



# Development and psychometric testing of the clinical learning environment, supervision and nurse teacher evaluation scale (CLES+T): The Spanish version



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## ABSTRACT

**Background:** The Clinical Learning Environment, Supervision and Nurse Teacher scale is a reliable and valid instrument to evaluate the quality of the clinical learning process in international nursing education contexts.

**Objectives:** This paper reports the development and psychometric testing of the Spanish version of the Clinical Learning Environment, Supervision and Nurse Teacher scale.

**Design:** Cross-sectional validation study of the scale.

**Setting:** 10 public and private hospitals in the Alicante area, and the Faculty of Health Sciences (University of Alicante, Spain).

**Participants:** 370 student nurses on clinical placement (January 2011–March 2012).

**Methods:** The Clinical Learning Environment, Supervision and Nurse Teacher scale was translated using the modified direct translation method. Statistical analyses were performed using PASW Statistics 18 and AMOS 18.0.0 software. A multivariate analysis was conducted in order to assess construct validity. Cronbach's alpha coefficient was used to evaluate instrument reliability.

**Results:** An exploratory factorial analysis identified the five dimensions from the original version, and explained 66.4% of the variance. Confirmatory factor analysis supported the factor structure of the Spanish version of the instrument. Cronbach's alpha coefficient for the scale was .95, ranging from .80 to .97 for the subscales.

**Conclusion:** This version of the Clinical Learning Environment, Supervision and Nurse Teacher scale instrument showed acceptable psychometric properties for use as an assessment scale in Spanish-speaking countries.

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### What is already known about the topic?

- The CLES+T scale was developed and published in English (Saarikoski et al., 2008).
- To date, the CLES+T scale has been translated into nine different languages, and is available in English, Finnish, Italian, Greek, Swedish, Dutch, Norwegian, German and now in Spanish.

### What this paper adds

- The Spanish version of the CLES+T showed satisfactory psychometric properties.
- Once again, the “supervisory relationship” and the “pedagogical atmosphere on the ward” were found to be the most significant factors in the clinical learning environment.

## 1. Introduction

Nursing is in essence a practice-based profession; consequently, clinical practice placements in health institutions form an essential component of the European undergraduate curriculum (Kajander-Unkuri et al., 2013; Salminen et al., 2010; Suhonen et al., 2009; Vizcaya-Moreno et al., 2005; Vizcaya-Moreno, 2005). European countries signatory to the Bologna Declaration are committed to restructuring their educational systems so that these become more transparent and similar, and to promoting the mobility of students, teaching and administrative in Europe. Previous research suggests that it is necessary to work cooperatively on the project of a European nursing education curriculum (De Witte et al., 2011; Johansson et al., 2010; Salminen et al., 2010; Suhonen et al., 2009). However, the concerning curricula evidence published in the scientific literature following the Bologna Declaration is limited and of little relevance in the context of nursing studies (Kajander-Unkuri et al., 2013; Dante et al., 2013; Suhonen et al., 2009).

In accordance with the Bologna Declaration and the guidelines published by the Spanish Government in 2005 (Real Decreto 55/2005), and following a period of intense work by various institutions, the structure of nursing degree programmes has been changed (Zabalegui and Cabrera, 2009) and now consists of 240 ECTS (European Credit Transfer System) studied over the course of 4 academic years (Real Decreto 1393/2007). In compliance with the European Directive, the clinical training component of a nursing degree in Spain now accounts for a minimum of 90 ECTS. Clinical placements are distributed throughout the degree course, although more are undertaken during the third and fourth academic years (Zabalegui and Cabrera, 2009). As a result of these recent changes, no in-depth studies of the characteristics of the clinical environment and their impact on the learning process have yet been conducted in Spain.

Historically, the Erasmus programme has enabled student nurses to undertake some of their clinical training at different universities around Europe, but it has recently been argued that there is a need to define areas of competence in the context of European nursing education

(Kajander-Unkuri et al., 2013). We believe that the development of a common classification of the levels of competence required of student nurses will constitute an important step for student mobility and for clinical training and learning environment quality and research.

Many instruments for evaluating the clinical learning environment have been developed in recent years, but only a few of them have been the subject of further research. Such is the case of the Clinical Learning Environment, Supervision and Nurse Teacher Evaluation Scale (CLES+T) (Saarikoski et al., 2008), which has been translated into several different languages, and used in different countries. For example, the first time in Finland (Saarikoski et al., 2008), and then in New Zealand (Watson et al., 2014), Germany (Bergjan and Hertel, 2013), Norway (Bos et al., 2012; Henriksen et al., 2012; Skaalvik et al., 2011), Holland (De Witte et al., 2011), Sweden (Johansson et al., 2010), Greece (Papastavrou et al., 2010) and Italy (Tomietto et al., 2009). Thus, the development of powerful, multilingual instruments for evaluating the quality of the clinical learning process around the world is essential. The purpose of this study was to develop a Spanish version of the CLES+T instrument and to test its psychometric properties.

## 2. Method

### 2.1. Participants

Participants were all students enrolled in the 3rd year of the nursing degree programme at the University of Alicante on clinical placement between January 2011 and March 2012 in 10 public and private hospitals in the Alicante area. Our rationale for selecting only third year students was to meet homogeneity criteria and minimize the effects of external factors, such as different level students and clinical placement planning.

Previous studies (Gaskin and Happell, 2013; Schreiber et al., 2006), have compiled guidelines for establishing the required sample size. The most important rules are: (1) minimum sample size of 100 participants; and (2) a minimum participant to variable ratio of 10:1. In order to obtain an acceptable sample size in our study for factor analysis (EFA and CFA) of the CLES+T instrument, a minimum of 340 students was required.

### 2.2. Instrument

The CLES+T scale consists of 34 items classified into 5 sub-dimensions: (1) pedagogical atmosphere on the ward; (2) supervisory relationship; (3) leadership style of the ward manager; (4) premises of nursing on the ward; and (5) role of the nurse teacher in clinical practice (Saarikoski et al., 2008). Items were scored using a 5-point Likert-type scale.

We also collected demographic data (gender, age) and learning-teaching data (hospital type, ward type, length of clinical placement, number of meetings with the nurse teacher, motivational level on clinical placement, level of satisfaction with the clinical placement and use of e-contact with the nurse teacher during clinical placement).

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