Nurse Education Today 35 (2015) 602–608

Contents lists available at ScienceDirect

Nurse Education Today

journal homepage: www.elsevier.com/nedt

Review

Identification of nursing competency assessment tools as possibility of their use in nursing education in Slovenia — A systematic literature review

Sabina Ličen *, Nadja Plazar

Faculty of Health Sciences, University of Primorska, Polje 42, 6310 Izola, Slovenia

ARTICLE INFO

Article history:
Accepted 24 December 2014

Keywords:
Nursing
Competences
Assessment
Education

SUMMARY

Aims: The aim of this study was to identify existing tools that purport to measure clinical nursing competence through the use of a systematic literature review to consider the possibilities of using them in nursing education in Slovenia.
Design: A systematic literature review following PRISMA guidelines.
Methods: The databases that were searched included MEDLINE, Cinahl, Cochrane Library and Science Direct. The search was limited to available full text articles in English, published between 2003 and 2013.
Results: After applying the inclusion and exclusion criteria, seven papers were included. The review indicated the availability of some highly reliable tools that enable assessment of clinical competences in nursing education. At the same time, however, it is still not clear as to what competences nursing students must achieve during their education.
Conclusions: Our review showed that various tools exist for assessing clinical nursing competences. In addition, for each country it is important to compose an assessment tool, which measures actual clinical nursing competences, and means customized for their needs and based on their national guidelines. Slovenia has three academic faculties and five colleges with a nursing education program. Common standards regarding assessment of nursing competences among them would definitely lead to better practices and success of graduates and subsequently for the professionals in nursing field. What emerges from the literature is the need to move forward, to foster creativity, freedom of thought and originality and for these reasons we have to consider the possibility of developing a model for obtaining universal clinical competencies.

Introduction

The term competence is used frequently, although it is a nebulous concept defined in various ways by different healthcare practitioners (Garside and Nhemachena, 2013). Despite the fact that there is no officially accepted theoretical or operational definition of competency among nurses, educators, employers, regulation bodies and government (Axley, 2008), the literature describes three main conceptual interpretations, consisting of behavioral, generic and holistic approaches (Garside and Nhemachena, 2013; McMullan et al., 2003; O'Connor et al., 2009; Watson et al., 2002b). Eraut (2000) indicates that definitions of competence merely differentiate between professionals and non-professionals. Despite the fact that competency is defined in different ways, the common goal ensures that nurses obtain the knowledge, skills and abilities expected and required for their practical settings (Anema and McCoy, 2010).

Also in Slovenia the lack of a uniform/agreed definition of nursing competencies represents difficulties that derive from this. Over the last two decades higher education in Slovenia has undergone several legislative and structural changes, rapid institutional development, and a significant increase in student numbers. When Slovenia joined the European Union (EU) in 2004, it was faced with the need to transform the nursing program in line with EEC (European Economic Community) directives 77/452 and 77/453. At that time each directive was derived from a process of "harmonization" that was achieved through the work of the relevant professions in advisory committee meetings that were held in Brussels. For instance, the two directives for nurses, dating from 1977, determined the mutual recognition of diplomas, certificates and other evidence of the formal qualifications of nurses responsible for general care and the coordination of provisions laid down by law, regulation or administrative action (World Health Organization, 2009). Before that, a degree system based on three main cycles has existed in Slovenian higher education system since the 1960s, but the length and the structure of studies did not correspond to the Bologna guidelines (Government Communication Office, RS, 2009).

* Corresponding author. Tel.: +386 5 40667530; fax: +386 5 662 64 80.
E-mail addresses: sabina.licen@fvz.upr.si (S. Ličen), nadja.plazar@fvz.upr.si (N. Plazar).

http://dx.doi.org/10.1016/j.nedt.2014.12.023
0260-6917/

In the academic years 2004 and 2005, three Slovenian nursing colleges existed, which provided a coordinated nursing study program following the aforementioned EU Directives. Today, Slovenia has three academic faculties and five colleges with a nursing education program. All are in line with EU Directive 2005/36/EC (European Community), which states that the duration of the general care training of nurses should be at least three years or 4600 h, including both theoretical and clinical training (Plazar et al., 2008). In fact, the compliance with Directive 2005/36/EC is for the most part achieved as part of a nursing and midwifery development package which incorporates a number of WHO Regional Office for Europe strategies, including those for nursing and midwifery education, guidance on the utilization of human resources, recommendations for strengthening nursing and midwifery practice, and use of WHO global standards for professional nursing and midwifery education (World Health Organization, 2009). The duration of courses is now limited in ECTS (European Credit Transfer and Accumulation System). One ECTS stands for 25–30 h of student work. 60 ECTS represent one academic year. The first-cycle has a binary system of academic and professional study programs (180–240 ECTS; 3–4 years) leading to the first-cycle degree, the second-cycle offers masters' courses (60–120 ECTS; 1–2 years) and the third-cycle comprises doctoral studies (180 ECTS; 3 years) (Government Communication Office, RS, 2009). As a result of the Bologna Process, educational systems in all European countries are in the process of modernization and harmonization (Ruzafa-Martinez et al., 2013). In addition, the Bologna Process is interested in establishing core competencies relevant to all graduate studies (not only in nursing programs), which means to facilitate mobility of students, graduates, and higher education staff. Despite this, differences among nursing curricula in Europe still occur, mainly because there is no uniform understanding of the concept of competence and consequently, no single uniform method for their assessment.

