Evidence-based nursing: clarifying the concepts for nurses in practice

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Aim. To provide a critical analysis of key concepts associated with evidence-based nursing (EBN) to substantiate an operational definition for nurses to use in practice.

Background. Despite the plethora of literature surrounding what evidence-based nursing is and is not and how it differs from its cousins, evidence-based medicine and evidence-based practice, nurses still struggle to get evidence into practice. Several reasons for this have been reported, for example, a lack of understanding about what evidence-based nursing means or time to engage with and apply the evidence into practice.

Design. An in-depth critical review and synthesis of literature was undertaken.

Method. Using the key words; evidence-based nursing, evidence-based medicine and evidence-based practice 496 articles were yielded. These articles were limited to 83. Using Burns and Grove’s (2001) phased approach to reviewing the literature the articles were critically reviewed and categorised into key concepts and themes.

Results. The in-depth critical review and synthesis of the literature demonstrated that evidence-based nursing could be defined as a distinct concept. The review clearly shows that for evidence-based nursing to occur, nurses need to be aware of what evidence-based nursing means, what constitutes evidence, how evidence-based nursing differs from evidence-based medicine and evidence-based practice and what the process is to engage with and apply the evidence.

Conclusion. The in-depth critical review and synthesis of the evidence-based nursing literature reinforces the need to consolidate a position for nursing in the evidence-based field. The review confirms that evidence-based nursing can be defined and conceptualised; however, for nurses to engage and apply with the evidence-based processes they need to be informed of what these are and how to engage with them in practice.

Relevance to clinical practice. This paper examines the concept of evidence-based nursing and its application to clinical practice.

Key words: evidence, evidence-based medicine, evidence-based practice, nurses, nursing

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Introduction

The drivers for EBN according to McSherry et al. (2006) are based on a combination of political, professional and societal factors. Politically, EBN is essential because of its potential to save time and money and improve patient outcomes by decreasing costs, through standardising and streamlining care. Elcoat (2000) and McSherry and Haddock (1999) argue that EBN has a very strong position in the clinical governance agenda. This is important because quality improvement emphasises the main components, being the development of an evidence-based culture through offering strategic direction for developing, applying and evaluating the skills in practice. In addition, Jones and Santaguida (2005) highlight that National Health Service (NHS) policies clearly identify the need for practice and policy to be evidence-based.
Professionally, the term evidence-base is regarded by professional bodies such as the Nursing Midwifery Council (NMC 2004), General Medical Council (GMC) (GMC 2001) and the Health Professional Council (HPC) (HPC 2004) as a professional obligation to inform decision-making in the quest for quality care. Societal perspectives highlight the public’s demands for the provision of best practice. Simpson (2004) advocates that developments in information access and communication have provided the public with a greater awareness of the country’s health system and also comparable alternatives. Consumers of health care are becoming more informed and ready to challenge authorities in health care, consequently expectations of health care provisions continue to rise, as people are encouraged to take responsibility and become actively involved in health care decisions (Levitt et al. 2000). When intervention is needed, expectations are high with the most appropriate and best treatment demanded (Berenholz & Provonost 2003).

Despite the reported relative merits and demerits of engaging with and applying the evidence, nurses continue to struggle in making this happen (Closs & Cheater 1999). The aim of this paper is to offer a critique of contemporary perspectives reported in the literature on EBN. This will be achieved by clarifying the terminology associated with the evidence-based movement and by differentiating EBP from EBN. The paper offers an operational definition of EBN and its elements. Furthermore, the concepts of ‘evidence’ and ‘constitutes’ are examined with analysis of application and implications to nursing practice.

### Literature review: establishing the current position of evidence-based nursing

To establish the current position of EBN an extensive literature review defined by Dunleavy (1988), as ‘a systemic reading of existing academic writing on a particular topic’ was performed.

