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Review

Educational interventions on evidence-based nursing in clinical practice: A systematic review with qualitative analysis

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ABSTRACT

Aims: To gather, assess and synthesise the currently available evidence of educational interventions on evidence-based nursing (EBN).
Background: Previous systematic reviews have focused on the items used in reporting educational interventions for facilitating evidence-based practices in medicine and health care or teaching research literacy in nursing as well as on the outcomes of these interventions.
Design: A systematic review based on a procedure of the Centre for Reviews and Disseminations for conducting a systematic review of health interventions.
Data Sources and Methods: Texts from 2008 to 2015 were sought from the Cochrane, CINAHL and PubMed Medline databases. Eight studies were selected for the final data and reviewed for quality. Data were analysed with narrative synthesis including qualitative content analysis.
Results: Four main categories and sixteen subcategories were identified. The learning contents included principles of EBN and research, the process of EBN, and planning a change in practice. The most popular teaching/learning methods were lectures/didactic presentations and group work. The interventions encouraged learners to critically examine and evaluate their practice. The interventions also improved participants' capacity to identify the need for research evidence in clinical practice.
Conclusion: The educational interventions were fairly similar and had promising results. However, as the level of evidence was modest in the studies, there are several development needs for interventions and further research challenges. Interventions should provide participants with sufficient competences for implementing every step of EBN, with special focus on the implementation of evidence in patient care. The assessment of the outcomes of interventions should cover all learning categories of EBN with focus on medium to long-term effectiveness. The influence of different teaching/learning methods and learning contexts and settings should be investigated further.

1. Introduction

Two Sicily statements (Dawes et al., 2005; Tilson et al., 2011) give recommendations for educational interventions on evidence-based practice (later EBP) in health care. The statements are based on literature and incorporate the experience of international delegates who attended Conferences of Evidence-Based Health Care Teachers and Developers. First conference was held in 2003 (Dawes et al., 2005) and the second one in 2009 (Tilson et al., 2011). The statements give recommendations for EBP competences, curricula and assessment tools for educational interventions. According to the first statement, it is a minimum requirement for all health care professionals, including nurses, to understand the principles of EBP, to have a critical attitude towards their own practice and to implement evidence-based policies. Teachers and leaders should have appraisal skills acquired through additional training and continuous evaluation of evidence. In order to deliver competences for EBP, curricula need to be grounded on a five-step model and should include learning in four components: attitudes, knowledge, skills, and practice. The five-step model of EBP consists of learning goals and competences, which include asking and searching for, appraising, integrating and evaluating evidence. (Dawes et al., 2005; see also Melnyk et al., 2014.)

The second Sicily statement identifies key principles for designing tools for assessing learning of EBP. According to the statement, educational assessment categories include the learner's reaction to the educational experience, his or her attitudes towards and knowledge about EBP, self-efficacy and skills in conducting EBP, behaviour congruent with EBP as a part of patient care, and benefits to patients. The tools used in assessing effectiveness need to reflect the aims of the curriculum, and aims should be matched with the needs and characteristics of learners. Students, for

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E-mail addresses: arja.haggman-laitila@uef.fi (A. Häggman-Laitila), lea-riitta.mattila@koti.fimnet.fi (L.-R. Mattila), hanna-leena.melender@vamk.fi (H.-L. Melender).

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0260-6917/

Table 1
Search terms from databases and strategy.

CINAHL	PubMed	Cochrane
(MH "research, nursing") and journal clubs OR (MH "professional practice, research-based") or (MH "nursing practice, research-based") or (MH "nursing practice, evidence-based") or (MH "practice guidelines"), (MH "quality improvement") or (MH "quality assessment") or (MH "quality management, organisational") or (MH "evaluation and quality improvement program") or (MH "quality of nursing care"), (MH "collaboration"), peer reviewed; research article	"Evidence-based nursing" and journal clubs and ("nursing education" or collaboration or quality or development* or improvement*), case reports; journal article; clinical trial; evaluation studies; meta-analysis; practice guideline; randomised controlled trial; review	"'Evidence-based nursing", Cochrane reviews, other reviews, trials, method studies, technology assessments, economic evaluations, Cochrane groups

