VALIDATION OF THE PRACTICE ENVIRONMENT SCALE TO THE BRAZILIAN CULTURE

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BACKGROUND

A professional nursing practice environment is a system that supports registered nurse control over the delivery of nursing care and the environment in which care is delivered. Studies showed that a better work environment contributes to positive results to patients, professionals and institutions.

The Practice Environment Scale (PES) is a measure with the objective to evaluate the presence of favorable characteristics professional nursing practice environment. It has been widely used in international studies to assess the nurses practice environment.

The availability of the PES to the Brazilian culture, in addition to assisting the assessment and classification of the professional nursing practice environment will allow managers to carry out benchmarking, including international institutions, in order to improve job satisfaction and the quality and safety of the care provided to patients.

METHOD

Purpose: To assess the validity and reliability of the Brazilian version of the Practice Environment Scale.

Study design and setting: Methodological study in two institutions, being one private (hospital A) and one public (hospital B).

Sample: A convenience sample.

Inclusion criteria: nurses who provided direct assistance to patients

Measure

The Practice Environment Scale: 31 items - 5 subscales:

Nurse Participation in Hospital Affairs - 9 items

Nurse Foundations for Quality of Care - 10 items

Nurse Manager Ability, Leadership, and Support of Nurses - 5 items

Staffing Resource and Adequacy - 4 items

Collegial Nurse-Physician Relations - 3 items

▪ Likert Scale – 1 (Strongly Agree) and 4 points (Strongly Disagree).
▪ The higher the score, the grea-ter the presence of favorable a-tributes to the Professional nur-sing practice.

Before the evaluation of the psychometric properties was realized the translation and cultural adaptation following the procedure steps of translation, synthesis, back-translation, assessment by the group of judges and pre-test.

Evaluation of Psychometric Properties

Reliability:

▪ Cronbach's alpha coefficient and composite reliability. Values ≥ to 0.70 may be acceptable.

Construct validity

▪ **Confirmatory factor analysis** - Structural equation model by Partial Least Squares (PLS) es-timation method.
  ▪ Convergent validity: Average Variance Extracted (AVE) and factor loadings.
  ▪ Discriminant validity: Cross loadings and the Fornell-Larcker criterion.
▪ **Convergent validity:** Spearman's correlation - subscales of the PES and the variables job satisfaction and safety climate.
▪ **Divergent validity:** Spearman's correlation - subscales of the PES and the subscales of the Maslach Burnout Inventory.
▪ **Known-groups validity:** Mann-Whitney test – Comparison between two institutions.

For the statistical tests, was considered a significance level of 5%.

Ethical considerations: Approval for the study was obtained from the institutions and from the Ethical Committee approval .

RESULTS

Sample:

209 nurses (return rate of 45.2%)

Gender=female(86.6%)

Age of 32.9 years (SD=5.9)

Years in nursing = 7.1 years (SD=5.1)

Years on current unit = 3.9 years (SD=3.7)

Years in current institution = 6.3 years (SD=5.4)

Table 1 - Average variance extracted, composite reliability and Cronbach's alpha for the subscales of the Brazilian version of the PES.

Subscales of the PES	Average variance extracted		Composite reliability		Cronbach's alpha	
	Original version	Final version	Original version	Final version	Original version	Final version
Nurse participation in hospital affairs	0.49	0.56*	0.89	0.86	0.87	0.80
Foundations for quality of care	0.41	0.51**	0.87	0.88	0.83	0.84
Nurse manager ability and leadership	0.65	0.65	0.90	0.90	0.87	0.87
Resource adequacy	0.67	0.67	0.89	0.89	0.83	0.83
Collegial nurse-physician relations	0.67	0.67	0.86	0.86	0.76	0.76

*Excluded item 27; **Excluded the items 14, 26 and 31

Table 2 - Fornell-Larcker Criterion - Result of the initial and final analyses of the square root of Average Variance Extracted and correlations between constructs.

Subscales of the PES	1	2	3	4	5
Initial analysis					
Foundations for quality of care	**0.71**				
Nurse manager ability and leadership	0.68	**0.81**			
Participation in hospital affairs	0.73	0.83	**0.71**		
Resource adequacy	0.67	0.59	0.59	**0.82**	
Collegial nurse-physician relations	0.48	0.60	0.54	0.47	**0.82**
Final analysis					
Foundations for quality of care	**0.71**				
Nurse manager ability and leadership	0.68	**0.81**			
Participation in hospital affairs	0.70	0.73	**0.75**		
Resource adequacy	0.67	0.59	0.53	**0.82**	
Collegial nurse-physician relations	0.48	0.60	0.49	0.74	**0.82**

Table 3 - Spearman's correlation coefficient between the subscales of the Brazilian version of the PES and the variables: perception of quality, safety climate, job satisfaction, intention to leave the job next year and the sub-scales of the MBI.

Subscales of the PES	Perception of quality	Safety climate	Job satisfaction	Intention to leave the job	Emotional exhaustion	Depersonalization	Personal Accomplishment
Participation in affairs	0.29*	0.59*	0.49*	-0.33*	-0.40*	-0.29*	0.40*
Foundations for quality	0.51*	0.60*	0.43*	-0.32*	-0.37*	-0.26*	0.38*
Manager ability	0.40*	0.65*	0.51*	-0.30*	-0.41*	-0.32*	0.38*
Resource adequacy	0.51*	0.44*	0.47*	-0.21**	-0.48*	-0.30*	0.32*
Collegial nurse-physician relations	0.35*	0.44*	0.44*	-0.18**	-0.36*	-0.32*	0.39*

*p<0.00001 **p<0.007

Table 4 - Comparison of the average responses between the two hospitals

Subscales PES	Hospital	*Average*	Standard Deviation	p-value
Participation in affairs	A	3.08	0.57	0.0029
	B	2.77	0.62	
Foundations for quality	A	3.33	0.43	< 0.0001
	B	2.59	0.56	
Manager ability	A	3.14	0.65	< 0.0001
	B	2.67	0.71	
Resource adequacy	A	2.70	0.68	< 0.0001
	B	2.17	0.71	
Collegial nurse-physician relations	A	2.98	0.58	0.0181
	B	2.77	0.41	

CONCLUSION

The Brazilian version of the Practice Environment Scale is a valid and reliable tool.

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