The rationale for undertaking an extensive literature review was, as suggested by Dunleavy (1988) and Burns and Grove (2001), to establish the critical points of current knowledge on a particular topic. An extensive literature review was performed as opposed to a systematic review because a systematic review is viewed as a research method for data extraction (Burns & Grove 2001, Aboelela et al. 2006) unlike an extensive literature review whose ultimate goal is to bring the reader up to date with current literature on a topic (Cooper 1998). A literature search was performed relating to EBN including perceptions of the concept and its application in practice. Four methods were used to ascertain relevant articles and information:

1. An electronic literature survey conducted on databases provided through Ovid online;
2. Hand searches within the University library;
3. Internet search using search engines yahoo and google;
4. Bibliographies of all retrieved and relevant publications were examined for further appropriate studies.

A 15-year restriction was applied on the date as the notion and theoretical underpinnings of EBN were not perceived to be beyond this period. Prior to this, with the exception of Cochrane’s work, there was no formal recognition of the concept.

Following the retrieval of the literature Burns and Grove’s (2001) four-phased approach to reviewing the literature was adopted. This included; skimming, comprehension, analysis and synthesis of sources. Skimming related to reviewing the 496 articles titles, abstracts and references for key words and themes to include or exclude articles for review. Following this process a total of 83 articles were included in the review. Comprehension pertained to critically reviewing the articles for key concepts, themes and note taking creative ideas about the content. Analysing invoked the skills of critical appraisal as outlined by Crombie (1996) which include reviewing, comparing and contrasting to formulate key concepts and themes. Synthesising involved clarifying the meaning of all the information gathered as part of the literature review. The review highlighted several important elements associated with getting evidence into nursing practice. What was more fundamentally important from this literature review was that for EBN to occur nurses need to be aware of the broader concepts akin to getting evidence into practice before developing the specific skills and characteristics for this to happen. To this end nurses need to be informed of what the evidence-based movement is, that is: a clarification of the terms, EBN; differentiating EBP and EBN; constitutes of evidence and the implementation of EBN.

### The evidence-based movement: clarifying terms

In 1970 Archie Cochrane pioneered the notion that health services must be evaluated on the basis of scientific evidence rather than on clinical impression (Alvarez-Dardet & Ruiz 1993, Levin 2001). Clarke (1999) and Gillenwater and Gray (2003) portray Cochrane as a maverick and renowned epidemiologist, who recognised and articulated a gap in medical evidence. Cochrane argued that much of contemporary medical practice was ineffective or at worst harmful (Pope 2003). The revolutionary work of Cochrane advocated the use of randomised controlled trials (RCTs) to provide scientific support and evidence for effective medical interventions whilst at the same time ensuring that resources were...
used efficiently and effectively (Gillenwater & Gray 2003). Despite the groundbreaking work of Cochrane, it took two decades to see an escalating interest and application of his ideas. This resulted in the establishment of the ‘Cochrane Collaboration’: an international organisation providing up to date information on health care and current evidence-based databases (Levin 2001, Cochrane 2005). It is this conjunction in medical history that heralded the birth of evidence-based medicine (EBM). The value of EBM at this time arose as a new paradigm for teaching medical students at McMaster’s University, Canada (O’Rourke 1998, Magarey 2001, Cliff et al. 2004, Mykhalovskiy & Weir 2004). McKibbon et al. (1995) considered EBM as an approach to health care that promotes the collection, interpretation and integration of valid and applicable patient reported, clinician-observed and research derived evidence. This is echoed in one of the most renowned and widest definitions used of EBM by Sackett et al.’s (1996) who define it as:

The conscientious, explicit and judicious use of current best evidence in making decisions about the care of individual patients.

Sackett et al. (1996) definition indicates that when considering any evidence, or indeed, the best evidence, it is examined to determine its effectiveness prior to use or application to the care of patients. Moreover, it clearly demonstrates an application to decision-making about individual care rather than ‘blanket’ administration to a group of patients. For health care professionals who endeavour to provide the best care for their patients, it would be difficult to ignore the principles behind EBM. However, what Sackett et al.’s (1996) definition fails to do is indicate how to ascertain whether evidence is good and what is ultimately the best. In contrast Winch et al. (2002) do emphasise that within EBM, there is an emphasis on the comprehensive evaluation of relevant research using a systematic approach. This systematic approach to evaluation is acknowledged in Rosenberg and Donald’s (1995) definition of EBM:

A process whereby a systematic approach is used to find, appraise and use contemporaneous research findings as a basis for making clinical decisions.