Strategy:
(MH "research, nursing") or (MH "professional practice, research-based") or (MH "nursing practice, research-based") or (MH "nursing practice, evidence-based") or (MH "practice guidelines").
(MH "research, nursing") or (MH "professional practice, research-based") or (MH "nursing practice, research-based") or (MH "nursing practice, evidence-based") or (MH "practice guidelines"), Limiters — peer reviewed; Published date from: 20080101–20131231.
"Evidence based nursing".
2 or 3.
(MH "staff development instructors") or (MH "professional development") or (MH "organisational development") or (MH "system development") or (MH "staff development").
4 and 5.
4 and 5, Limiters — peer reviewed; English language; Abstract available; Published date from: 20080101–20131231, research article.
(MH "quality improvement") or (MH "quality assessment") or (MH "quality management, organisational") or (MH "evaluation and quality improvement program") or (MH "quality of nursing care").
4 and 8.
4 and 8, Limiters — as 7.
JN "evidence based nursing" and quality.
JN "evidence based nursing".
(MH "collaboration").
4 and 13.
4 and 13, Limiters — as 7.
(4 and 13) and attitude* Limiters — as 7.
(MH "education+").
4 and 17.
4 and 17, Limiters — as 7.
7 or 10 or 15.
7 or 10 or 15, Limiters — exclude MEDLINE records.

example, must learn to perform the five time-intensive steps of EBP, whereas health professionals in charge of managing services may require skills in using evidence summaries. The contexts of learning, teaching and using EBP also need to be considered during the assessment. (Tilson et al., 2011.)

In recent decades, a lot of research interest has been devoted to understanding why nurses in clinical practice still base their decisions on sources other than research knowledge (Thompson et al., 2007; Carlson and Plonczynski, 2008; Munten et al., 2010; O'Byrne and Smith, 2011; Rycroft-Malone et al., 2013). Health care organisations have developed their strategies, facilities, culture and leadership to support evidence-based nursing (henceforth referred to as EBN) (Wallen et al., 2010; Gerrish et al., 2011; Hauck et al., 2013; Wilson et al., 2015). EBN competences and strategies for their integration have also been determined in order to guide nurses towards continuous learning (Melnyk et al., 2014). However, the implementation of EBN remains challenging. Organisations have offered educational activities in clinical practice, but the results of these interventions have been sporadic. It is difficult to establish an overall picture of the course format, design and outcomes of the interventions for learning EBN in clinical practice.

The aim of this systematic review was to gather, assess and synthesise the currently available evidence of educational interventions on EBN. The research questions were:

1. What kinds of educational interventions have been used in order to promote nurses' learning of EBN in clinical practice?
2. What outcomes have been achieved by using these interventions?

1.1. Previous Systematic Reviews

We found two previous systematic reviews closely related to our subject. Aglen (2015) reviewed pedagogical strategies for teaching information literacy and the research process for nursing students, while Hines et al. (2015) reviewed those for teaching research literacy for nursing students and nurses. Aglen's review included 39 studies.

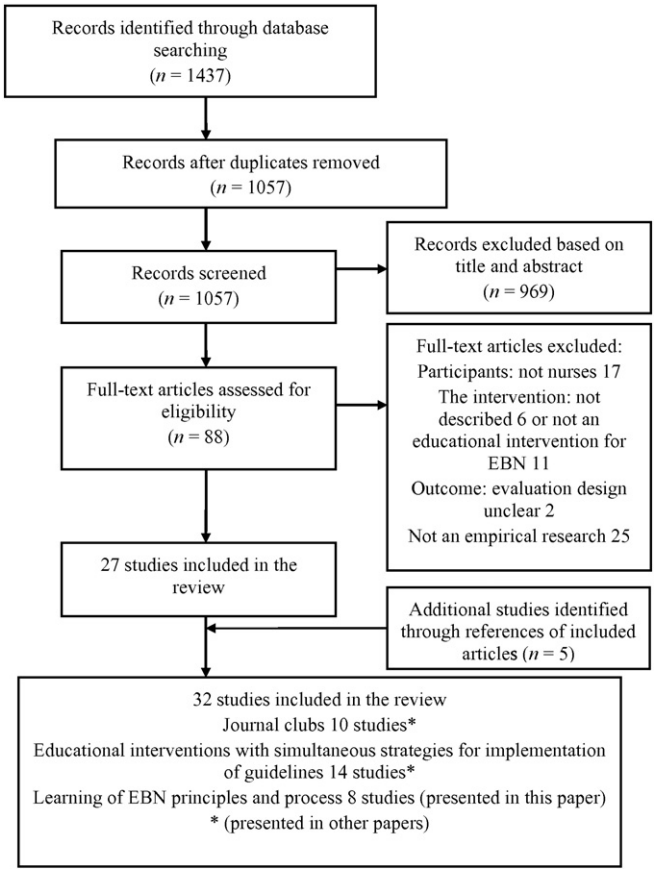

Fig. 1. PRISMA flow chart.