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# Medication education in nursing programmes in Finland – Findings from a national survey



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**Summary** Medication management is one of the fundamental roles of nurses. Deficiencies in registered nurses' medication competence have been highlighted in previous research. It is important to ensure adequate medication competence to ensure safe practice upon graduation to nursing profession. Yet, little is known of the current medication education in undergraduate nursing programmes.

This study aims to describe the current medication education in Finland. More precisely, we explored the curriculum content, teaching and evaluation methods. A national survey in which data was collected with two questionnaires was conducted: one targeted programme managers responsible for curriculum ( $n=22$ ) and the other one teachers ( $n=136$ ) involved with medication education. The data was analyzed statistically.

The amount of medication education varied between the polytechnic schools involved. It appears that the content of teaching is quite comprehensive. However, we found under-emphasis on theoretical basis of medication care. This result is worrying since the understanding of the principles is essential for safe delivery of medication care. Also more emphasis on the use of self-treatment medications and therefore on patient education is warranted. The most often used teaching methods were lectures and skill laboratories. In all of the polytechnic schools, nurse students' medication competence was regularly evaluated.

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Based on previous research, there is scope for educational initiatives to improve nurse students' medication competence. Therefore, it is important to develop medication education to ensure that medication education with relevant content and with contemporary and evidence-based methods is provided during nurses' basic education.

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## Introduction

Safe and effective medication care is an important part of quality of care, and medication-related activities form a major part of registered nurses' (RN) work and responsibility in everyday practice (Dilles, Vander Stichele, Van Romapaey, Van Bortel, & Elseviers, 2010; Grandell-Niemi, Hupli, Leino-Kilpi, & Puukka, 2005). Medication competence has been found to be a challenging area, as medication errors continue to constitute a problem in nursing practice. Some of the errors in medication are due to deficiencies in the nurses' knowledge or skills, which calls for more attention to educational preparation of the nurses (Deans, 2005; Dilles, Vander Stichele, Van Bortel, & Elseviers, 2011).

Several studies have addressed deficiencies in nurses' (Aitken, Manias, & Dunning, 2006; Ndosi & Newell, 2009) and nurse students' (Dilles et al., 2011; Grandell-Niemi et al., 2005; Grandell-Niemi, Hupli, Puukka, & Leino-Kilpi, 2006) medication competence. Nurses must be able to assess the clinical condition of the patient before commencing pharmacotherapy, planning goals of care, administering medication safely and effectively, and evaluating the effectiveness and safety of the medication administered (Manias, 2009) and document their activities on delivering medication care (Aitken et al., 2006). Earlier research indicates that undergraduate medication education is not at an adequate level (Bullock & Manias, 2002; Latter, Rycroft-Malone, Yerrell, & Shaw, 2001; Manias & Bullock, 2002b; Morrison-Griffiths, Snowden, & Pirmohamed, 2002).

## Background

Undergraduate nursing curriculum and its implementation prepare nurses for their future roles in medication management. Earlier international research indicates need for development of medication education in nursing education (e.g. Bullock & Manias, 2002; Meechan, Mason, & Catling, 2011; Morrison-Griffiths et al., 2002). Concerns have been raised on the lack of pharmacology teaching (Manias, 2009), on teacher's competence and abilities to teach medication education (Morrison-Griffiths et al., 2002) and the integration of theory and practice (Lim & Honey, 2006; Manias & Bullock, 2002a, 2002b). Previous research also indicates that the extent and content of pharmacology teaching varies in different educational institutions (Bullock & Manias, 2002; Dilles et al., 2011; Latter et al., 2001; Manias, 2009; Morrison-Griffiths et al., 2002). Learning pharmacology is an ongoing process supporting nurses in the development of their knowledge, skills and expertise, which will then be transferred from the education environment to the practice setting (Lim & Honey, 2006). Nurse teachers' goal is to provide meaningful, relevant and effective teaching that prepares nurse students for entry to clinical practice

(Krautscheid, Orton, Chorprenning, & Ryerson, 2011), but teachers generally are dissatisfied with the amount of pharmacology in the curriculum (Latter et al., 2001).

Practice in a clinical learning environment is important for nurse students for becoming competent in medication management (Lim & Honey, 2006). Nurse mentors in clinical practice have an important role in supporting nurse students' learning during clinical practice, but, according to previous studies, there seems to be a lack of supervision by the nurse mentors and a lack of support from them (Reid-Searl, Moxham, Walker, & Happell, 2009; Reid-Searl, Happell, Burke, & Gaskin, 2013). The opportunities for integration of knowledge and skills are necessary to ensure development of competent decision making skills (Honey & Lim, 2008).

Nursing education in Europe is guided by European regulations, and in different countries recommendation or curriculum guidelines direct the curriculums of nursing programmes. In Finland nursing education is a bachelor-level higher education, the undergraduate programme is a 3.5 years full-time course with seven semesters. Bachelor degree requires 210 ECTS (European Credit Transfer and Accumulation System) credits, with one ECTS credit meaning 27 h of students work. In addition to European regulations, the Finnish Ministry of Education published in 2006 guidelines for nursing education, where a minimum of 9 ECTS credits of medication education was recommended.

In Finland, a national structured educational initiative for supporting the development of nurse students' medication competence, the Medication Passport, was launched in autumn 2010. The Medication Passport was based on national collaboration and consensus on the requirements of graduating nurse students' medication competence. It is a student nurse's personal document, which contains a record of studies completed in pharmacology, medication management and medication calculations in a polytechnic school and clinical practice (Sulosaari, Erkkö, & Walta, 2010).

Yet, only little is known on recommendations implementation in undergraduate nursing programmes since the polytechnic schools have autonomy in their decisions on curriculum and variation on the amount of medication education has been identified in international research. Therefore, there is a need to critically evaluate nurses' medication education in undergraduate nursing programmes.

In this study, "medication education" is defined as a competence base necessary for safe and effective medication management. The content includes theoretical and practical principles of pharmacology, pharmacy and clinical pharmacology and theoretical and practical aspects of medication management and administration including medication calculation, clinical decision-making and patient education.

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