Pope (2003) expands Rosenberg and Donald’s (1995) ideas by insinuating that the process is one, which explicitly applies research evidence to the practice of medicine. Muir Gray (1997) unlike Sackett et al. (1996) views EBM from a broader perspective where by it can be seen as a project for reshaping biomedical practice through creating an organising presence for clinical research within medical decision making: from the definitions offered by Sackett et al. (1996) and Rosenberg and Donald (1995) it is evident that the key elements of EBM include the systematic use of appraisal techniques on research evidence to make clinical medical decisions more efficient and effective. Surprisingly, what is not always apparent in all definitions is the focus on individualised care.

Given the popularity of EBM, the phrase has radically expanded and been adopted and adapted under the guise and term of EBP (French 1999, 2002) by other professionals within the health care arena. According to French (1999), the origin of the EBP is difficult to determine because there is a distinct lack of empirical evidence demonstrating the development of the concept and generation of the underlying principles. Morris et al. (2001) suggest that generally EBP appears to be used as a broad generic term evolving from EBM, thus becoming an umbrella term, which encompasses several specialities (including medicine). Clarke (1999) reinforces this notion, suggesting that EBP should not be accepted as being the same as EBM but should embrace a wider spectrum of principles emphasising the diversity and range of healthcare practices. Many specialist areas of health care have aligned themselves to the evidence-based movement by referring it to their specific practice area, e.g. evidence-based health promotion (Perkins et al. 2001), evidence-based health visiting, (Elkan et al. 2001) and evidence-based midwifery (Carr & Schott 2002). However, Kitson (1997) indicates that the notion of EBP cannot be easily transferred directly to individual elements of health care and that the simple translation of EBM to EBP may be inappropriate without an alteration to some elements of the underlying conceptual framework of EBP.

By considering the application of the evidence-based notion to differing healthcare professions as exemplified by Perkins et al. (2001), Elkan et al. (2001), Carr and Schott (2002) and Kitson (1997) it is apparent that EBP is often expressed as the transfer of EBM theories directly onto other health care practices. According to Pearson (2001), EBP is the process of making clinical decisions based on the most valid and relevant information currently available. Similarly, Ciliska et al. (2001) argue EBP, is not unlike EBM in that it involves integrating the best available research evidence with information about patient preferences, clinical skill level and available resources to make decisions about care. In support of Ciliska et al. (2001), Windell (2003) argues that EBP incorporates theory, clinical decision-making, judgement and research knowledge to arrive at the application of the best, most effective and most useful evidence to specific elements of practice. Likewise, DeGeorges (1999) purports that EBP involves identifying research, evaluating its strengths and weaknesses, synthesising sometimes-divergent conclusions and applying the resulting insights to daily patient care.
Defining evidence-based nursing

