

Psychometric properties of an assessment instrument of graduates of nursing undergraduate courses

Propriedades psicométricas de instrumento para avaliação de egressos de cursos de graduação em enfermagem

Propiedades psicométricas de un instrumento de evaluación de egresados de carreras de enfermería

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Descriptores

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Abstract

Objective: Psychometric validation of the Assessment Instrument of Nursing Graduates.

Methods: Cross-sectional, quantitative study conducted in three Nursing Undergraduate Courses located in the states of São Paulo, Minas Gerais and Acre, Brazil, with 446 participants. Reliability was tested by Cronbach's alpha (internal consistency and reproducibility) and construct validity was obtained by exploratory factor analysis and principal component analysis.

Results: The overall Cronbach's alpha coefficient of the instrument was 0.98; the overall intraclass correlation coefficient (94%) showed strong agreement between measurements. In factor analysis, KMO was 0.971 and the Bartlett's sphericity test showed significant results ($p < 0.001$) for all constructs and correlation matrices between the items of each construct.

Conclusion: The psychometric analyzes showed favorable results and a strong internal consistency of the instrument. The Assessment Instrument of Nursing Graduates is valid and reliable to evaluate the professional education of Nursing graduates.

Resumo

Objetivo: Validar psicometricamente o Instrumento Avaliação de Egressos de Enfermagem.

Métodos: Estudo transversal, quantitativo, realizado em três Cursos de Graduação em Enfermagem localizados nos Estados de São Paulo, Minas Gerais e Acre, Brasil, com 446 participantes. A confiabilidade foi testada pelo alfa de Cronbach (consistência interna e reprodutibilidade) e a validade de construto foi obtida pela análise fatorial exploratória e pela análise dos componentes principais.

Resultados: O valor do coeficiente Alfa de Cronbach total do instrumento foi de 0,98; os coeficientes de correlação intraclasse total de (94%), evidenciando forte concordância entre as medições. Na análise fatorial, KMO foi de 0,971 e o teste de esfericidade de Bartlett apresentou resultados significativos ($p < 0,001$) para todos os construtos e as matrizes de correlação entre os itens de cada construto.

Conclusão: As análises psicométricas mostraram resultados favoráveis, evidenciando forte consistência interna do instrumento. O Instrumento Avaliação de Egressos de Enfermagem é válido e confiável para a avaliação da formação profissional do egresso bacharel em Enfermagem.

Resumen

Objetivo: Validar psicométricamente el instrumento Evaluación de Egresados de Enfermería.

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Conflicts of interest: this manuscript was extracted from the thesis "External Validation of the IAE-ENF Assessment Instrument of Nursing Graduates: Multicentric Study, 2019", which was presented to the Universidade Federal de São Paulo/UNIFESP. Although De Domenico EBL is an Associate Editor of Acta Paulista de Enfermagem, she did not have access to the evaluation process of the referred manuscript nor to any of the manuscript reviewers.

Métodos: Estudio transversal, cuantitativo, realizado en tres carreras de grado de enfermería ubicadas en los estados de São Paulo, Minas Gerais y Acre, Brasil, con 446 participantes. La fiabilidad fue probada mediante el alfa de Cronbach (consistencia interna y reproducibilidad) y la validez del constructo se obtuvo con el análisis factorial exploratorio y el análisis de los componentes principales.

Resultados: El valor del coeficiente alfa de Cronbach total del instrumento fue de 0,98. Los coeficientes de correlación intracase totales fueron del 94 %, lo que evidencia fuerte concordancia entre las mediciones. En el análisis factorial, el KMO fue de 0,971 y la prueba de esfericidad de Bartlett presentó resultados significativos ($p < 0,001$) en todos los constructos y las matrices de correlación entre los ítems de cada constructo.

Conclusión: Los análisis psicométricos mostraron resultados favorables, lo que evidencia una fuerte consistencia interna del instrumento. El instrumento Evaluación de Egresados de Enfermería es válido y confiable para evaluar la formación profesional del egresado Licenciado en Enfermería.

