Helping Relationship Skills in nurses: the validation of a measurement instrument*

COMPETÊNCIAS RELACIONAIS DE AJUDA NOS ENFERMEIROS: VALIDAÇÃO DE UM INSTRUMENTO DE MEDIDA

COMPETENCIAS RELACIONALES DE AYUDA EN LOS ENFERMEROS: VALIDACIÓN DE UN INSTRUMENTO DE MEDIDA

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ABSTRACT

Considering the importance of assessing nurses' helping relationship skills, it was necessary to use reliable and context-adapted instruments. Thus, the objective of this study was to assess the psychometric properties of the Helping Relationship Skills Inventory (Inventário de Competências Relacionais de Ajuda, ICRA), by conducting reliability and validity studies to increase the level of confidence or accuracy of the data obtained using this instrument. This quantitative study was conducted on a sample of 690 nurses who worked in six hospitals and eight health centres in Portugal. The results indicate a multidimensional structure of helping relationship skills, divided into four different dimensions (generic, empathetic, communication and contact skills) with a positive correlation between them. Cronbach's alpha for each dimension was higher than .79, showing a good internal consistency of the items within each factor.

DESCRIPTORS

Nursing care
Humanization of assistance
Helping behaviour
Nurse-patient relationships
Validation studies

RESUMO

Considerando a importância da avaliação das competências relacionais de ajuda nos enfermeiros, torna-se necessário utilizar instrumentos fiáveis e adaptados aos contextos. Assim, o objectivo deste estudo foi avaliar as propriedades psicométricas do Inventário de Competências Relacionais de Ajuda (ICRA), através da realização de estudos de fiabilidade e validade, no sentido de aumentar o grau de confiança ou de exatidão que podemos ter na informação obtida por meio da utilização deste instrumento. O estudo quantitativo foi realizado numa amostra de 690 enfermeiros, que exerciam funções em seis hospitais e oito centros de saúde em Portugal. Os resultados obtidos indicam a existência de uma estrutura multidimensional das competências relacionais de ajuda diferenciando-se em quatro dimensões (competências genéricas, empáticas, de comunicação e de contacto), com correlações positivas entre si. O valor de Alpha Cronbach obtido por dimensão foi superior a .79, revelador de uma boa consistência interna dos itens por fator.

DESCRITORES

Cuidados de enfermagem
Humanização da assistência
Comportamento de ajuda
Relações enfermeiro-paciente
Estudos de validação.

RESUMEN

Considerando la importancia de la evaluación de las competencias relacionales de ayuda en los enfermeros, se hace necesario utilizar instrumentos fiables y adaptados a los contextos. Este estudio objetivó evaluar las propiedades psicométricas del Inventario de Competencias Relacionales de Ayuda (ICRA), mediante realización de estudios de fiabilidad y validez en sentido de aumentar el grado de confianza o exactitud de la información obtenida a través del uso del instrumento. El estudio cualitativo se realizó con muestra de 690 enfermeros con funciones en 6 Hospitales y 8 Centros de Salud en Portugal. Los resultados obtenidos indican existencia de una estructura multidimensional de competencias relacionales de ayuda, diferenciándose en cuatro dimensiones (competencias genéricas, empáticas, de comunicación, de contacto), con correlaciones positivas entre sí. El valor de Alpha de Cronbach obtenido por dimensión fue superior a .79, lo que revela buena consistencia interna de los ítems por factor.

DESCRIPTORES

Atención de enfermería
Humanización de la atención
Conducta de ayuda
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INTRODUCTION

The nursing theories assume caring as the focus of their action[1], but there is no caring if an efficient helping relationship is not established[2]. Thus, establishing a helping relationship, as an autonomous and unquestionable intervention in nursing care, develops a central role in the response to the individual needs of each person, positively competing for the provision of more humanized and efficient care[3-4].

However, nursing practice, due to the technical-scientific evolution and also influenced by the positivist paradigm, has not always been directed to the development of fundamental values related to the person, often resulting in a dehumanized professional practice[5].

In this context, a previous study[6] refers that, in order to provide care to people and respond to the stimuli with abilities in the human contact, it is necessary to have patience, persistence, constant self-observation and continuous training.

Thus, as we aim to develop knowledge and abilities to improve nursing techniques for physical care, there should be also concern towards developing the helping relationship skills. These skills include interaction abilities such as contact, touch, look, distances, listening, communication, empathy, and respect[7].