The current systematic literature review was undertaken in an attempt to identify and evaluate the best available research evidence related to assessment of clinical competence in nursing education using a clinical competence questionnaire to consider the possibilities of using them in nursing education in Slovenia.

Methods

Search Strategy

The systematic review of the published literature on assessment of competencies in nursing education was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA), using the PRISMA checklist and PRISMA flowchart methodology (Moher et al., 2009).

The searched literature databases included MEDLINE, Cinahl, Cochrane Library and Science Direct. The search was limited to available full text articles in English, published between 2003 and 2013. The following search terms were used: nursing competences, assessment and nursing students. The search strategy consisted of a combination of three main sets of terms: competenc*, *nurs*/health care*, *student*/education*/stud*in the title (TI) *and assessment*/measure*/evaluation** in TI and/or abstract (AB) and/or KEYWORDS, for which Boolean operators were used.

In addition to the literature databases, other sources such as (inter) national reports and personally recommended studies provided additional articles.

Exclusion Criteria

Studies meeting the following criteria were excluded from the review:

a) those that focused only on nursing competencies in clinical practice environments,
b) those without the involvement of undergraduate nursing students,
c) those based on a literature review only,
d) those based on students enrolled in open distance learning programs,
e) those written in a language other than English.

Eligibility Criteria

Studies meeting all the following criteria were included in the review:

a) those with undergraduate nursing student involvement,
b) those based on competency assessment,
c) those that included experiments, observational study, comparative study and survey,
d) those using a clinical competence questionnaire
e) those available in English or non-English studies translated into English,
f) those that conducted proper Cronbach's alpha and/or exploratory factor analysis to identify essential factors (indicated by significant α's) or some correlation statistics.

Results

Study Selection

The PRISMA flow diagram (Fig. 1) summarizes the article selection process. Using the aforementioned search strategy and the application of classification review filters, the initial search protocol identified 75 articles from the databases, while 46 additional articles were identified by using a 'snowballing' strategy. After removal of duplicates, 108 articles were left, of which another 64 were subsequently excluded because of inadequacy in terms of the inclusion criteria based on competency assessment. Exclusion of irrelevant articles or duplicates led to the initial identification of 41 relevant full text available studies. All the studies were then further evaluated, which led to the exclusion of a further 33 articles. The exclusion of these 33 was mainly based on the absence of student involvement or because they measured only one specific competence. Seven studies that met the criteria were finally included in the qualitative analysis.

Assessment Tools

The final 7 studies identified in the current review were (listed in order of publication date): (1) Lee-Hsieh et al. (2003, Taiwan); (2) Lauder et al. (2008, Scotland); (3) O'Connor et al. (2009, Ireland); (4) Hsu and Hsieh (2009, Taiwan); (5) Klein and Fowles (2009, USA); (6) Hsu and Hsieh (2013, Taiwan); and (7) Sedgwick et al. (2013, Canada). Table 1 provides a brief summary of the methods used in these studies, and the results from the present qualitative analysis in brief, while a more detailed description of the present qualitative analysis follows below.

In Taiwan, Lee-Hsieh et al. (2003) developed the Clinical Nursing Competence Questionnaire (CNCQ) to assess four dimensions of clinical nursing competence, (1) caring, (2) communication/coordination, (3) management/teaching and (4) professional self-growth competence. These dimensions were based on the results of a factor analysis. The internal reliability using Cronbach's α was $=0.93$. The CNCQ contains 22 items and, compared to other analytical instruments, students need less time to complete it.

O'Connor et al. (2009) developed a common competence-based assessment tool or Shared Specialist Placement Document (SSPD) to assess students while in clinical settings. The completion of the SSPD required the student and the preceptor to follow a protocol, which comprised a series of three formal meetings and suitable records. The SSPD is designed as a generic assessment document, so standards of practice