Introduction

The university institutional evaluation is a valuable opportunity to turn the look and the criticism upon oneself, recognizing the importance of the Higher Education Institution (HEI) as a pole of construction and dissemination of knowledge. When this becomes a cultural practice and is performed carefully, it is a precious diagnostic tool for quality and generates data to be used in the improvement or reorientation of the educational process whatever the applied scenario; class, discipline, course, educational institution.⁽¹⁾

The aim of higher education is to qualify, in different knowledge areas, the subjects who can be inserted in professional sectors for the development of Brazilian society, encouraging the permanent desire for cultural and professional improvement. At the national level, the evaluation of higher education is under control of the National Institute for Educational Studies and Research (Portuguese acronym: INEP) of the Ministry of Education (MEC), which regulates, supervises and reinforces the continuous and systematic evaluation of HEIs.⁽²⁾

From the perspective of university professional training, specifically in Nursing training, a professional area with a large contingent of health graduates, the educational process throughout the training years and its product should be evaluated, seeking to ascertain, in graduates, if the social role of HEIs is being fulfilled with society and if newly graduated professionals are able to exercise what has been bestowed to them.⁽³⁾

In this context, graduates must assess if academic activities developed collectively by institutional managers are being effectively performed with efficiency and quality, considering the ideals of the profession, society and the labor market.^(4,5) Although

the graduates' evaluation is complex, in practice the fundamental intentionality is to know how HEIs have followed the basic principles guiding higher education, including Nursing courses.

In previous studies, the instruments proposed were developed with the purpose of 'getting to know' the graduates in relation to their professional training and employability with a view to obtaining information to support pedagogical and administrative decisions more concretely.⁽⁶⁻⁹⁾ However, there is a scarcity of studies aimed at assessing the construction of knowledge required for the exercise of general competencies and skills required by the National Curricular Guidelines for the area of Nursing (Portuguese acronym: DCN/ENF).⁽¹⁰⁾

Thus, establishing a complementary model for the evaluation of the educational process that quantitatively and qualitatively validates the education offered is as important as expanding higher education in the national territory. The standardization of valid and reliable instruments is fundamental to certify the quality of higher education as a whole.^(4,11)

In this sense, the instrument with the purpose of evaluating graduates of Nursing Undergraduate Courses based on National Curricular Guidelines for the area of Nursing titled 'Instrument for the Evaluation of Graduates of Nursing Undergraduate Courses (IAE-ENF)' was created. The content validation process was accomplished and the reliability was tested by Cronbach's alpha (0.750) although without external validation.⁽¹²⁾

Considering the importance of graduates' assessment, the current study is justified by the need to complement the previous study by deepening the evaluation of the psychometric properties of the IAE-ENF in a multicenter population of graduates of Undergraduate Nursing Courses, so that it

becomes a valid and reliable instrument. This will allow the assessment of the convergence between academic activities, the assumptions contained in the National Curricular Guidelines for the area of Nursing and the training product.⁽¹²⁾ The objective was to psychometrically validate the Assessment Instrument of Nursing Graduates.

Methods

Methodological, cross-sectional, quantitative, multicentric study.

Ethical aspects

The study complied with the rules involving ethical aspects in research involving human beings and was approved by the Research Ethics Committee under Opinion number 0977/2016 and CAAE number 57869516.7.0000.5505.

Study location and population

The study sites included three Brazilian HEIs: Universidade Federal do Acre (HEI-1), located in the northern region of Brazil; Universidade Estadual de Montes Claros (HEI-2) and the Universidade Federal de São Paulo (IES-3), both in the southeastern region. The multicentric study was chosen given the possibility of comparing data from different educational, social, economic and cultural contexts. The three universities were selected by convenience, since they are the researchers' workplaces. The participating institutions consented to conduct the study and make their names public by signing a term of consent.

To calculate the sample size (n), estimating the 95% confidence level and 0.05 significance level, the total number of graduates from 2013 to 2017 (n: 603) was considered. It was made available by the three academic secretariats of the participating courses. The sample size was calculated using the OpenEpi[®] software, version 2.⁽¹³⁾ According to the specialized literature, for each question in the questionnaire, there must be at least five subjects.⁽¹⁴⁾ As the IAE-ENF contains 87 questions, the sample number stipulated was of 435 graduates, but

a greater number participated, 446 graduates, of which 75 graduates from HEI-1, 341 from HEI-3/SP and 187 from HEI-2.

The inclusion criteria adopted in the study were: being a graduate of the Nursing Undergraduate Course at one of the three institutions participating in the study; having completed the course in the period from 2013 to 2017. The exclusion criterion was not responding and returning all requested instruments duly completed within the stipulated deadlines.