Nursing literature evidences the association between the interactions based on helping relationships and the results obtained in the cared person. It becomes, therefore, fundamental to develop studies to assess the interactions based on the helping relationships in order to document the *evidence of the results and allow for developing methodologies of care oriented to the person*[8].

establishing a helping relationship, as an autonomous and unquestionable intervention in nursing care, develops a central role in the response to the individual needs of each person, positively competing for the provision of more humanized and efficient care.

The concern with the investigation in this area is obvious in studies developed by several authors[9-11]. Confirming this tendency, an author[9] developed a study about helping relationship skills in nursing undergraduate students and nurses who attended the Complementary Nursing Course. In this study, developed with a sample of 314 subjects, the author built and validated an instrument aimed at assessing helping relationship skills (Helping Relationship Skills Inventory – ICRA)[9]. This inventory, comprising 51 items, is similar to a Likert scale from 1 to 7, in which the higher the scores, the higher the number of helping relationship skills the subjects have[9].

According to the researchers[7], helping relationship skills are organized as a multidimensional construct, with differences in four dimensions: generic skills, empathetic skills, communication skills, and contact skills. Therefore, for these authors, the generic skills, which account for 16.83% of the total variance, *reveal the way nurses understand others, their work and themselves*. The empathetic skills, which respond for 12.016% of the total variance, are understood by these authors as *the way the nurses enter the world of the health care user, recognize them as unique and accept their views*, whereas communication skills, which account for 9.620% of the total variance, refer to *important resources in communication such as listening, silence, reformulation, and synthesis*. Contact skills, which respond for 8.465% of the total variance, refer to the *position, attitude and way nurses behave towards health care users*. It was evidenced that these dimensions present positive correlations among themselves and somehow correlate to the dimensions of social and interpersonal skills.

In a study developed with nursing undergraduate students, the dimension that, in global terms, obtained the best results was the dimension of generic skills and the worst results were found in the contact skills, which agrees with the obtained results[10].

Other study[11], showed that the nurses obtained a higher value in the dimension of generic skills and a lower value in the contact skills.

By analyzing the relation existing between the context in which the nurses work and the level of development of the helping relationship skills, the author concluded that the statistic differences found were only significant for the communication dimension[9]. The mean values of the helping relationship skills were higher in all the dimensions, except for the dimension of empathetic skills for nurses who develop functions in the community health area.

In the study developed with nursing undergraduate students, using the ICRA, it was evidenced that the interviews performed during the clinical teaching, in which the reflection about "helping relationships" took place, influenced the development of helping relationship skills[10].

The use of the ICRA in nurses who were providing care to terminal patients showed the existence of a statistically significant relation between the helping relationship skills and the variables *importance attributed to the continuous education about helping relationship* and *satisfaction with life*[11]. This study did not find a statistically significant relation between the helping relationship skills and the variables age, gender, time of professional experience and professional category[11].

The same researcher[11] concluded that nurses with a higher professional category presented higher mean values in all the dimensions of the helping relationship skills. In agreement with these results, the study[9] concluded that the nurses in the category specialist/head nurse are

the ones who present, in general terms, a higher level of helping relationship skills, and the statistically significant differences stand in the communication skills.

STUDY EXPLANATION

Considering the context exposed herein, the importance of developing helping relationship skills in nursing practice seems consensual. Therefore, the existence of measurement instruments for these skills is fundamental in order to be able to understand the factors that interfere in their development.

Therefor, it is necessary and vital to replicate studies using assessment instruments that are theoretically updated and appropriate for the context to be studied, and thus allow for learning its psychometric properties in order to verify its highest or lowest suitability.

Similar to the study regarding the construction and validation of the ICRA, the used sample comprehended nurses who were in an educational process (Complementary Nursing Course), i.e., different from the universe of nurses, hence the need to assess the validity and reliability of the inventory in the new universe[12]. Considering that the subjects referred to this inventory as being too long, the authors proposed to develop the present study.

OBJECTIVE

The objective of the present study was to assess the psychometric properties of the ICRA through the development of validated and reliable studies in order to increase the level of confidence or accuracy that may be found in the data obtained through the use of the measurement instrument.

METHOD

In the initial stage, the authors of the present study requested authorization to the author of the ICRA and the health institutions where the study would be developed.

The study population comprehended nurses who worked in the health units at health institutions (hospitals and health centres) in Portugal.

