Evidence-Based Practice: misconceptions and challenges

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Introduction

• Research utilization
• Extent of research utilization in nursing
• Barriers to research utilization
• Limitations of ‘research utilization’ as a concept to bridge the research-practice gap
• Evidence-based practice (EBP)
• Role of stakeholders in EBP
• Challenges and the way forward for meaningful EBP
Research utilization (RU)

- Discussed in nursing in the late 1970’s (see Horsley et al., 1978)
- It simply means using research findings to improve practice
- Different types of RU (conceptual, instrumental etc.)
- RU strategies adopt a top-down approach, with emphasis on changing behaviours
- Researchers (mainly) decide what topics they research
- Interpretation of findings reside with researchers
Evidence-based practice

- Background of evidence-based practice (EBP)
- Misunderstanding/misinterpretation of EBP
- EBP is more than just about research evidence
- EBP starts with clinicians/practitioners
- EBP can be achieved if all stakeholders are aware of their roles and responsibilities
Definition

...... the conscientious, explicit and judicious use of current based evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating individual clinical expertise with the best available external clinical evidence from systematic research.

Sackett et al. (1996)
……the collection, interpretation, and integration of valid, important and applicable patient-reported, clinician-observed, and research-derived evidence. The best available evidence, moderated by patient circumstances and preferences, is applied to improve the quality of clinical judgements and facilitate cost-effective health care.

McMaster University Evidence-Based Medicine Group (1996)
Components and Context of Evidence-based Practice (expanded from Sackett et al (1996))

Available Resources

Legal issues

Professional Expertise

Evidence-based Practice

Patients’ Information and Preference

Work Culture

Ethical issues

Research
EBP involves

• Decision making
• Reflective practice
• Critical thinking
• Research
Research is the systematic collection and analysis of data for the purpose of answering (researchable) question/s.
EBP involves

...asking relevant, focused questions (e.g. best way to address bedwetting among older children)
... learning how to access and interpret research evidence and use it in conjunction with information from other sources (patient, parents, own’s expertise etc.)
.... critically reading literature in own’s field
.... learning how to evaluate practice
.... Use guidelines where appropriate (e.g. The Irish Paediatric Early Warning System [PEWS])
Evidence-based practice process

- Formulate a clear question related to policy or practice
- Search for relevant research studies
- Appraise selected studies (based on their quality)
- Analyse and synthesise the findings of these studies
- Dissemination the results
- Implement the evidence
- Evaluate the change

Parahoo (2006)
Difference between EBP and research

- Evidence-based practice starts with practitioners but research starts with researchers.
- The responsibility for evidence-based practice lies with practitioners not researchers.
- One cannot expect all nurses to be researchers. Only a small proportion of the nurse research should be responsible for conducting research required by the profession.
- Research findings may or may not find its way into practice.
Extent of research utilisation (Squires et.al., 2011)

The objective of this study was to systematically identify and analyze the available evidence related to the extent to which nurses use research findings in practice.

- 55 studies were reviewed

- Nurses' reported use of research is moderate-high and has remained relatively consistent over time until the early 2000's.

- This finding, however, may paint an overly optimistic picture of research utilisation.

- This has remained relatively unchanged over the last 40 years.
Barriers to research utilization


- The main barriers reported were related to the setting, and the presentation of research findings.


- The most identified barriers are lack of time, inadequate facilities and resources to implement new ideas, no enough authority to implement new ideas, lack of administrative support and others.

A random sample of 200 RSCNs were surveyed in this study that aimed to provide a better understanding of barriers to, and facilitators of, research utilisation in the Republic of Ireland.

The most frequently cited barrier was lack of time to implement new ideas. All eight characteristics of the organisation feature in the ten highest barriers, with characteristics of adopter and innovation ranking among the five lowest barriers.
Attitude, awareness, and knowledge of pediatric nurses to EBP
Evidence-Based Practice: A Survey Among Pediatric Nurses and Pediatricians (Maaskant et al., 2013)

- The survey (255 nurses and 128 pediatricians) in Holland, compared the attitude, awareness, and knowledge of pediatric nurses and pediatricians regarding evidence-based practice (EBP).

- Both nurses and pediatricians welcomed EBP (mean scores are 73.3 and 75.4 out of 100).

- Overall, 52% of the nurses and 36% of the pediatricians did not know relevant sources of information, and 62% of the nurses versus 19% of the pediatricians did not know common EBP terms.