Data collection instrument and procedures

The 87 items of the IAE-ENF are divided into three dimensions: Dimension 1- Characterization of the graduate: corresponds to sociodemographic data such as nationality, ethnicity, sex, year of birth, year of completion of the course, legal nature of the Institution, mode of study, extracurricular activities and maximum degree; Dimension 2- Evaluation of Professional Training: with eight closed questions based on the National Curricular Guidelines for the area of Nursing for the evaluation of the professional training process and nursing specific knowledge; Dimension 3- Evaluation of Professional Performance (at the interface with the undergraduate course): six closed questions about the type of training received, satisfaction with the remuneration and the nurse profession, and two open questions about the positive and negative points of the nursing course taken.

Data collection began in June 2017, seeking graduates from 2013 to 2016 and ended in June 2018, when data of graduates from year 2017 was obtained. Data were collected using a structured electronic questionnaire available on a website by means of the SurveyMonkey[®] software, advanced version.

The capture of respondents occurred through wide dissemination via electronic mail and social networks and finally, through snowball sampling. This technique was not previously determined, but necessary throughout the data collection process. It consists of capturing respondents belonging to the same target population of the study, in which a person in the group indicates other participants referring to the same group, and so on.⁽¹⁵⁾

Analysis of results

After completing the data collection phase, the instrument data were stored in the “Analysis of results” item of the SurveyMonkey® online software and tabulated in a Microsoft Excel® spreadsheet.

During the evaluation of psychometric properties of the IAE-ENF, the steps established in the literature were followed: reliability and validity tests to prove the authenticity of an instrument.⁽¹⁶⁾ The reliability study was conducted in the three dimensions, while the validity was restricted to dimensions 2 and 3, because these give rise to the precepts contained in the National Curricular Guidelines for the area of Nursing.

The reliability of the IAE-ENF was analyzed through test-retest reproducibility at a 7-15 days interval between applications and the sample was composed of 58 graduates. To test the internal reliability of the IAE-ENF, Cronbach's Alpha was used, in which the minimum acceptable alpha value was 0.70 and the maximum expected value was 0.90.^(16,17)

Construct validation was performed through exploratory factor analysis. To this end, the first step was to check the suitability of the set of items contained in the IAE-ENF by performing KMO tests (Kaiser-Meyer-Olkin) and the Bartlett test (BTS). The expected values are between 0.5 and 1 for KMO tests, and p-value less than 0.5 for BTS.^(18,19)

Then, the analysis of the main components was performed, selecting the factors that obtained eigenvalues (total variance explained for each factor) greater than one. The extraction of the main factors was performed after orthogonal Varimax rotation and Kaiser's criterion.⁽¹⁸⁾

Results

The reliability of the IAE-ENF was tested by Cronbach's alpha coefficient in the three dimensions and the total value found was 0.98, which characterizes high reliability. In dimensions 2 and 3, the values found by the same coefficient were greater than 70%. A Cronbach's alpha value of 0.98% was observed specifically for the dimension of training evaluation and of 78% for the professional performance dimen-

sion. Through these results, it was possible to affirm that the items are homogeneous and the IAE-ENF instrument consistently measures the characteristic for which it was proposed (Figure 1).

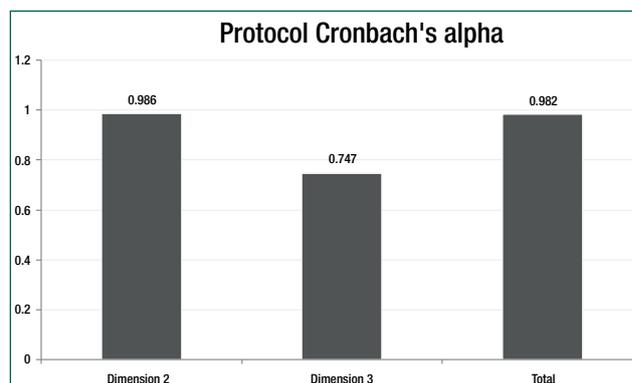


Figure 1. Reliability Percentage of the IAE-ENF (Cronbach's Alpha) and its respective dimensions

Dimension 2 of the IAE-ENF sought to identify aspects related to nurses' professional training. The items that made up this part of the instrument were constructed according to the National Curricular Guidelines for the area of Nursing, including terms and content. This dimension contained eight groups of questions subdivided into sub-items in the form of a Likert scale. For the evaluation of the mean of items, the maximum score of 5 points on a scale of 5/4/3/2/1 was considered and the total mean was 2.56 in HEI-1, 2.13 in HEI-2 and 2.27 in HEI-3. Dimension 3 of the IAE-ENF was composed of semi-structured questions related to graduates' perception of professional training and performance in the labor market. For the seven closed questions, the semantic differential scale was used with a 1-5 numerical presentation, in which 1 is insufficient and 5 is sufficient. The overall value of this dimension was calculated by the mean of questions composing it and the following results were found: 3.46 (HEI-1), 3.27 (HEI-2) and 3.35 (HEI-3), respectively (Figure 2).