After sending the authorization requests to these institutions, the authors received a positive answer from eight health centres and six public hospitals. Among these institutions, the authors selected units which had a head nurse managing the nursing staff. At these units, nurses that had been in contact with the current head nurse for less than a year were excluded.

After applying these criteria, the sample was composed of eight health centres and 49 health units (services) at hospital level. Thus, 1508 questionnaires were sent to these units and 690 nurses answered them, corresponding to a response rate of 45.75%. All the nurses were free to participate in the study or not.

Data collection was performed through the used of the Helping Relationship Skills Inventory (ICRA), presented as a Likert scale from 1 to 7 (varying between completely agreed and completely disagreed), which included four dimensions, with the designation of generic, empathetic, communication and contact skills. In this inventory, the higher the score obtained, the higher the level of helping relationship skills perceived by the nurses.

RESULTS

In order to perform the factor analysis, it was first necessary to assess the value of the measurement Kaiser-Meyer-Olkin (KMO), which in this study presented a value of .927, considered *excellent* for a factor analysis[12].

The next stage was the determination of the factor analysis for the study of the main components, followed by the varimax rotation to learn the independent and subjacent dimensions. The rotation was forced to four factors, according to the results of the inventory's author. The items were included in the subscales corresponding to the factors in which the highest values of saturation were obtained.

For the selection of the number of factors, some recommended criteria[13] were followed: proper or specific values (*eigenvalues* > 1), exclusion of factor saturations under 0.3 and the application of the discontinuity principle. Trough an overall analysis, it was verified that items 10, 16, 39, 41 and 26 abandon their theoretical dimension. The remaining 46 items saturate in the theoretical dimension to which they belong.

Items 39 and 41 abandon their theoretical dimension (generic skills), saturating in the dimension of communication skills. Items 10 and 16 abandon their theoretical dimension (contact skills), saturating in the dimension of generic skills. The item 26 abandons its theoretical dimension, saturating in the dimension of communication skills.

In face of the obtained results, after removing the 5 items that did not saturate conveniently in the theoretical dimension, a second analysis was performed to the 46 items. This analysis in the main components with varimax orthogonal rotation forced to four factors revealed four factors theoretically coherent to those found in the original inventory.

In this analysis and based on the referred criteria, items 20 and 23 were eliminated because, despite saturating in the theoretical dimension to which they belong (generic skills) (.402 and .393), they present higher values in the dimension of empathetic skills (.459 and .395).

After the elimination of the items 10, 16, 20, 23, 26, 39 and 41, the final version of the inventory was reduced to 44 items, according to Table 1.

