correspondente com a intensidade de estresse que a situação lhe provoca, conforme a legenda a seguir:

0 = não vivencio a situação

1 = não me sinto estressado com a situação

2 = me sinto pouco estressado com a situação

3 = me sinto muito estressado com a situação

Nova Numeração	Itens	0	1	2	3
1.	Ter preocupação com o futuro profissional				
2.	A obrigatoriedade em realizar os trabalhos extraclasse				
3.	Estar fora do convívio social traz sentimentos de solidão				
4.	Realizar os procedimentos assistenciais de modo geral				
5.	As novas situações que poderá vivenciar na prática clínica				
6.	Comunicação com os demais profissionais da unidade de estágio				
7.	O ambiente da unidade clínica de estágio				
8.	Comunicação com os profissionais de outros setores no local de estágio				
9.	Ter medo de cometer erros durante a assistência ao paciente				
10.	A forma adotada para avaliar o conteúdo teórico				
11.	Distância entre a faculdade e o local de moradia				
12.	Executar determinados procedimentos assistenciais				
13.	Sentir insegurança ou medo ao fazer as provas teóricas				
14.	O grau de dificuldade para a execução dos trabalhos extraclasse				
15.	A semelhança entre as situações que vivencia no estágio e aquelas que poderá vivenciar na vida profissional				
16.	Perceber as dificuldades que envolvem o relacionamento com outros profissionais da área				
17.	Pensar nas situações que poderá vivenciar quando for enfermeiro				
18.	Tempo reduzido para estar com os familiares				
19.	Perceber a responsabilidade profissional quando está atuando no campo de estágio				
20.	Observar atitudes conflitantes em outros profissionais				
21.	Sentir que adquiriu pouco conhecimento para fazer a prova prática				
22.	Transporte público utilizado para chegar à faculdade				
23.	Tempo exigido pelo professor para a entrega das atividades extraclasse				
24.	Distância entre a maioria dos campos de estágio e o local de moradia				
25.	Vivenciar as atividades, como enfermeiro em formação, no campo de estágio				
26.	Faltar tempo para o lazer				
27.	Perceber a relação entre o conhecimento teórico adquirido no curso e o futuro desempenho profissional				
28.	Assimilar o conteúdo teórico-prático oferecido em sala de aula				
29.	Transporte público utilizado para chegar ao local do estágio				
30.	Faltar tempo para momentos de descanso				

**Cálculo dos escores:**

Para aferição do resultado, deve ser feita a soma do número correspondente da intensidade de estresse dos itens presentes em cada domínio. O domínio com maior pontuação será considerado predominante e com maior intensidade de estresse para o respondente.

Domínio 1: (6 itens) 4, 5, 7, 9, 12, 21

Domínio 2: (4 itens) 6, 8, 16, 20

Domínio 3: (5 itens) 3, 18, 23, 26, 30

Domínio 4: (4 itens) 11, 22, 24, 29

Domínio 5: (6 itens) 1, 15, 17, 19, 25, 27

Domínio 6: (5 itens) 2, 10, 13, 14, 28

**Interpretação dos escores:**

Domínio 1: 0-9 baixo nível de estresse; 10-12 médio nível de estresse; 13-14 alto nível de estresse; 15-18 muito alto nível de estresse.

Domínio 2: 0-5 baixo nível de estresse; 6 médio nível de estresse; 7-8 alto nível de estresse; 9-12 muito alto nível de estresse.

Domínio 3: 0-10 baixo nível de estresse; 11-12 médio nível de estresse; 13-14 alto nível de estresse; 15 muito alto nível de estresse.

Domínio 4: 0-7 baixo nível de estresse; 8-10 médio nível de estresse; 11 alto nível de estresse; 12 muito alto nível de estresse.

Domínio 5: 0-9 baixo nível de estresse; 10 médio nível de estresse; 11-12 alto nível de estresse; 13-18 muito alto nível de estresse.

Domínio 6: 0-9 baixo nível de estresse; 10-11 médio nível de estresse; 12-13 alto nível de estresse; 14-15 muito alto nível de estresse.