In the analysis of construct validity through exploratory factor analysis, the Kaiser-Meyer-Olkin (KMO) and Bartlett measure of adequacy was used to check if the study sample was appropriate, as shown in table 1. The KMO result was 0.971, showing an excellent correlation between the vari-

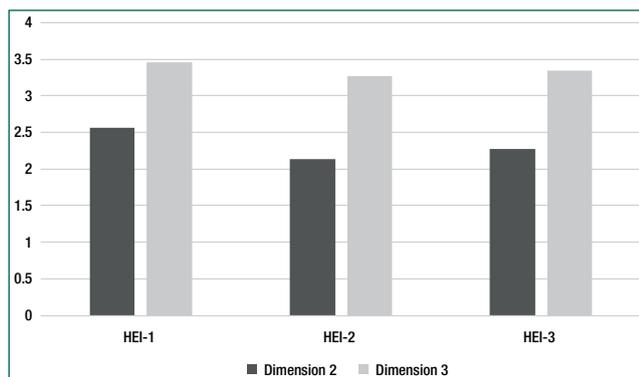


Figure 2. Distribution of the means of dimensions 2 and 3 of the IAE-ENF

ables. Bartlett’s sphericity test showed significant results (<0.001) for all constructs and the correlation matrices between items of each construct (Table 1).

Table 1. KMO and Bartlett test for Factor Analysis

Test	Result
KMO	0.971
Bartlett	<0.001

Table 2 presents the results of the exploratory factor analysis, considering the number of factors identified in the scree plot test.

Table 2. Eigenvalues and Variability of the IAE-ENF Factors

Factors	Eigenvalues	% Variance	% Accumulated
Factor 1	31.72	52.0	52.0
Factor 2	4.38	7.2	59.2
Factor 3	3.13	5.1	64.3
Factor 4	2.11	3.5	67.8
Factor 5	1.57	2.6	70.3
Factor 6	1.46	2.4	72.7
Factor 7	1.19	2.0	74.7
Factor 8	1.08	1.8	76.5

The first factor was composed of 22 items and accounted for 52% of data variability. Among these, the item “Assume the ethical, humanistic and social commitment to multidisciplinary health work” stands out with a factor load of 0.819. The analysis of these results demonstrated that factors 1,2,3,4 and 5 were composed exclusively of items from dimension 2 of the IAE-ENF, that is, related to issues of nurses’ professional training in the National Curricular Guidelines for the area of Nursing. Factor 6, composed only of the items of dimension 3 of the IAE-ENF, totaling six items, made reference to graduates’ perception of the academic train-

ing received in the HEI and the needs of the labor market. Factor 7 corresponded to three questions of dimension 2 of the IAE-ENF related to professional training and factor 8 to a question of dimension 3 of the IAE-ENF related to remuneration of the professional category. The adjusted version after factor analysis can be found in full in appendix 1.

Discussion

This study emerges from the need to make available to the scientific community the first validated instrument fully addressing the skills and competencies required by the National Curricular Guidelines for the area of Nursing, as well as graduates’ perception of professional training and performance in the labor market. The results indicate that the IAE-ENF, currently in the phase of validation, presented satisfactory results in the tests performed in the present investigation, as well as in the previous study, in which content validation was performed.⁽¹²⁾

The IAE-ENF is an instrument that follows theoretical and methodological criteria, ensuring an appropriate factor model. The objective of factor analysis is to investigate the underlying elements in a given data matrix using multivariate techniques. These steps are important to check the internal structure and reveal the accuracy of the constructs of the instrument.⁽²⁰⁾

Initially, the items of the IAE-ENF were analyzed through the Kaiser-Meyer-Olkin Measure (KMO) to confirm the correlations between items, showing a good fit for the model with eight domains (0.97). In the Bartlett’s Sphericity Test, used to assess the significance of correlations in a data matrix, the IAE-ENF demonstrated correlations between items with <0.001, thereby making it possible to perform the factor analysis, as in other validation studies of instruments that presented similar values to this study.^(21,22)

Confirming the appropriateness of the factor analysis for the items of the IAE-ENF, the presence of more than one factor in the general data matrix was investigated through the Principal Component Analysis by the scree plot test with the objective of

reducing the number of items, taking into account the variance of variables in the different groups studied. The results found were from a matrix with eight factors that explained 76.5%, which is considered a good value, with each of the other factors showing eigenvalues greater than 1.^(18,20)

Regarding aspects analyzed in relation to the nurses' training and performance, which correspond to an analysis of the abstract concept of what is expected from professional training, the IAE-ENF construct validation investigated the relationships and the need to adapt the IAE-ENF to measure these aspects, but the decision was to maintain all items since results are satisfactory for this matrix.