Evidence-based nursing is a term or phrase often used interchangeably in nursing practice with the title of EBP. Jennings and Loan (2001) argue that although this frequent interchange is rarely questioned. This is significant because it may contribute to misconceptions. Zeitz and McCutcheon (2003) indicate that the nursing profession has embraced EBP, but, the concept of EBN, even today, has yet to become reality. French (1999) believes has occurred because the concept of EBN, even today, has yet to become reality. French (2002) further purports that EBN is merely a construct and has yet to be successfully implemented. However, in opposition, Jennings and Loan (2001) suggest that although EBN is often incorrectly used, as a synonym for research-based practice, which has been around for much longer. Lindberg (2004) suggests that EBN contains similar elements to research-based practice and French (1999) believes that the term research-based nursing is adequate when considering the implementation of evidence. French (2002) further purports that EBN is merely a construct and has yet to be successfully implemented. However, in opposition, Jennings and Loan (2001) suggest that although EBN is often incorrectly used, as a synonym for research utilisation, in reality, research use and research based practice are subsets of EBN. Additionally, when debating this, French (2002) fails to take into account the extensive nature of EBN. Carnwell (2000) capitalises on this void by emphasising that it encompasses a broader meaning than systematic research use by: encouraging decision-making, synthesis of knowledge and skills, along with changes in practice to individualised care of patients. In support of Carnwell (2000), Ciliska et al. (2001) and Flemming (1998) argue that EBN is a process, which expands beyond application and necessitates evaluation and rigorous review. Flemming (1998) also reinforces that the process encompasses the use of best available evidence alongside clinical expertise and the patients’ perspective, to plan care as well as evaluate the performance through a process of self-reflection or peer assessment. Despite EBN being highlighted as process for getting evidence into practice, the dilemma exists about how this should occur in relation to nursing and nursing practice.

Greater complexities arise when attempting the application of EBP to nursing which could be likened to the debate offered by Elkan et al. (2000) in relation to health visiting. Elkan et al. (2000), purport that to implement EBP there needs to be an understanding of the nature of health visiting which needs to be model based to shape goals. Only then they believe, can practice be evaluated and moved forward. Synthesising this notion into nursing practice illuminates the ongoing debate as to the nature of nursing. Despite the introduction of specific nursing theories i.e. theoretical frameworks on which to base care and direct nursing practice such as nursing models and the nursing process the definition debate still continues. In essence, the dilemma in defining EBN is complicated by the dilemma in defining nursing. The Royal College of Nursing (RCN 2003) attempted to review this dilemma and dichotomies within definitions of nursing. They describe nursing as:

The use of clinical judgment in the provision of care to enable people to improve, maintain or recover health, to cope with health problems and to achieve the best possible quality of life, whatever their disease or disability until death.

Allen (2003), while critiquing the RCN’s definition suggests that attempts to define nursing are a futile exercise, as one of the elements of effective nursing involves constant moves forward and change to practice and roles. However, this definition from the RCN and the supporting characteristics is probably one of the most comprehensive offered to date. It clearly stipulates that clinical judgement is one of the major facets to nursing practice, which in itself reinforces the notion of EBP and ultimately EBN. Judgement or decision making as a process using the best available research evidence, clinical expertise and patient preferences could therefore be synthesised as a proposed definition of EBN. In support of this, Thompson (2003) suggests that EBN is a process, designed as a means of combating biases that arise from uninformed decision-making and does this by steering nurses towards the ‘best’ form of research evidence. However having highlighted what EBN and EBP mean is there a real difference between the terms?

Differentiating evidence-based practice and evidence-based nursing

Ingersoll (2000) argues that many nursing scholars express concern about the direct application of EBP to nursing
practice and advocates that there are several components absent from EBP, which are essential to nursing care. These include; the reluctance to accept qualitative research as evidence, the importance of the theoretical foundation of nursing practice, the philosophical drives for nursing and technical aspects that shape decision making in nursing. Ingersoll includes these in her definition stating that:

Evidence-based nursing is the conscientious, explicit and judicious use of theory derived, research based information in making decisions about care delivery systems and in consideration of internal and external consumer needs and preferences. (Ingersoll 2000)

To differentiate the concepts of EBN and EBP, 13 definitions from the literature were collated and scrutinised to determine the main components and key elements. Eleven key elements were extracted from the definitions as demonstrated in Table 1. Table 2 further demonstrates their inclusion within the definitions. To determine the frequency of the occurrence of the elements within each concept i.e. EBP and EBN, their distribution in the definitions was analysed as shown in Fig. 1.