Table 1 – Dimensionality of the ICRA – Final Version – Portugal – 2010

Item No.	Items	Factors (saturation)			
		1	2	3	4
G 3	The emotional and intellectual sensitiveness that I have helps me to understand and to be able to intervene in the course of a helping relationship.	.714			
G 7	In the course of the nursing interventions, I call on the collaboration of the health care user.	.699			
G 5	As a nurse, my help to the other is a dynamic process that evolves in time and space.	.651			
G 4	Recognizing my physical, social and spiritual characteristics helps me learn my limitations.	.609			
G 25	In the communication process I use non-verbal expressions, which can be richer than the verbal language.	.598		.349	
G 2	The quality of the work I execute goes through the ability I have to communicate to the other.	.542			
G 6	At the care planning, I do it according to the priorities fixed once they are assessed and validated with the person.	.539			
G 9	The touch, for me, is covered with spontaneity, intuition and knowledge.	.539			
G 22	In my practice, I develop the ability to understand the meaning and value of the data perceived and observed.	.528		.344	
G 27	In the listening situation, I adopt an open body position.	.510		.372	
G 24	I have the ability to detect when the health care user wants to draw my attention to secondary aspects.	.498			
G 8	The touch allows me to perceive the level of satisfaction or indisposition of the health care user.	.452			.305
G 1	The quality of the work I execute depends of the knowledge I have about myself.	.433			
G 19	When I get in touch with someone, the first sensory organ I use is that of sight.	.361			
G 21	I recognize my ability to use the sense of sight despite of the discomforts that may be associated to it.	.351			
E 45	When using specificity, I make the health care user be accurate in communication.		.723		
E 44	The use of specificity makes the health care user recognize his emotions accurately, objectively and concretely.		.700		
E 46	The immediacy aims to help the health care user recognize the information that makes the communication to his organism.		.675		
E 43	By communicating authentically, I am serving as a "model" to the health care user.		.639		
E 47	When I am with the health care user, past events must only be considered if they affect the client at this moment.		.574		
E 48	At the confrontatiọn, I give importance to the contradictions of the behaviour and speech of the health care user.		.568		
E 50	I identify clearly the objectives to achieve so that, at the moment of confrontation, I do not mix them with my own objectives.		.501		
E 40	I share with the health care user some of my characteristics as an empathy facilitating attitude.		.497		
E 42	I consider authenticity as one of the characteristics present in an emotionally sane person.		.491		
E 51	I believe that the confrontation should not be imposed to the user, but presented as an attempt to help him solve his problems.		.478		
E 49	I only use confrontation when I am comfortable with the health care user, so that he feels I am his ally.		.471		.325
E 37	In order to avoid confusion in the process of communication I only use feedback to describe a type of behaviour.		.469		.387
E 38	In the empathetic comprehension, I try to apprehend the obtained data as if I were the health care user.		.448	.311	
C 32	I use the reformulation to facilitate the access of the person who needs help to his own emotions.			.680	
C 31	I use the reproduction of words in the course of helping to paraphrase, summarize or evidence the communication.			.676	
C 34	The use of synthesis allows me to highlight what is essential in the content communicated.	.339		.657	
C 30	I typically live the silence so that it allows emotions to emerge, facilitating the approach to the cared person.			.643	
C 33	I turn to the elucidation to help the health care user perceive his experiences in the whole.		.331	.623	
C 35	The use of synthesis allows me to verify whether I retained the essential part of the communication, inviting the person who needs help to complete the content if necessary.	.378		.610	
C 36	The use of synthesis allows the health care user to go back to those moments in which the content was not clear and apparently meaningless.	.323		.609	
C 29	In the course of the helping relationship, I use silence as a means of communication with the health care user.			.569	
C 28	In order to make the listening efficient in the help relationship process, I look at the face of the health care user without fixing on his eyes.			.427	
Con14	I use the social distance (120-210 cm) when I have difficulty to establish a close relation to the care person.				.762
Con13	I use especially the personal distance (45-125 cm) when I intend to make an observation to the health care user.				.724
Con12	I frequently use the distance of intimate character (45 cm) when I help the user in routine activities.				.659
Con17	The distance I adopt with the health care user reveals the importance he has to me.				.635
Con18	The physical position I adopt in the contact with the user may reveal the importance he has to me.				.609
Con15	When I use the public distance (360-750 cm), the exchanges are only possible if they are out loud, thus the non-verbal communication is lost.				.529
Con11	At the communication to the health care user, I use the physical distance kept as a means of communication.	.304			.490

After the referred changes, the ICRA was composed of 44 items that were distributed according to the following factors: the first factor (generic skills – G) is composed of 15 items and explains 12.935% of the total variance; the second factor (empathetic skills – E) is composed of 13 items and explains 11.862% of the variance; the third factor (communication skills – C) comprehends nine items with 10.926% of an explained variance and, at last, the fourth factor (contact skills – Con), composed of seven items, presents an explained variance of 8.560%. For the whole inventory, the total variance explained is 44.283%. The authors verified that the Cronbach's alpha obtained in each dimension was higher than 0.795, revealing a good internal consistency of the items within each factor.

Table 2 – Dimensions, items, eigenvalue, explained variance after the forced rotation and Cronbach's alpha by dimension – Final Version – Portugal – 2010

Dimensions	Items	Eigenvalue	% variance	% accumulated variance	α
Generic Skills	1, 2, 3, 4, 5, 6, 7, 8, 9, 19, 21, 22, 24, 25, 27	12.252	12.935	12.935	.870
Empathetic Skills	37, 38, 40, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51	3.075	11.862	24.796	.876
Communication Skills	28, 29, 30, 31, 32, 33, 34, 35, 36	2.340	10.926	35.722	.869
Contact Skills	11, 12, 13, 14, 15, 17, 18	1.817	8.560	44.283	.795

In order to verify whether each of the half items of the final ICRA is as consistent to measure the construct as the other half, the authors determined the correlation *even/odd*. Thus, the α obtained in the first part was 0.882 and in the second part was 0.889. The value obtained in the Spearman Brown correlation was 0.840 (Table 3), which indicates the expected consistency when the instrument is applied to other samples.