The statistical measures to validate the IAE-ENF construct in each of the three dimensions originally proposed (that is, sociodemographic characteristics, professional training and professional performance) show a good fit between items, even though dimensions 2 and 3 prove greater affinities, confirming the coherence of items proposed in the original instrument.⁽¹²⁾

Regarding the IAE-ENF reliability, Cronbach's Alpha coefficient values were high, indicating good internal consistency. Regarding stability, total intra-class correlation coefficients of 94% showed strong agreement between measurements, and when analyzed separately, dimensions 2 and 3 showed values greater than 0.70.⁽¹⁷⁾

Considering that items 20 and 25 were added to better target the answers, which did not contribute to increase neither reduce the instrument reliability, Cronbach's Alpha did not change and remained at the value of 0.98, characterizing the instrument as reliable in its final version.

The item referring to biological identity in dimension 1 of the IAE-ENF, which addresses the sociodemographic characteristics, can be reviewed. The IAE-ENF includes the item "sex", and it was observed that only 67 graduates (17.67%) answered such an item. In this perspective, it is opportune to reflect on this variable in the construction of future research projects and add more options, including the possibility of free self-declaration, since the right to gender expression has assumed great relevance nowadays.⁽²³⁾

That said, the instrument called IAE-ENF was made up of eight domains divided into three dimensions as described: dimension 1 with 23 items related to sociodemographic characteristics; dimension 2 with eight groups of questions related to requirements contained in the National Curricular Guidelines for the area of Nursing; and dimension 3 with eight questions related to professional performance and insertion in the labor market. Two of these dimensions were of dissertation type (Appendix 1).

The Cronbach's Alpha values found in this study were above the value obtained in the original instrument.⁽¹²⁾ When analyzed separately by dimension, 2 and 3, Cronbach's Alpha values showed good data reliability. These data confirm that the IAE-ENF produces consistent and coherent results from the scores proposed. The findings corroborate other studies, in which a value of at least 0.70 indicates acceptable reliability.⁽²⁴⁻²⁶⁾

In relation to the eight domains of the IAE-ENF, most correspond to dimension 2 of the instrument, in which all items are related to the requirements contained in the National Curricular Guidelines for the area of Nursing, followed by dimension 3, in which items are related to nurses' role and the insertion in the labor market.

Considering the use of techniques similar to those adopted in this study and suggested in other validation studies, in addition to the evaluation processes adopted for the instrument, the adequacy of a new version of the instrument deserves reflections regarding the conceptual evaluation of items by the target population and the dialogue with the author of the original instrument in relation to the pertinence of the proposed adjustments and modifications.^(15,20) In the present investigation, there was consensus among the authors in relation to the changes made.

The limitation of the present study is related to the non-inclusion of representative participants from all states of the Brazilian federation, which generates the need to perform a reliability test for its application in other population groups. As for the validated version of the IAE-ENF, for future applications, we suggest replacing the item sex, dimension 1, by gender and the inclusion of one

more item (third option) with a free space for the respondent's self-declaration.

Conclusion

The results improved the original instrument and showed that the IAE-ENF is reliable and valid for the graduates' assessment of the Nursing Undergraduate Course based on Curricular Guidelines for Nursing Courses, base year 2001. Psychometric analyzes showed favorable results with the Cronbach's alpha, strong internal consistency of the instrument. Regarding stability, the overall intraclass correlation coefficients showed strong agreement between measurements. The results of the KMO and the Bartlett test were significant for all constructs and correlation matrices between the items of each construct, showing a good correlation between data. Implications for practice: the IAE-ENF is an advance in the evaluation process of graduates of Nursing courses, and can be used in the national territory for individual, institutional or comparative analysis, providing an opportunity to obtain data from a common matrix, based on the National Curricular Guidelines for the area of Nursing with multiple analysis possibilities.

Collaborations

Aguiar KLA, Vieira MA and De Domenico EBL contributed to the study design, analysis and interpretation of data, writing of the article, relevant critical review of the intellectual content and approval of the final version to be published.

