

# Implementation of Professional Competences in the Nursing Curricula at Selected Slovak Universities

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**Key Words:** nursing education, nursing competences, patient safety, Competency Framework.

**Summary.** The aim of this paper was to summarise the theoretical background of key competences in undergraduate nursing education at selected Slovak universities based on international recommendations for training of nurses. The objective was to assess whether the content of nursing education was focused on patient safety.

**Methods.** The curricula of nursing programmes at selected Slovak universities were analysed and compared in accordance with eight key competences of the amended EU Directive 2013/55/EC and Competency Framework of nursing practice issued by the European Federation of Nurses.

**Results.** The Competency Framework and eight key competences listed in the Directive determine the minimum competence level to perform the nursing profession. The content of nursing programmes at selected Slovak universities reflects current advancements in nursing such as orientation of health care towards disease prevention, long-term care and community-based care, patient safety, e-health and information computer technologies development, and research and evidence-based practice. The analysis presumes that all higher education institutions in Slovakia deliver nursing education that assures necessary competences for graduates to perform nursing. The accreditation process fosters the improvements of nursing programmes to assure quality of nursing education in colleges and universities in Slovak Republic.

**Conclusions.** Curricula of nursing programmes at selected Slovak universities are in compliance with the Competency Framework of the European Federation of Nurses (EFN) and imply eight professional competences listed in the EU Directive 2013/55/EC. The content of subjects in nursing programmes should be studied with an emphasis on the development of professional competences for patient safety.

## Introduction

Various health professions undergo constant process of development, the same as the entire society. Nursing profession has experienced immense changes during the last one hundred and fifty years from an apprenticeship model to an independent profession in interdisciplinary health care practice. In 2001, the World Health Organization (WHO) introduced a European strategy for Nursing and Midwifery with the aim to improve and integrate educational programmes for nurses and midwives. Education institutions throughout Europe and in the world have modified the nursing curricula according to specific demographic and regional needs (1).

In Europe, nursing education is currently offered in 45 of the 47 European Higher Education Area (EHEA) countries. The majority (68%) of nursing programmes in Europe are established at the higher education level, which is most commonly offered at universities (33%). Nursing education at the diploma level still exists as well and is most commonly offered at nursing schools and colleges (2).

Nursing programmes usually last from three to four years, and the majority (68%) of these programmes lead to a bachelor's degree or the equivalent (3). The organisation of four-year basic education for nurses with 240 ECTS enables higher education institutions to include all necessary subjects and required duration of clinical training into the basic nursing curriculum. EU Directive 2005/36/EC and its amended version as Directive 2013/55/EC regulate that basic nursing education lasts at least three years and includes minimum 4,600 hours of theoretical and clinical training. The duration of clinical training must be at least half of the minimum duration of training, i.e., 2,300 hours (4, 5). It is essential that clinical training with a professional nurse as a mentor is considered as a vital part of the nursing education programme since it has an enormous influence on the student's learning experience in real work environment. However, the amount of time each student needs for achieving learning outcomes and accomplishing the programme aims also depends on student's knowledge,

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skills, abilities, experience and the level of his/her intellectual development.

The introduction of global standards to the education of nurses and midwives with an emphasis on the development of professional competences of future nurses is essential for the safety of a patient. The International Council of Nurses (ICN) defines a competence as “a level of performance demonstrating the effective application of knowledge, skill and judgment” (6). In Europe, for example, the Nursing and Midwifery Council (NMC) uses the term *competence* to refer to “the combination of skills, knowledge, and attitudes, values and technical abilities that underpin safe and effective nursing practice” (7).

The European Qualifications Framework (EQF) defines a competence as a proven ability to apply knowledge, skills and personal, social and/or methodological abilities while working and studying or in professional and personal development (8). In the context of the European Qualifications Framework, competences are described in relationship with responsibility and independence of the professional. Specific competences refer to particular fields, sectors or qualifications, and they focus on achievement of a particular profile of a graduate (8).

Many changes in health care lead to an increased demand with respect to nurses' competence as well as the number of nurses. The competence of graduating nursing students is an important issue as it is related to professional standards, patient safety and the quality of nursing care. The nursing competences have to be based on nursing knowledge, skills and moral/ethical dimensions, i.e., attitudes and values (7, 9, 10).

