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Este trabajo es reproducido tal y como lo aportaron los autores al tiempo de presentarlo como COMUNICACIÓN DIGITAL en "CUIDADOS Y TECNOLOGÍA: UNA RELACIÓN NECESARIA" I Congreso Virtual, IX Reunión Internacional de Enfermería Basada en la Evidencia, reunión celebrada del 21 al 22 de noviembre de 2013 en Granada, España. En su versión definitiva, es posible que este trabajo pueda aparecer publicado en ésta u otra revista científica.

Título **Validation of the Portuguese Version of the Attitudes to Evidence-Based Practice Questionnaire: An exploratory approach**

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ABSTRACT

Background: The lack of cultural and linguistically sensitive instruments prevents the opportunity of assessing attitudes and barriers of health care staff towards evidence-based practice. The aim of this communication is to report the validation process in the Portuguese context of the Attitudes to Evidence Based Practice Questionnaire.

Methods: We developed a cross-sectional, descriptive psychometric validation study. For cultural adaptation, a bidirectional translation was carried out, accordingly to common standards. To determine the psychometric properties of the questionnaire we conducted a Principal Component Analysis with Varimax orthogonal rotation. The reliability of the questionnaire was assessed by Cronbach's alpha.

Results: We obtained 244 valid questionnaires with a 64.2% response rate. Data collected explained that the questionnaire showed an acceptable internal consistency ($\alpha = .63$). Subjected the questionnaire to a principal components analysis using Varimax method, we obtained eight dimensions that explain 56.66% of total variance.

Conclusions: The exploratory factorial analysis conducted demonstrated valid empiric evidence and the questionnaire could be used in our context.

TEXTO DE LA COMUNICACIÓN

Introduction

The evidence-based practice (EBP) can be understood as "the process by which nurses make clinical decisions using the best scientific evidence, their clinical expertise and patient preferences in the context of available resources".¹ Various studies have demonstrated a wide range of attitudes and barriers in relation to EBP by health professionals in general and nurses in particular.²⁻⁸

In fact the barriers for the evidence-based nursing practice especially regarding to their effective application, have been widely outlined in the literature. In a systematic review⁹ were identified 630 articles published between 1972 and 2001 concerning the use of evidence obtained from research on nursing practice. The authors⁹ concluded that, despite the growing interest in the barriers and facilitators to the use of research, the study area was relatively undeveloped, justifying further development of conceptual work and support.

Other authors⁴ prepared a review of the most frequent barriers identified in 15 different studies, developed in different countries regions and continents regarding the period between 1991 and 2006. Among these barriers were perceived as the most referenced the following: "i) do not have time to investigate, ii) inability to assess the quality of studies; iii) physicians do not cooperate iv) does not have the authority to implement changes, v) inability to investigate vi) difficulty understanding statistical analyzes vii) not have time to read the scientific literature; viii) lack of compilation of literature ix) difficulties in implementing results from the investigation."

One of the assessment instruments that supported most of these studies was proposed in 1991 by Funk SG, Champagne MT, Wiese RA, Tornquist EM¹⁰ through the Barriers to Research Utilization Scale (BARRIERS). Despite its widespread use in various countries and continents and the production of multiple studies using the BARRIERS scale, only in 2011 was developed its validation for Portuguese¹¹. Despite it was felt necessary to evaluate in a more comprehensive approach the attitudes of health professionals in general and particularly nurses' face EBP. Recently, Pereira RP, Cardoso MJ, Martins MA¹² evaluated the attitudes and barriers to evidence-based nursing practice in a community context, trough an exploratory and descriptive cross-sectional study, which took place in local health unit in northern Portugal, using a test version of the "Attitudes to Evidence Based Practice Questionnaire".¹³ Pursuing this project and considering the added value brought by the use of this instrument, we moved towards the validation of this instrument for the Portuguese language as a way to provide an additional tool to contribute to the implementation and dissemination of EBP particularly among nurses.

Methodology

The Attitudes to Evidence Based Practice Questionnaire is an instrument whose objective is to assess the attitudes and barriers encountered by nurses face the EBP and included 26 items assessed on an ordinal scale from 1 to 5. Considering the lack of a validated Portuguese version, we decided to translate and validate this instrument. After obtaining from the authors of the original questionnaire formal authorization for the

validation into Portuguese the translation from English into Portuguese was performed with recourse to two translators. In the translation process were clarified the semantic equivalence of some terms. We appealed to a panel of experts to examine the conceptual equivalence of the items and achieve an outcome by consensus. Retroversion had been accomplished by an independent translator. Finally, an analysis was made to the instrument with respect to the format, appearance, visual understanding of items and receptivity of content.

To determine the psychometric properties of the questionnaire we carry out a Principal Component Analysis with Varimax orthogonal rotation. Followed the criteria set by Polit DF, Beck, CT, Hungler BP¹⁴ for the selection of factors: eigenvalues or specific > 1 and excluding factorial loads lower than 0.30. The reliability of the questionnaire was assessed by Cronbach's alpha. The missing values in the questionnaire were calculated by the overall average remaining items of their questionnaire.