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Appendix 1. IAE-ENF instrument

DIMENSION 1: SOCIODEMOGRAPHIC CHARACTERISTICS AND INSERTION IN THE LABOR MARKET					
Race: <input type="checkbox"/> Yellow <input type="checkbox"/> White <input type="checkbox"/> Indigenous <input type="checkbox"/> Black <input type="checkbox"/> Mixed race					
Sex: <input type="checkbox"/> Male <input type="checkbox"/> Female					
Year of birth: __/__/__					
Year/Semester of completion of the Nursing Undergraduate Course: __/__/__					
Mark the legal nature of the Higher Education Institution where you completed your Nursing Degree: <input type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Other. Which one? _____					
Mark the mode of study in which you completed your Nursing Graduation: <input type="checkbox"/> Full time <input type="checkbox"/> Daytime <input type="checkbox"/> Evening					
Mark your highest level of education: <input type="checkbox"/> Nursing Graduation <input type="checkbox"/> Specialization <input type="checkbox"/> Course in progress. If so, which one (s)? _____ Year of completion: ____					
Academic Master's: <input type="checkbox"/> Yes <input type="checkbox"/> In progress / If so, indicate year of completion: ____.					
Professional Master's: <input type="checkbox"/> Yes <input type="checkbox"/> In progress / If yes, indicate year of completion: ____.					
PhD: <input type="checkbox"/> Yes <input type="checkbox"/> In progress / If yes, indicate year of completion: ____.					
Post-PhD: <input type="checkbox"/> Yes <input type="checkbox"/> In progress / If yes, indicate year of completion: ____.					
Do you have previous training in the field of Nursing? If yes, mark: <input type="checkbox"/> Nursing assistant <input type="checkbox"/> Nursing Technician					
As a nurse, do you have a job in the field of Nursing? <input type="checkbox"/> Yes, in one workplace. <input type="checkbox"/> Yes, in more than one workplace. How many? _____ <input type="checkbox"/> No, I am unemployed. <input type="checkbox"/> No, I work in another area/profession. Specify: _____					
How long after graduation did you get your first job as a nurse? <input type="checkbox"/> 6 months after graduation <input type="checkbox"/> 1 year after graduation <input type="checkbox"/> 2 to 3 years after graduation <input type="checkbox"/> 4 to 5 years after graduation <input type="checkbox"/> More than 6 years after graduation					
Indicate how you managed to get your current job as a nurse. <input type="checkbox"/> Public concourse <input type="checkbox"/> Selective process <input type="checkbox"/> Direct contact with the institution. <input type="checkbox"/> Indication of other professionals in the area. <input type="checkbox"/> Indication of friends/relatives <input type="checkbox"/> Others. Specify: _____					
As a nurse, what is the total weekly workload in your job? <input type="checkbox"/> Up to 20 hours <input type="checkbox"/> From 21 to 36 hours <input type="checkbox"/> From 37 to 44 hours <input type="checkbox"/> From 45 to 60 hours <input type="checkbox"/> Above 61 hours					
What is your net monthly income from your job as a nurse? <input type="checkbox"/> Up to 2 minimum wages <input type="checkbox"/> from 3 to 5 minimum wages <input type="checkbox"/> From 6 to 8 minimum wages <input type="checkbox"/> From 9 to 11 minimum wages <input type="checkbox"/> Above 12 minimum wages					
Indicate your form of professional bond as a nurse <input type="checkbox"/> Wage earner <input type="checkbox"/> Self-employed <input type="checkbox"/> Employer <input type="checkbox"/> Consultant <input type="checkbox"/> Other. Specify: _____					
Regarding your current job as a nurse, mark your position. <input type="checkbox"/> Managerial <input type="checkbox"/> Care <input type="checkbox"/> Education <input type="checkbox"/> Researcher <input type="checkbox"/> Consultant or Advisor <input type="checkbox"/> Other Specify: _____					