This study aims to summarise the theoretical background of key competences in undergraduate nursing education at four Slovak universities based on international recommendations for nursing education. The objective was to assess whether the content of nursing education was focused on patient safety.

### Material and Methods

The curricula of nursing programmes were analysed and compared in the context of the EU Directive 2013/55/EC and EFN Competency Framework of eight professional key competences on demands of nursing practice at four selected Slovak universities: Pavol Jozef Šafárik University in Košice, Faculty of Medicine, University of Prešov, Faculty of Health Care, College of Health Care and Social Work st. Alžbeta in Bratislava, n.o., and Comenius University in Bratislava, Jessenius Faculty of Medicine in Martin.

The information about the curricula was gathered by emailing representatives of selected four universities in the Slovak Republic and by

searching literature and documents. The literature search was done via Google Scholar and Web of Science using the following keywords: “Bologna Process”, “Nursing education”, “curricula”, “competence”, and “European Qualifications Framework – EFN”. The search was limited to published scientific articles in the last ten years (2006–2016), in English and Slovak languages. Together, these two sources provided 18 articles relevant to the study, of which 6 articles focused on EU Directive and 12 scientific articles focused on professional guidelines. The articles that only briefly described national nursing competences and/or education were not included in this study. The literature search provided information about different aspects of European nursing education in general. This study analysis emphasises the implementation of particular eight key competences into nursing curricula at four selected Slovak universities (Table 1, 2).

### Results

Nursing as a profession is defined by professional practice, nurses' skills, development of teamwork and the use of research (11). The Competency Framework and eight key competences that are included in the Directive 2013/55/EC determine the minimum level only to perform the nursing profession (4). At this point, it is difficult to readily access information and compare the nursing education programmes of different EU member states (7).

The content of nursing programmes at individual Slovak universities reflects current advancements of nursing, such as the new focus on health care that is oriented towards:

- disease prevention (health education and promotion of health, primary care nursing, health education);
- long-term care and community-based care (community nursing, therapeutic nursing, geriatric nursing and gerontology, fundamental of palliative care, oncology nursing, mental health nursing, etc.);
- patient safety (assessment scales in nursing);
- e-health and developments of information and communication technologies (ICT) (administration and documentation in nursing, informatics and communication technology);
- research- and evidence-based practice (law and legal aspects of nursing, sociology in nursing, research methodology, and nursing research).

The future of professional nurses' education is confronted with a remarkable progress of ICT, which is an essential factor for safe and high quality patient care. In the current health care system, nurses use information technologies and electronic health records to document the nursing process (as-

Table 1. Implementation of Professional Nurses' Competences Ca. 4 and Ca. 6 into Curricula of Nursing Programmes at Selected Slovak Universities

Competences determined by Directive 2013/55/EC and EFN Competency Framework	Education Institutions and Content of Nursing Curricula			
	Pavol Jozef Šafárik University in Košice, Faculty of Medicine	University of Prešov, Faculty of Health Care	College of Health Care and Social Work st. Alžbeta in Bratislava, n. o.	UK in Bratislava, Jessenius Faculty of Medicine in Martin
Competence B Competence G  CA. 4. Communication and teamwork	Administration and documentation in nursing Informatics	Informatics and communication technology	Information technology	Administration and documentation in nursing care
Competence A Competence D Competence E  CA. 6. Nursing Care (theoretical education and training)	Nursing Nursing techniques Anatomy Hygiene and epidemiology Physiology Fundamentals of histology Fundamentals of biophysics and radiology Fundamentals of biochemistry microbiology and immunology Pathological physiology Dietology Psychology Clinical propaedeutic nursing in pedagogy Nursing in surgery Nursing in internal medicine Nursing in anaesthesiology and intensive medicine First aid	Nursing theory Nursing techniques Anatomy and physiology Hygiene and epidemiology Fundamentals of biophysics, biochemistry and radiology Microbiology and immunology Dietology Pathology Clinical examination Clinical pharmacology First aid Nursing practice in internal medicine, surgery, paediatrics, geriatrics Gynaecology and obstetrics Surgery Paediatrics Neurology Oncology Psychiatry Fundamentals of clinical discipline	Nursing theory Nursing procedures and techniques Anatomy and physiology Biophysics Biochemistry and radiology Microbiology Pathological anatomy and physiology Epidemiology, hygiene and nutrition Pharmacology Psychology	Nursing Nursing techniques Anatomy and physiology Biophysics, biochemistry and radiology Medical terminology Microbiology Psychology Hygiene, epidemiology and nutrition Pathological anatomy and pathological physiology First aid Pharmacology