Results / Discussion

The study was developed in a local health unit in the north of Portugal involving a population of nurses exercising clinical practice in different contexts. Were guaranteed all authorizations involved in the study developing (ethics committee and the administration board). Through a convenience sample was distributed 380 questionnaires which have been returned 244. Thus, the response rate was reported at 64.2%. The participants (n=244) volunteer accepted to participated in the study. Answering the questionnaire was assumed informed consent. The nurses sample (Table 1) was composed essentially by females (85.8%), aged 31-40 years (45.7%), 21-30 years (32.4%), and followed by 41-50 years (17.4%). In terms of professional category the sample was classified as graduate nurses (36.4%), generalists (33.2%), specialists (26.3%) and head nurses (2.8%). In terms of the employment relationship, we find that 66% of the nurses held a contract for an indefinite period.

Table 1. Characteristics of the respondents to the questionnaires

	Male		Female		Total	
	n	%	n	%	n	%
Total	32	13	212	85,8	244	100
Age	n=32		n=212		N=244	
21-30	14	43,8	65	30,7	79	32,4
31-40	16	50,0	97	45,8	113	46,3
41-50	2	6,3	41	19,3	43	17,6
51-60	0	0	6	2,8	8	3,3
Professional category	n=32		n=212		N=244	
Generalist Nurse	13	40,6	68	32,1	81	33,2
Graduate Nurse	15	46,9	73	34,4	88	36,1
Specialist Nurse	3	9,4	62	29,2	65	26,6
Head Nurse	0	0	7	3,3	7	2,9
Other	0	0	1	,5	1	,4
Academic qualifications	n=32		n=212		N=244	
Bachelor (3 years)	1	3,1	14	6,6	15	6,1

Degree (4 or 5 Years)	29	90,6	168	79,2	197	80,7
Master	2	6,3	26	12,3	28	11,5
PhD	0	0	2	,9	2	,8
Nursing specialization						
	N=32		N=212		N=244	
Without specialization	22	68,8	104	49,1	126	51,6
Community Health / Public Health	4	12,5	34	16,0	38	15,6
Medical & Surgical	2	6,3	26	12,3	28	11,5
Physical rehabilitation	2	6,3	11	5,2	13	5,3
Child health and pediatrics	1	3,1	25	11,8	26	10,7
Midwives	0	0	9	4,2	9	3,8
Mental Health and psychiatry	1	3,1	3	1,4	4	1,6
Frequented post-graduate formation						
	N=32		N=212		N=244	
Yes	8	25,0	28	13,2	36	14,8
No	24	11,4	184	86,8	208	85,2

Of the participants 80.7% completed an undergraduate program in nursing with a duration of 4 academic years full-time, 12.3% had academic postgraduate (Masters or PhD) and 15% were attending a postgraduate program in several areas of health sciences. Approximately 48.4% held a specialization in nursing and in this case, there was a predominance of nursing community, with 15.6%, followed by areas of specialization in medical-surgical nursing and pediatrics and child health with 11.5% and 10.7% respectively. We note that only 26.3% of the nurses have been involved in different research projects.

Data collected explained that the questionnaire showed internal consistency as measured by Cronbach's alpha coefficient of 0.60. However removing the item 5, alpha value changes to 0.63. According to Ribeiro JL, Ponte AC15 a good internal consistency must submit a coefficient of Cronbach's alpha equal to 0.80 ($\alpha = 0.80$), however on scales with a small number of items are acceptable values greater than 0.60. The value of the coefficient of Cronbach's alpha identified by the original authors¹³ was 0.74.

Originally, the questionnaire is presented as one-dimensional. However when we perform a principal components analysis using Varimax method, we obtained eight dimensions that explain 56.66% of total variance, the first factor "I feel confident in my ability to evaluate the quality of research papers" was responsible for 14.67% of the total variance. Nevertheless, we have chosen to follow the indications of the author and present the data through the global scale.

One of the difficulties experienced in this work was due to not having located other studies using the same instrument. Accordingly, the discussion of the results was limited to data provided by the original study¹³ developed by the authors of the questionnaire.

Conclusions

The factorial analysis conducted demonstrated valid empiric evidence and the questionnaire can be used in our context. However results obtained invite to advance with further refinements, testing it in more contexts and extended to diverse professional profiles. Nevertheless, the statistical analyzes conducted for the validation of the Portuguese version of the Attitudes to Evidence Based Practice Questionnaire, the level of internal consistency, as well as its factor structure revealed acceptable levels indicating that this questionnaire can be a valid and useful instrument to the study of the topic in question. The satisfactory results of this validation process reinforce the importance of continuing the same also allowing discerns practical implications, either in educational settings, whether in contexts of nursing practice. The assessment of attitudes and barriers should be the first step and a main support to the development of tailored interventions towards the implementation of evidence-based practice among health care staff in general and specifically in nurses.

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