In what health care modality do you exercise your job as a nurse? <input type="checkbox"/> Specialties Clinic. <input type="checkbox"/> Urgency/Emergency Area. <input type="checkbox"/> Health/Nursing Audit <input type="checkbox"/> General Hospital. <input type="checkbox"/> Specialty Hospital <input type="checkbox"/> Nursing Clinic/Office <input type="checkbox"/> Teaching - Higher Education <input type="checkbox"/> Teaching - Technical Education <input type="checkbox"/> Nursing Care Company. <input type="checkbox"/> Home Health Nursing. <input type="checkbox"/> Occupational Health Nursing <input type="checkbox"/> Health/Nursing Services Management <input type="checkbox"/> Industry/Commerce <input type="checkbox"/> Research <input type="checkbox"/> Polyclinics <input type="checkbox"/> Basic Health Network/Family Health Strategy <input type="checkbox"/> Walk-in Center <input type="checkbox"/> Traditional Health Unit. Others. Please specify: _____					
What is the nature of the institution where you work as a nurse? <input type="checkbox"/> Public <input type="checkbox"/> Private <input type="checkbox"/> Philanthropic <input type="checkbox"/> Mixed <input type="checkbox"/> Own. Other. Specify: _____					
Have you taken or are you attending another course? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, please indicate which one. _____					
DIMENSION 2: EVALUATION OF PROFESSIONAL TRAINING PROCESS					
Dear Graduate,					
Nursing courses respect the National Curriculum Guidelines and must train Nurses "with generalist, humanistic, critical and reflective training. Qualified professionals for the practice of Nursing based on scientific and intellectual rigor and guided by ethical principles. Able to know and intervene on the most prevalent health-disease problems/situations in the national epidemiological profile, with an emphasis on their region of operation, identifying the biopsychosocial dimensions of their determinants. Trained to act with a sense of social responsibility and commitment to citizenship as promoters of comprehensive health for human beings" (BRAZIL, 2001 p.1).					
Considering this prerogative, read and answer the following questionnaire, circle the number of the scale that best indicates your perception in relation to the item asked. Circle only one answer per item asked.					
Use the following CODES: TA- Totally Agree. A- Agree. N- Neutral (Neither agree nor disagree). D- Disagree. TD - Totally Disagree.					
1. The Undergraduate Nursing Course prepared you to perform professional activities inherent to your area of expertise in order to be able to:					
Competencies and skills	Likert Scale				
1.1 In the health-disease process, taking responsibility for the quality of nursing care/assistance at the different levels of health care, with actions for the promotion, prevention, protection and rehabilitation of health in the perspective of comprehensive care.	TA	A	N	D	TD
1.2 Respond to regional health specificities through strategically planned interventions at the levels of health promotion, prevention and rehabilitation.	TA	A	N	D	TD
1.3 Provide nursing care compatible with the different needs presented by the individual.	TA	A	N	D	TD
1.4 Provide nursing care compatible with the different needs presented by the family.	TA	A	N	D	TD
1.5 Provide nursing care compatible with the different needs presented by the population.	TA	A	N	D	TD
1.6 Act in programs of comprehensive care to Women's Health.	TA	A	N	D	TD
1.7 Act in programs of comprehensive care to Newborns.	TA	A	N	D	TD
1.8 Act in programs of comprehensive care to Children's Health.	TA	A	N	D	TD
1.9 Act in programs of comprehensive care to Adults' health.	TA	A	N	D	TD
1.10 Act in programs of comprehensive care to the Health of Older Adults.	TA	A	N	D	TD
1.11 Use theoretical and methodological references with emphasis on the Nursing Process.	TA	A	N	D	TD