assessment, diagnosis, interventions and outcomes) based on comparable nursing classification systems and nursing taxonomies and the appropriate patient's data from the records utilised in practice. All nurses' skills and abilities reflect competences B, G/CA. 4. according to the Competency Framework. The content of theoretical nursing education and training complies with competences A, D/CA. 6. Table 1 shows implementation of professional nurses' competences CA. 4 and CA. 6 into the content of nursing curricula at individual Slovak universities.

The extent of application of nurses' competences is defined by their importance in professional

nursing practice. Competences A, E/CA. 6. relate to clinical training of nurses and ensure the development of professional responsibility in providing care, expansion of scientific knowledge, strengthening of nurses' independence to assess, plan and provide integrated care with the focus on health outcomes. Competence CA. 6 can be looked upon as an absolute prerequisite for basic patient-related nursing and patient safety. Such competences are linked to learning and realising nursing theoretical and methodological foundations and principles, evidence-based and sources-available nursing interventions (Table 2).

Table 2. Implementation of Professional Competences CA. 6: Nursing Care (Clinical Education and Training) into Curricula of Nursing Programmes at Selected Slovak Universities

Competences determined by Directive 2013/55/EC and EFN Competency Framework	Education Institutions and Content of Nursing Curricula			
	Pavol Jozef Šafárik University in Košice, Faculty of Medicine	University of Prešov, Faculty of Health Care	College of Health Care and Social Work st. Alžbeta in Bratislava, n. o.	UK in Bratislava, Jessenius Faculty of Medicine in Martin
Competence A Competence E CA. 6. Nursing care (clinical education training) CA. 6.1. Assessment and diagnosis CA. 6.2. Care planning CA. 6.3. Nursing intervention CA. 6.4. Evaluation and quality assessment	Nursing care Nursing training Nursing in internal medicine Nursing in gerontology and geriatrics Nursing in neurology Nursing in surgery Nursing in obstetrics and gynaecology Nursing in paediatrics Fundamentals of palliative care Nursing in physiotherapy Nursing in infectology	Vocational training Continual vocational training Internal medicine Nursing in internal medicine Paediatric nursing Surgery in nursing Neurology in nursing Geriatric nursing Mental health nursing Gynaecology and obstetrics nursing Oncology nursing Applied psychology in nursing	Vocational training Internal medicine Gerontology and nursing Surgery and nursing Gynaecology and obstetrics Paediatric nursing Neurology nursing Mental health nursing	Vocational training Patients' needs and nursing process Clinical propaedeutic Internal medicine/gerontology and nursing Surgery nursing Psychiatry, mental health and nursing Gynaecology and obstetrics nursing Paediatrics and nursing

### Discussion

The level and the content of nursing education determine the competences of future nursing professionals and the outcomes of their clinical practice. A study of Aiken et al. (2014) in nine European countries (Belgium, England, Finland, Ireland, Netherlands, Norway, Spain, Sweden and Switzerland) focused on patient safety and the number of personnel needed for care (12). Researchers have concluded that patient mortality decreases with the higher number of bachelor's degree nurses and with higher number of nurses providing patient care. Similar studies in Europe also prove a significant negative relationship between the patient mortality rate and human resources factors: the number of personnel and the number of nurses with a bachelor's degree (13–15).

The content of the analysed nursing curricula imply the competences listed in the EU Directive and EFN Competency Framework (4, 8). With regard to the range of existing studies and reports on the influence of achieved education of nurses on their professional competence (12, 14, 16), the wide inclusion of eight professional competences into the nursing curriculum and clinical training particularly was the key factor at selected Slovak universities of this study. Therefore, the current process of education of nurses in Slovakia requires more adjustments of the programme content to the students' needs and modern nursing education.

