Clinical education

# Translation and validation of the clinical learning environment, supervision and nurse teacher scale (CLES + T) in Croatian language

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## ABSTRACT

Clinical practice is essential to nursing education as it provides experience with patients and work environments that prepare students for future work as nurses. The aim of this study was to translate the "Clinical Learning Environment, Supervision and Nurse Teacher" questionnaire in Croatian language and test its validity and reliability in practice. The study was performed at the Faculty of medicine, Josip Juraj Strossmayer University of Osijek, Croatia in April 2014. The translated questionnaire was submitted to 136 nursing students: 20 males and 116 females. Our results reflected a slightly different factor structure, consisting of four factors. All translated items of the original constructs "Supervisory relationship", "Role of nurse teacher" and "Leadership style of the ward manager" loaded on factor 1. Items of "Pedagogical atmosphere on the ward" are distributed on two factors (3 and 4). The items of "Premises of nursing on the ward" loaded on factor 2. Three items were identified as problematic and iteratively removed from the analysis. The translated version of the aforementioned questionnaire has properties suitable for the evaluation of clinical practice for nursing students within a Croatian context and reflects the specifics of the nursing clinical education in this country.

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## 1. Introduction

Nursing is a practical discipline and its knowledge is embedded both in theoretical knowledge and in clinical practice (Benner, 2001). The transition of nurse education to the education system has resulted in many changes to educational and training programmes (Saarikoski et al., 2008). Clinical education is a vital component in the nursing study programmes curricula as it offers the opportunities to develop competencies in clinical practice. This is essential for nursing students as they gain experience with patients and work environments (Henriksen et al., 2012), where a single mistake can result in harmful consequences. Clinical practice represents up to half of the undergraduate nursing students workload when clinical mentors facilitate the students' acquisition of professional knowledge; technical, psychomotor, interpersonal and communication competencies (Lovrić et al., 2015). According to Johansson et al. (2010), nursing has dissimilar educational standards across the European Union (EU). In order to promote the equalization of nurse education programmes within the EU, universally applicable instruments for the quality assurance of nursing clinical practice should be available to nursing educators (Suhonen et al., 2009). These universally applicable instruments allow to perform cross-cultural comparative studies, which are important for the advancement of nursing knowledge.

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The results of literature review indicate there is a lack of universally applicable instruments for the quality assurance of nursing clinical practice within a Croatian context, in particular for assessing the clinical learning environment. The purpose of this study is to help to bridge this gap by providing a Croatian translation of "Clinical Learning Environment, Supervision and Nurse Teacher evaluation scale" (as follows CLES + T).

## 2. Background

The instrument CLES + T was selected as its psychometric properties and reliability indexes confirm it as the gold standard to assess a clinical learning environment internationally (Johansson et al., 2010; Tomietto et al., 2012). CLES + T was developed in 2008, its theoretical framework draws upon a number of empirical studies, 5 literature reviews, 5 reports of audit instruments and 7 discussion papers in the context of this paper (Saarikoski et al., 2008). CLES + T combines aspects of clinical learning environment and nurse teacher liaison functions within the same scale. The recent version of CLES + T (Saarikoski et al., 2008) consists of 34 items, 5 factors were identified in the psychometric testing: pedagogical atmosphere (9 items in total derived from the 4 items of the "ward atmosphere" factor and 5 items from the "Premises of learning" factor), Leadership style of the WM (4 items), Supervisory relationship (8 items), Premises of nursing in the ward (4 items), and Role of nurse teacher (9 items). The last dimension was included in the 2008 version as a result of further theoretical discussions, scale revisions and empirical studies (Saarikoski et al., 2008, 2009). Inclusion of nursing education into the higher educational system has affected the nurse teacher role, and the sub-scale for this new dimension is particularly focused upon the nurse teacher's liaison function between the nursing college and the nursing ward (NW) in areas regarding the integration of theory and practice (Ramage 2004; Saarikoski et al., 2002), co-operation with mentors and students (Newton and Smith, 1998; Brown et al., 2005), and co-operation with the NW (Forrest et al., 1996; Wills, 1997). Each CLES + T item is evaluated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). In the original study, which recruited 549 students in Finland, the CLES + T scale showed the values of the Cronbach alpha coefficients ranging from 0.77 to 0.96 and the 5 factors identified were able to explain 67% of the variance, with "supervisory relationship" as the main factor explaining 40% of the variance. Items loading indicated a 5 factors model. Another study carried out in Sweden with a sample of 324 students (Johansson et al., 2010) reported the values of the Cronbach alpha coefficients ranging from 0.75 to 0.96 and a variance of 60.2% in the 5-factor model, with the main factor "Supervisory relationship" explaining 22.5% of variance. However, item loadings in the Swedish version of CLES + T suggest a 4-factor model in which "Pedagogical atmosphere" and "Premises of nursing in the ward" are merged in one factor called "Pedagogical and caring atmosphere on the ward". However, the criteria to perform a factor analysis (Polit and Beck, 2008) were not fully reached in this study due to the insufficient sample size. The results of the Italian study confirmed the items structure found internationally, however the "role of the nurse teacher" factor showed 3 sub-factors and suggested an overall 7-factor model in spite of a 4 or 5-factor model being found in other studies (Tomietto et al., 2012).