Continue...

Continuation.

2. The Undergraduate Nursing Course prepared you to assist the human being in its entirety, and thus, be able to:					
<i>Competencies and skills</i>	<i>Likert Scale</i>				
2.1 Recognize health as a right and dignified conditions of life.	TA	A	N	D	TD
2.2 Act in order to guarantee comprehensive care, understood as a coordinated and continuous set of preventive and curative actions and services, individual and collective, required for each case at all levels of complexity of the system.	TA	A	N	D	TD
2.3 Act professionally, understanding human nature in its life cycle according to the biopsychosocial and spiritual characteristics and the care needs.	TA	A	N	D	TD
2.4 Diagnose health and nursing problems.	TA	A	N	D	TD
2.5 Make decisions and intervene on diagnosed health and nursing problems.	TA	A	N	D	TD
2.6 Promote healthy lifestyles, considering the needs of both users and those of the registered population, acting as an agent of social transformation.	TA	A	N	D	TD
2.7 Take care of your own physical and mental health and seek your wellbeing as a citizen and as a nurse.	TA	A	N	D	TD
3. The Undergraduate Nursing Course prepared you regarding ethical issues to the exercise of the profession in order to be able to:					
<i>Competencies and skills</i>	<i>Likert Scale</i>				
3.1 Respect the ethical, legal and humanistic principles of the profession.	TA	A	N	D	TD
3.2 Recognize yourself as the nursing team's work coordinator and responsible for the actions determined for members of the nursing team.	CT	A	N	D	TD
3.3 Assume the ethical, humanistic and social commitment to multidisciplinary health work.	TA	A	N	D	TD
3.4 Manage the nursing work process with Ethics and Bioethics principles.	TA	A	N	D	TD
3.5 Respect users' right of choice and self-determination in nursing care and health care.	TA	A	N	D	TD
3.6 Respect users' privacy, ensuring confidentiality and security of the information acquired in a professional situation.	TA	A	N	D	TD
4. The Undergraduate Nursing Course has prepared you technically and scientifically to be able to:					
<i>Competencies and skills</i>	<i>Likert Scale</i>				
4.1 Collect technical and scientific knowledge that gives quality to professional practice.	TA	A	N	D	TD
4.2 Plan and/or participate in research and/or other forms of knowledge production aimed at professional practice qualification.	TA	A	N	D	TD
4.3 Apply scientific principles to professional activities.	TA	A	N	D	TD
4.4 Apply the principles of Evidence-Based Practice in professional practice.	TA	A	N	D	TD
5. The Undergraduate Nursing Course encouraged the exercise of citizenship for you to be able to:					
<i>Competencies and skills</i>	<i>Likert Scale</i>				
5.1 Understand health policy in the context of social policies, recognizing the health problems and needs of the population.	TA	A	N	D	TD
5.2 Recognize the social role of nurses to work in health policy and planning activities.	TA	A	N	D	TD
5.3 Interfere in the dynamics of institutional work, recognizing oneself as an agent of this process with rights and duties.	TA	A	N	D	TD
5.4 Coordinate the nursing care process, considering the particular activities of the profession.	TA	A	N	D	TD
6. The Undergraduate Nursing Course prepared you to develop teaching activities and be able to:					
<i>Competencies and skills</i>	<i>Likert Scale</i>				
6.1 Act as a subject in the process of training human resources at higher and technical levels.	TA	A	N	D	TD
6.2 Plan, implement and participate in Continuing Education programs for nursing and health workers.	TA	A	N	D	TD
6.3 Plan, implement and evaluate education and health promotion programs, considering the specificity of users, families and population.	TA	A	N	D	TD
7. The Undergraduate Nursing Course prepared you to work as a team and be able to:					
<i>Competencies and skills</i>	<i>Likert Scale</i>				
7.1 Coordinate the activities of the nursing team.	TA	A	N	D	TD
7.2 Manage conflicts between members of the nursing and multidisciplinary team.	TA	A	N	D	TD
7.3 Plan and lead actions that promote the quality of teamwork.	TA	A	N	D	TD
8. The Undergraduate Nursing Course provided support so you could perform health management activities and be able to:					
<i>Competencies and skills</i>	<i>Likert Scale</i>				
8.1 Participate in the co-management of the health work process.	TA	A	N	D	TD
8.2 Discuss problems and intervention plans to seek collective solutions.	TA	A	N	D	TD
8.3 Establish cooperation with the nursing and multidisciplinary team.	TA	A	N	D	TD
8.4 Take responsibility for the quality of care provided to users, families and the population.	TA	A	N	D	TD
8.5 Conduct cost-effectiveness, cost-benefit and cost-utility analyzes of health products and procedures.	TA	A	N	D	TD
8.6 Match the professional characteristics of nursing team agents to the different demands of users.	TA	A	N	D	TD
8.7 Recognize work relationships and their influence on health.	TA	A	N	D	TD
DIMENSION 3 – EVALUATION OF PROFESSIONAL PERFORMANCE					
Dear Graduate, In order to answer DIMENSION 3, you will use a Semantic Differential Scale. Your answers should be recorded on a scale of 1 to 5, in which the closer to the number 1, the more negative your choice, while the more positive if you mark it closer to number 5. Number 3 represents the average.					
1. Describe how you have experienced the relationship between your academic education received in the Undergraduate Nursing Course, and the job market demands in your main job.	1	2	3	4	5
2. How do you evaluate the practical experiences (internships) that you had in the Nursing Undergraduate course in relation to the preparation for professional practice?	1	2	3	4	5
3. What is your perception in relation to the Evaluation process adopted in the Nursing Undergraduate course you attended?	1	2	3	4	5
4. As a nurse, what is your evaluation of your remuneration in Nursing?	1	2	3	4	5
5. How satisfied are you with the professional activities you perform in the field of Nursing?	1	2	3	4	5
6. How satisfied are you with being a nurse?	1	2	3	4	5
7. Describe the Strengths of the course?	Open question				
8. Describe the Weaknesses of the course?	Open question				