The Swedish study investigated self-reported competences among all nursing students who

graduated from an upper secondary school and an undergraduate programme. The nurse professional competence scale (NPCS) consisted of 88 items within eight competence areas (CAs) and two overarching themes: "patient-related nursing" and "organisation and development of nursing care". The results of the study showed that students, before acquiring the bachelor's degree, reported significantly higher scores for the competences of nursing care, medical and technical care, documentation and information technology and value-based nursing than for the competence of organisation and development of nursing care. This supports previous findings that nurses seem to be most competent to provide immediate and individualised patient care (17, 18).

It is important to assess nursing competences that are developed during nursing education at a particular institution and to compare the content of nursing programmes in the same country. Even more, the national syllabus for nursing education or the general curriculum would help to harmonise training of nurses across the country and to assure the highest education standards. The implementation of professional competences into nursing curricula in Slovakia has to be further studied at the subject level analysing the content, i.e., aims and learning outcomes, teaching and assessment methods, implementation of principles of adult learning, etc. Finally, the cross-cultural study on the topic of nursing competences in education would be appropriate.

## Conclusions

Professional competences of nurses are central in achieving positive patient care outcomes. This study indicates a need for further investigations of the context of nursing curricula in order to achieve high standards of nursing education and to harmonise better nurse training across Slovakia.

Higher education institutions with nursing programmes, selected for this study, have curricula with subjects that signal a good command of competences for graduates to perform professional nursing. The accreditation of study programmes each five years in colleges and universities stimulates the

development and advancements in nursing education. However, due to the globalisation of society and internationalisation of education of nurses, no frame is possible to consider final. The international cooperation of nurse educators for the development of nursing curriculum and joint research agenda on nursing competences would presumably foster the implementation of European guidelines on competences in nursing education.

## Statement of Conflict of Interest

The authors state no conflict of interest.

## Profesinių kompetencijų diegimas Slovakijos universitetų slaugytojų rengimo programose

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**Raktažodžiai:** slaugytojų rengimas, pacientų saugumas, Kompetencijų sandara.

**Santrauka.** *Straipsnio tikslas* – apibendrinti pagrindines pasirinktų Slovakijos universitetų pirmosios pakopos slaugos studijų programų profesines kompetencijas teoriniu aspektu, vadovaujantis tarptautinėmis slaugytojų rengimo rekomendacijomis. Buvo siekiama įvertinti, ar pacientų saugumas pabrėžiamas slaugytojų rengimo programų turinyje.

*Medžiaga ir metodai.* Pasirinktų Slovakijos universitetų slaugos programų turinys buvo analizuojamas ir lyginamas atsižvelgiant į aštuonias 2013/55/EC direktyvoje minimas kompetencijas ir Europos slaugytojų asociacijų federacijos parengtą Slaugos kompetencijų sandarą.

*Rezultatai.* Slaugos kompetencijų sandara ir aštuonios direktyvoje minimos kompetencijos nustato žemiausią kompetencijų lygmenį, būtiną slaugos paslaugoms teikti. Slaugos programų turinys pasirinktuose Slovakijos universitetuose apima naujausius pokyčius slaugos srityje: sveikatos priežiūros orientavimą į ligų profilaktiką, ilgalaikę priežiūrą ir slaugą bendruomenėje, pacientų saugumą, e. sveikatą ir informacinių kompiuterinių technologijų diegimą, mokslinius tyrimus bei moksliniais įrodymais grįstą praktiką. Atlikus analizę paaiškėjo, kad Slovakijos universitetų vykdomos slaugos programos užtikrina, jog būsimieji slaugytojai įgis reikiamų profesinių kompetencijų. Akreditacijos ir savianalizės procesai Slovakijos universitetuose ir kolegijose skatina slaugos programų atsinaujinimą ir slaugytojų rengimo kokybę.

*Išvados.* Pasirinktų Slovakijos universitetų programos suteikia slaugos studentams Slaugos kompetencijų sandaroje ir direktyvoje nurodomas profesines kompetencijas. Slaugos programų dalykų turinys turėtų būti analizuojamas ugdomų kompetencijų ir pacientų saugumo požiūriu.

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