



Teaching core EBP skills to post-graduate nursing students

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Introduction

It is important that nurses working in healthcare systems worldwide are in a position to respond and adapt to the complexities of care on a daily basis. It is widely acknowledged that evidence-based practice (EBP) is necessary in order to improve patient outcomes and deliver quality care (Albarqouni et al., 2018; Melnyk, Gallagher-Ford, Long, & Fineout-Overholt, 2014). EBP is also becoming a key expectation of both professional and regulatory bodies for healthcare professionals worldwide. Despite this EBP utilization among health professionals remains variable at best (Melnyk et al., 2014) and patients are potentially failing to benefit from healthcare advances that could save lives (Melnyk & Fineout-Overholt, 2019). Despite recognition of the benefits of EBP there is still disparity on how best to promote its application in practice. Educational efforts to date have failed to achieve consistent EBP utilization (Albarqouni et al., 2018; Ubbink, Guyatt, & Vermeulen, 2013). Key barriers include a lack of EBP knowledge and skills (Levin & Feldman, 2013; Melnyk & Fineout-Overholt, 2019), insufficient awareness of EBP principles (Horntvedt, Nordsteien, Fermann, & Severinsson, 2018) and poor information literacy skills (Kolstad, 2017). How best to ensure nursing students emerge from programmes with the necessary knowledge, skills and competencies to operationalise EBP going forward is a key challenge. This provided the impetus for the current initiative, which was to provide a dedicated EBP module to qualified nurses undertaking a Masters in Nursing programme in the Republic of Ireland.

Description of the intervention

The module was specifically crafted to embed EBP competencies (Melnyk et al., 2014) across the teaching, learning and assessment strategies using the seven steps of the EBP process (Melnyk & Fineout-Overholt, 2019) as the guiding template. The aim was to provide

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3 students with a ready to use skill set for EBP in practice. The module was delivered over one
4 semester and included face to face teaching; a virtual learning environment (VLE) to enable
5 active engagement with module tasks and promote student involvement in the learning
6 process (Levin & Feldman, 2013); and a written assignment structured to mirror the steps of
7 the EBP process.
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15 Face to face teaching included formulating PICOT (Population, Intervention,
16 Comparison/context, Outcome, Time) questions utilising recognized templates (Melnyk &
17 Fineout-Overholt, 2019). This was supported by an online student forum enabling peer and
18 self-review of uploaded PICOT questions and provided a fertile ground for shared learning.
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20 In also offered a formative feedback mechanism to identify aspects students were grappling
21 with. A key relationship was established at the outset with the subject librarian for nursing.
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23 Their input included guidance on literacy skills, database searching and literature retrieval.
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25 The importance of building firm partnerships with librarians who can help to build literacy
26 skills, essential for EBP, has previously been recognised (Horntvedt et al., 2018; Kolstad,
27 2017). Additional classroom activities included using rapid critical appraisal tools to review
28 evidence and student presentations of completed synthesis tables, both designed to foster
29 skills in appraising and evaluating evidence for practice.
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44 The written assignment afforded students the opportunity to articulate knowledge of the
45 principles and process of EBP. They were required to select a clinical issue of interest;
46 generate a searchable, answerable PICO(T) question; detail a clear search strategy including
47 rating evidence retrieved; examine the best available evidence incorporating their own
48 clinical expertise and patient preferences (where relevant) to guide the discussion and inform
49 decision-making. They then had to determine whether a change to current practice was
50 warranted based on the evidence; and finally propose a detailed implementation strategy.
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3 Time constraints meant that implementation of any new evidence to practice and subsequent
4 evaluation was not possible or feasible during one semester. Students were however expected
5 to provide a detailed plan on how evidence could be translated into practice drawing on
6 recognised models/frameworks for EBP implementation. The coordinator was keen to have
7 implementation science explicit in both the module content and assessment given its critical
8 role to achieving sustained implementation of EBP (McNett, Tucker, & Melnyk, 2019). The
9 student also had to clearly articulate their contribution to the proposed implementation
10 process as a potential EBP champion in practice.
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21 22 **Methods used to evaluate outcomes /results**

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25 Students were asked to complete end of semester evaluations. Overall the evaluations were
26 very positive. Students reported a sense of achievement at having acquired ready to use EBP
27 skills and competencies applicable to practice, a key learning outcome. Challenges included
28 achieving competency in PICO(T) formulation. This process involved much re-framing of
29 questions. The benefits included uncovering a core practice issue of focus. They reported
30 increased confidence in their ability to seek out and appraise evidence. They also felt the
31 module had provided them with a good direction of travel to help them move forward and
32 address a 'problem' issue in practice.
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44 45 **Conclusions and recommendations**

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48 The current endeavour set out to equip students with a "hands-on" practical approach to
49 acquiring knowledge, skills and competencies for EBP. While certain aspects proved
50 challenging for students they also saw the benefits. They included a clearly articulated
51 clinical question, a supporting evidence base to inform decision-making and a clear
52 implementation strategy to progress. Crafting the module to mirror the steps of the EBP
53 process also introduced them to the concepts of EBP and a language heavily embedded with
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3 terminology associated with the process. Module tasks also compelled them to engage
4 repeatedly with the process. This offered a real opportunity to build EBP competencies and
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6 potentially improve quality of care delivery going forward.
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10 **LINKING EVIDENCE TO ACTION**

- 14 • Crafting module activities to mirror the steps of the EBP process can help to reinforce
15 learning and promote student engagement.
- 16 • Linking in with librarians is pivotal to help develop competency in literacy skills
17 fundamental to support EBP implementation.
- 18 • Innovative educational approaches have the potential to develop EBP competencies.
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