

## ORIGINAL PAPER

### Validation of the *Practice Environment Scale of the Nursing Work Index* (PES-NWI) for the Portuguese nurse population

**António Fernando Salgueiro Amaral, MSc, RN**

Coordinator Professor, Outcome Researcher on UICISA-E, member of Sigma Teta Thau International, Coimbra Nursing School, Coimbra, Portugal

**Pedro Lopes Ferreira, PhD**

Associate Professor with Aggregation, Researcher on CEISUC, Economic Faculty Coimbra University, Coimbra, Portugal

**Eileen Lake, PhD, RN, FAAN**

Jessie M. Scott Term Chair in Nursing & Health Policy, Secondary Faculty in Sociology and Assoc Dir of the Ctr for Health Outcomes & Policy Research University of Pennsylvania School of Nursing, Philadelphia, USA

**Correspondence:** António Fernando Salgueiro Amaral, Escola Superior de Enfermagem de Coimbra. Rua 5 de Outubro | Apartado 7001 | 3046-851 Coimbra – Portugal e-mail: Amaral@esenfc.pt

#### Abstract

**Background:** The need to obtain efficiency gains and to focus practice on obtaining value has influenced research in the area of nursing environment and nursing outcomes. The conclusions reached in those studies highlight the need for better nurse/patient ratios, better qualified nurses, and greater involvement of nurses in decision-making and in clinical management, which will lead to increased levels of productivity and satisfaction and, consequently, better patient outcomes and better organization. The study and creation of favourable practice environments may play a fundamental role on that. Practice environments have been studied since the 1980s (Lake, 2002) with the aim of better understanding their effect on nursing professionals and on patient outcomes. More recently, focus has also been put on their connection to patient safety.

**Aim:** To translate and validate the *Practice Environment Scale of the Nursing Work Index* (PES-NWI) for producing a Portuguese version of the scale ready to be used for the assessment of nursing practice environments in Portugal.

**Methodology:** Translation, cultural validation and back-translation were achieved with the collaboration of a group of nurses and nursing teachers. The psychometric validation of the Portuguese version was reached by extracting the principal components using a varimax rotation (construct validity). The analysis of the criterion validity was carried out through correlation using Barton's Job Satisfaction Scale and scale reliability was assessed through the analysis of internal consistency using Cronbach's Alpha. An electronic version of the instrument was created and given to a sample of nurses who were members of the National Board for Nursing and who were invited to fill out the scale via email. A total of 418 responses were received.

**Results:** The analysis identified an eight-factor solution which, following a deeper semantic analysis resulted in seven subscales. The scale's global internal consistency was 0.892, with the subscales' alpha varying from 0.693 to 0.822

**Conclusions:** The results obtained shows that the Portuguese version of the PES-NWI is useful in assessing nursing practice environments. Implementing this scale, it is possible to identify the environments in an organization which are more favourable to the quality of the service provided and of nursing care, as well as their correlations with patient outcomes. By using its subscales it is possible to identify the areas where improvements can be initiated.

**Key Words:** Practice environment, nursing outcomes, validation