- Time constraints and lack of knowledge were considered as major barriers.
The nature of research evidence

Research evidence is unlikely to be used if it:

• Is not relevant to current practice, is effective, efficient, and practical
• Is too theoretical, complex, inconclusive and not easily transferable into practice and policy
• Requires high effort to implement and use
• Involves a high amount of risk and responsibility
• Does not suit practitioner or agency needs

An example of practice not based on evidence

Many children suffering asthma attacks receive a drug to open their airways with a nebulizer in an ED, for example, when research has shown that using a metered-dose inhaler with a spacer leads to fewer side effects, less time in the ED and lower likelihood of hospitalization (Melnyk et al. (2012))
“Paediatrics is a field of particular concern as there is a lack of scientific evidence for the use of therapies in children. Many treatments tested only in adults have been adapted to be used in children without being investigated specifically for use in this patient group” (Health Research Authority (2016)).

‘The scant evidence base is impeding the development of clinical guidance and policy (in paediatrics)—less than 20% of the outputs of the National Institute for Health and Clinical Excellence are applicable to children’ (Modi 2016).
Brenner et al. (2015)
The aim of this study was to explore Irish parents’ perspectives of the transition of a child with complex respiratory health care needs, from hospital to home, which could help inform the national model of care for the discharge to home of this group.

Brenner (2014)
The aim was to identify research priorities for children's nursing in an acute care setting in Ireland. The top three priorities identified were recognition and care of the deteriorating child, safe transfer of the critically ill child between acute health care facilities, and the child and family's perceptions of care at end-of life.
Stakeholders

- Frontline nurses
- Government
- Managers
- Professional organisations
- Healthcare organisations
- Researchers
- Educators

Evidence-based practice
Front-line nurses

- Critically reflect on their practice
- Ask the right questions
- Search for the evidence
- Appraise the evidence
- Implement/evaluate change as appropriate
- Seek opportunities to continue to develop professionally (participation in courses, conferences, etc.)
- Take part in research projects where relevant and appropriate
Managers

- Take a leadership role in evidence-based practice
- Assess the resource and support needs of staff
- Create support structures for staff
- Promote a culture to encourage staff to question practice
- Assess the barriers and facilitators to evidence-based practice in their setting
- Facilitate staff to develop their evidence-based practice skills and knowledge
- Learn from experience of implementing evidence-based practice and celebrate success
Healthcare organizations

- Ensure that a written strategy and action plan is developed and accessible to all staff
- Provide resources and facilities for staff to access evidence
- Create a research culture within the entire organisation
- Create reward mechanisms to reward and celebrate achievements
Educators

• Educate nurses to think critically and question what they (and others) do
• Help students to develop the skill of asking relevant evidence-based practice questions
• Educate students to acquire evidence-based practice skills (e.g. searching, appraising, implementing, evaluating)
• Educate students to resist the pressure to conform to traditional, non-evidence-based practice
Educators

• Provide students with the skills to work as autonomous practitioners within multidisciplinary teams
• Put less emphasis on teaching undergraduate students how to do research and more on how to use research and implement change
Researchers

• Work collaboratively (as appropriate) to identify clinical practices for which there is little or no evidence
• Carry out research to meet the needs of practitioners and policy-makers
• Involve practitioners in research activities, as appropriate and feasible
• Translate research findings into accessible and user-friendly information (e.g. avoid statistical details, academic language, etc.)
• Carry out systematic reviews
Professional organizations (e.g. nurses associations)

• Develop strategies for promoting evidence-based practice in their professions
• Provide opportunities for discussing/sharing evidence-based practice issues (e.g. conferences, workshops)
• Develop and disseminate relevant material to enhance evidence-based practice
• Advocate the need for evidence-based practice and for nurses to acquire the skills, knowledge and opportunities to use research
Government

- Recognise that nursing (including ‘bedside nursing’) requires evidence to underpin its practice
- Recognise that all health professionals should be educated, at least, to graduate level
- Develop and implement strategies for evidence-based healthcare
- Provide funding and other resources to make evidence-based practice a reality
Leen et al. (2014)

"Evidence-based practice: a practice manual"

Self-assessment should be an integral part of the continuous cycle of EBP. The checklist below sets out some of the questions you might consider:

**EBP Self-Assessment Checklist**

- Am I asking any clinical questions?
- Am I actively locating evidence/practice gaps and articulating questions based on same?
- Do I search the sources of best evidence in my clinical discipline?
Conclusions

- Evidence-based practice starts with a practice/clinical question
- It takes professional expertise and patients’ preferences/wishes and the best research evidence into account
- It is about decision-making
- A number of stakeholders have responsibilities in promoting EBP
- Without practitioners/clinicians, there is no EBP
Selected references


Melnyk et al. (2012) USPSTF Perspective on Evidence-Based Preventive: Recommendations for Children*Pediatrics* 2012;130:e399–e407

Leen, Brendan;Bell,Miriam & McQuillan, Patricia "Evidence-based practice: a practice manual" Kilkenny. HSE 2014.