The search of literature showed that there was no formal translation of CLES + T questionnaire in Croatian language. According to our knowledge (collaboration with other institutions, attending Croatian conferences in the field of nursing mentoring),

no other Croatian faculties where nursign study programme is performed are using this instrument. This fact was also confirmed also by the author of the questionnaire. The goal of this study was to translate the CLES + T questionnaire in Croatian language and test its validity and reliability in practice. The translated and adapted instrument will provide information about the clinical practice through students' perception, which will help to identify potential problems between educators and students during the clinical practice.

## 3. Methods

### 3.1. Translation procedure

The instrument was translated into Croatian language by two independent groups of 8 nursing PhD students with the consent of the author of original CLES + T. These students are the first generation of nurses enrolled in a PhD study in Croatia, and all of them are nursing clinical mentors. Due to their knowledge in nursing and English, they constitute a competent group which was prepared to translate the instrument. Furthermore, the final translation was reviewed by an expert in English and Croatian language (BSc) with considerable experience in translating texts on nursing and education. The back-translation was performed by the first author of this paper, who did not participate in forward translation, and compared with the original CLES + T. The structure of CLES + T is suitable for the evaluation of clinical practice for nursing students within Croatian context. However, some modifications were required due to some differences in educators' roles. Furthermore, the questionnaire was revised to comply with the system standards for the education of nurses in Croatia by two experts in this field, who teach at Croatian faculties where nusing study programme is performed. The first expert is a registered nurse, an assistant professor with more than 30 years of experience in the organization of clinical practice; the second expert is an associate professor responsible for the organization of nursing clinical practice. Both experts teach at Croatian faculties where nusing study programme is performed and have considerable experience in nursing clinical practice.

### 3.2. Participants

This institution has 159 nursing BSc students in total (58 in the first, 52 in the second, and 26 in the third year), from different Croatian counties. They were included in the study with a convenience criterion: i.e. students who gave informed consent and who were attending a clinical placement in hospital for at least 5 days (30 working hours). The students participated in clinical practice under the supervision of the same mentor ranging from 5 to 10 days depending on the course programme and skills as well as competences that should be acquired during this period. In total, 143 students participated. Seven of the solved questionnaires were excluded from the analysis due to non-responses. The final sample consisted of 136 students (85.6%), of whom 20 were males and 116 females. The average age was 22 (SD = 4.4). As the study was performed in the second semester, all students gained some clinical experience. As it was difficult to repeat the survey for all students, 50 students (21 from the first, 19 from the second, and 10 from the third year of the study, i.e. 36.8% of the final sample) were randomly selected from the final sample for the participation in test-retest. This number was determined by considering the minimum sample size requirements for computing Spearman correlation coefficient (Udovičić et al., 2007).