Table 3 – Statistics referring to the split-half method– Portugal – 2010

	Mean	Standard Deviation	α
Part 1	115.31	17.334	.882
Part 2	126.57	14.241	.889

Split-half = .830
Spearman Brown = .840

The validity of the items was assessed through the correlation inter-item and between the items and dimension to which they belong with and without overlap.

As it may be observed in Tables 4 and 5, the correlation values are moderate and strong. Most of the items present a stronger relation to the factor to which they theoretically belong, being guaranteed of homogeneity of contents of the items in each factor. The correlations of each item to the dimension to which they theoretically belong is higher than 0.40, so it is possible to state that the set of items defined a construct[14].

From the analysis of the results of the 2-tailed correlation between the items and the factors, it was verified that all the items presented stronger correlations to the factor to which they theoretically belong than to other factor.

The authors verified that the correlations of the item with the factor without overlap present moderate values, most of them being higher than 0.40. In most of them, the correlation values without overlap of the item are higher with the dimension to which they belong than with other dimension.

As it may be observed in Table 4, the correlations are globally higher between the items and the dimension to which they theoretically belong than with other dimensions, suggesting that the items of each dimension have enough proximity to constitute a dimension (discriminating convergent validity), being an indication of validity of the construct.

Another contribution to the study of the instrument validation was the development of a matrix of correlation of Pearson between the several factors, according to Table 5. The authors found moderate correlations whose values vary between 0.356 and 0.641, and the statistical differences found are fairly significant, thus, indicating that the factors are sensitive to different aspects of the same construct.

Table 4 – 2-tailed correlations r of Person item/factors – Portugal – 2010

Item No.	Without overlap of the item	Communication Skills - C	Contact Skills - Con	Empathetic Skills - E	Generic Skills - G
C 28	.569	.554	.173	.392	.311
C 29	.419	.676	.273	.401	.330
C 30	.466	.729	.266	.451	.378
C 32	.522	.752	.266	.466	.478
C 33	.571	.717	.221	.519	.431
C 34	.548	.736	.230	.461	.518
C 35	.551	.735	.252	.482	.549
C 31	.583	.748	.278	.448	.467
C 36	.565	.713	.244	.462	.497
Con 15	.379	.218	.608	.305	.286
Con 11	.509	.386	.578	.376	.440
Con 12	.486	.337	.707	.366	.349
Con 13	.434	.301	.747	.321	.238
Con 14	.381	.242	.732	.268	.174
Con 17	.360	.157	.663	.303	.252
Con 18	.385	.201	.657	.279	.274
E 37	.386	.294	.363	.540	.143
E 38	.562	.514	.309	.642	.454
E 4	.501	.400	.312	.620	.379
E 42	.483	.427	.222	.593	.431
E 43	.534	.445	.297	.695	.386
E 44	.585	.479	.282	.703	.428
E 45	.589	.501	.279	.726	.413
E 46	.580	.445	.315	.680	.385
E 47	.376	.263	.230	.583	.247
E 48	.512	.414	.215	.651	.402
E 49	.494	.347	.393	.627	.342
E 51	.545	.502	.245	.634	.467
E 50	.556	.482	.232	.660	.471
G 1	.391	.314	.260	.301	.545
G 2	.379	.358	.193	.291	.594
G 19	.379	.358	.216	.335	.524
G 21	.488	.370	.363	.398	.562
G 22	.527	.457	.205	.430	.632
G 24	.480	.385	.226	.399	.578
G 25	.510	.464	.226	.361	.650
G 27	.529	.510	.212	.413	.614
G 3	.405	.419	.108	.342	.660
G 4	.427	.400	.232	.329	.604
G 5	.440	.407	.191	.335	.633
G 6	.416	.337	.218	.339	.591
G 7	.455	.409	.181	.378	.657
G 8	.498	.380	.359	.407	.592
G 9	.523	.425	.314	.423	.655

Table 5 – Correlation of Pearson between the several factors of the ICRA - Final version – Portugal – 2010

Factors	Communication Skills	Contact Skills	Empathetic Skills	Generic Skills
Communication Skills	1	.356**	.641**	.622**
Contact Skills		1	.454**	.396**
Empathetic Skills			1	.590**
Generic Skills				1

** Correlation is significant at the 0.01 level (2-tailed).

DISCUSSION

In order to be useful, a measurement instrument must be validated and reliable. The validity refers to the power of the instrument to measure what needs to be measured[15]. Therefore, in order to assess the psychometric qualities of a measurement instrument, it is necessary to develop studies of validation and reliability to indicate the level of generalization that the results may reach[16].

Studies of reliability indicate the level of confidence or accuracy of the obtained information. These studies assess the temporal stability and internal consistency or homogeneity of the items[12]. The temporal stability, or test-retest reliability, was not performed in this study since the inventory is an instrument to measure a state that may be modified, which does not make it relevant as a measure of confidence[17].

The internal consistency *corresponds to the homogeneity of the propositions of a measurement instrument*[16]. For this author, the more correlated the propositions, the higher the internal consistency of the instrument. Therefore, in order to calculate the internal consistency, the authors used the Cronbach's alpha coefficient, as it is the most used technique to assess the internal consistency of an instrument when there are several options of answer with different scores like in Likert scale[16].

Validation studies include three main aspects: content validity, theoretical validity and practical validity. *The questionnaire has validation of appropriate content when the items form a representative sample of all the items available to measure the aspects of the components*[12]. Furthermore, in the perspective of these authors, there are three types of theoretical validity: the convergent validity, the discriminating validity and the factorial validity.

The factorial validity may be assessed through the statistical technique of *factor analysis*.

> This technique analyzes, essentially, the correlations between several variables to find a group of *factors* that, theoretically, represent what the variables analyzed have in common[12].

Some authors[13] add that this factor analysis is a group of techniques whose objective is to reduce a high number of variables to a less numerous group of factors that aim, as much as possible, to retain the nature of the initial variables. These authors consider it as a multivariate procedure that, despite having a high level of subjectivity, constitutes a powerful tool with great applicability[13]. For others, the advantage of this technique stands on the fact that it presents more sophisticated measures than the discriminating validity and the convergent validity[12].

The factor analysis develops complex interrelations with the referred variables and identifies those to which they intercorrelate. Therefore, it is possible to obtain a structure that is denominated of factors. There are several methods to perform the factor analysis, but the most used method is nominated *method of the main components*. As a result of this procedure, the factor matrix is obtained[13].

This matrix, thereby determined, shares the maximum of variances, making it difficult to read and interpret it, being necessary to perform the rotation of factors. Through this process of orthogonal rotation, the variables (items) associated to each factor are those that more strongly correlate to each one of them. However, in order to assess the factorial validity of questionnaire it is necessary to follow some recommendations, such as the size of the sample, since, despite existing differences of opinion regarding this matter in the literature, researchers[18] consider that the *N* of the sample must be at least five times the number of items in the scale and never lower than 100 subjects by analysis. Since the sample of this study comprehends 690 subjects and considering the number of items (51), the authors believe there are not problems of validation.

Therefore, the Helping Relationship Skills Inventory (ICRA) stands as an instrument of self-response, constituted by 44 items aimed to assess the helping relationship skills of a nurse.

In the sample composed of 690 nurses who worked for its validation, the study obtained a Spearman-Brown value of 0.840 and the values of Cronbach's alpha obtained in each dimension were higher than 0.826, revealing a good internal consistency in each factor. The study developed by the author of the inventory, with a sample of 314 nursing undergraduate students, obtained a Spearman-Brown value of 0.879 and a Cronbach's alpha index of 0.747.

The factor analysis, with varimax orthogonal rotation, revealed the existence of four factors with latent roots higher than 1, which explains 44.283% of the total variance. The first factor (generic skills) is the most significant and explains 12.935% of the total variance. The second factor (empathetic skills) explains 11.862% of the variance, the third factor (communication skills) has 10.926% of explained variance and, at last, the fourth factor (contact skills) presents an explained variance of 8.560%.

The study developed by the inventory's author also revealed the existence of four factors with latent roots higher than 1, which explains 46.939% of the total variance. The factors of generic and communication skills were the most significant, with variances of 16.838% and 12.016%.

It was verified that the empiric factorial structure of this study is adapted to the initial conceptual organization and is also in agreement with the data obtained by the inventory's author[9] and with the conceptual definitions existing in its conception[19-21].

These facts indicate that there is conceptual equivalence between the two versions, in other words, both measure the same phenomena[22].

In the studies[9-11], using this inventory, the values found for the Cronbach's alpha coefficient for both dimensions of the ICRA were, respectively, .81, .74 and .80, which agrees to the value .80 found in this study.

CONCLUSION

The authors of this study consider that the analysis of reliability and validation of the ICRA are fundamental aspects, since the value of the results obtained in studies developed with this inventory and the conclusions taken from them are going to depend on their conceptual and psychometric qualities.

The conceptual validity of the construct counted on the fact that the factorial structure of the items, resulting from the analysis of the main components and with varimax rotation, almost matched the multidimensional organization of the items, which agrees with the results obtained by the inventory's author.

The argument in favor of the validation of the ICRA has to do with the fact that it presents statistically significant and moderate correlations between the dimensions, not being redundant, which may indicate they assess different aspects of the same construct.

The analysis developed allows to validate this inventory and to consider that it has psychometric qualities appropriate to the assessment of helping relationship skills in nurses in Portugal.

New contributions, though, are expected from other studies to improve its reliability and validity in order to increase the level of confidence or accuracy obtained in the information collected through the use of this measurement instrument.

REFERENCES

1. Lira PS, Silva MJP. O cuidado como uma Lei da Natureza: uma percepção integral do cuidar. Rev Esc Enferm USP. 2008;42(2):363-70.
2. Chalifour J. A intervenção terapêutica: estratégias de intervenção. Loures: Lusociência; 2009.
3. Cadah L. Avaliação da qualidade da assistência da enfermagem sob a ótica da satisfação dos pacientes [dissertação]. São Paulo: Escola de Enfermagem, Universidade de São Paulo; 2000.
4. Hesbeen W. Trabalho de fim de curso, trabalho de humanitude: emergir como o autor do seu próprio pensamento. Loures: Lusociência; 2009.
5. Queirós AA, Sílvia LC, Santos EM. Educação em enfermagem. Coimbra: Quarteto; 2000.
6. Silva MJP. Comunicação tem remédio: a comunicação nas relações interpessoais em saúde. São Paulo: Loyola; 2006.
7. Ferreira MCF, Tavares J, Duarte JT. Competências relacionais de ajuda nos estudantes de enfermagem. Referência. 2006;2(1):51-62.
8. Queiroz, AA, Melo RCCP. Importância da investigação sobre relação de ajuda. Invest Enferm. 2007;15(1):38-41.
9. Ferreira MMC. Relação de ajuda na formação dos enfermeiros [tese]. Aveiro: Universidade de Aveiro; 2004.
10. Melo RCCP, Raposo NV. Desenvolvimento de competências relacionais de ajuda: estudo com estudantes de enfermagem. Rev Portuguesa Pedag Fac Psicol Ciênc Educ Univ (Coimbra). 2007;41(1):189-210.
11. Simões RMP. Competências de relação de ajuda no desempenho dos cuidados de enfermagem [dissertação]. Porto: Instituto de Ciências Biomédicas Abel Salazar, Universidade do Porto; 2008.
12. Hill MM, Hill A. Investigação por questionário. Lisboa: Edições Silabo; 2008.
13. Polit DF, Beck CT, Hungler BP. Fundamentos de pesquisa em enfermagem: métodos, avaliação e utilização. 5ª ed. Porto Alegre: Artmed; 2004.
14. Ribeiro JL. Avaliação das intenções comportamentais relacionadas com a promoção e protecção da saúde e com a prevenção das doenças. Análise Psicol. 2004;27(2):547-58.
15. Cruz DALM, Fontes CMB, Braga CG, Volpato MP, Azevedo SL. Adaptação para a língua portuguesa e validação do Lunney Scoring Method for Rating Acuracy of Diagnoses. Rev Esc Enferm USP. 2007;41(1):127-34.
16. Fortin MF. O processo de investigação: da concepção à realização. Loures: Lusociência. 1999.
17. Vaz Serra A. Inventário de Avaliação Clínica da Depressão - IACLIDE. Coimbra: Edição Psiquiatria Clínica; 1994.
18. Brymen A, Cramer D. Análise de dados em ciências sociais: introdução às técnicas utilizando o SPSS. Oeiras: Celta; 1992.
19. Carkhuff RR. L'art d'aimer. Montreal: Editions de l'Homme; 1988.
20. Lazure H. Viver a relação de ajuda: abordagem teórica e prática de um critério de competência da enfermeira. Lisboa: Lusodidacta; 1994.
21. Rogers CR. Tornar-se pessoa. São Paulo: Martins Fontes; 2009.
22. Pimenta CAM, Cruz DALM. Crenças em dor crónica: validação do Inventário de Atitudes frente à Dor para a língua portuguesa. Rev Esc Enferm USP. 2006;40(3):365-73.

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