It can be seen from Fig. 1 that all definitions include some form of research or evidence utilisation. Both EBP and EBN promote the use of best evidence and also highlight the value of clinical expertise when making decisions about evidence-based care (Muir Gray 1997, Giliska et al. 2001, Pearson 2001, Windell 2003). The elements most heavily highlighted in EBN definitions, included theory driven practice: pertaining to how research as evidence becomes theory, which underpins practice. However, the theory/evidence arguments need further debate (McSherry et al. 2006). Patient involvement reiterates the nursing profession’s philosophy of actively encouraging patient empowerment (Neuhauser 2003, Hewitt-Taylor 2004). The final major element emphasises the nature of EBN being a process, yet the definitions fail to highlight what the process is and how it can be implemented. In summarising the concepts of EBN it can be seen to differ from EBP in that EBN involves additional elements in its implementation, this being patient involvement as part of an ongoing process.

Based on a synthesis of these elements, EBN could be defined as ‘an ongoing process by which evidence, nursing theory and the practitioners’ clinical expertise are critically evaluated and considered, in conjunction with patient involvement, to provide delivery of optimum nursing care for the individual.’ This proposed definition of EBN indicates the use of evidence, theory and expertise in making decisions about optimum care for and with the individual patient. There is clear emphasis at the onset that EBN is a process that does not end once the decision has been made, but evaluation continues within the process, which also involves the implementation of decision-making based on outcomes. However despite the fact that a body of knowledge is emerging about what EBN is and involves, the challenge is, in encouraging nurses to engage with the process in practice.

### Implementing evidence-based nursing

Despite the rhetoric of enthusiasm surrounding EBN, Gagan and Hewitt-Taylor (2004) emphasise that the uptake and the transfer of evidence into practice remains difficult and challenging. There is an abundance of literature highlighting problems associated with implementation of EBN (Drury 1998, Berenholtz & Pronovost 2003, Glacken & Chaney 2004, McKenna et al. 2004), yet, there is little evidence offering a contextual framework for its development and implementation. Viewing EBN as a process for practice implementation rather than theoretical conceptualisation may prove to be a more appropriate approach to permit application within the context of practice.

Considering EBN as a process it would be pertinent to explore the process further within the context that it is to be implemented and also consider strategies for using the process. Rycroft-Malone et al. (2004), view evidence, context and facilitation as key elements to successful implementation within a framework. The conceptual framework presented is the Promoting Action on Research Implementation in Health Services (PARHIS) Framework (Rycroft-Malone et al. 2004). This is however complex and subdivides into several additional areas, with little clarification how to progress staff engagement within the framework or how to use it effectively. The elements and sub elements within the framework provide a sound basis for evaluating the contextual environment for application and implementation of EBN.
Table 1  Definitions of EBP/EBN and elements

<table>
<thead>
<tr>
<th>Definition</th>
<th>EBP or EBN</th>
<th>Author and year</th>
<th>Elements [l]</th>
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<tbody>
<tr>
<td>EBP is the combination of individual, clinical or professional expertise with the best available external evidence to produce practice that is most likely to lead to a positive outcome for a client or patient</td>
<td>EBP</td>
<td>The Joanna Briggs Institute (2004)</td>
<td>4, 8</td>
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<td>EBP involves the application of the best available evidence often from research findings into the clinical setting to ensure best practice</td>
<td>EBP</td>
<td>Grimmer et al. (2004)</td>
<td>1, 3, 4</td>
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<td>The integration of the best evidence available, nursing expertise and the values and preferences of the individuals, families and communities who are served</td>
<td>EBN</td>
<td>Sigma Theta tau (2004)</td>
<td>1, 2, 3, 4, 5, 8, 9, 10</td>
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<td>A process designed as a means of combating biases that arise from uniformed decision-making and does this by steering nurses towards the best form of evidence</td>
<td>EBN</td>
<td>Thompson (2003)</td>
<td>3, 4, 7, 9, 11</td>
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<tr>
<td>EBP incorporates theory, clinical decision-making, and judgement and research knowledge to arrive at the application of best and most effective and most useful evidence to specific elements of practice</td>
<td>EBP</td>
<td>Windell (2003)</td>
<td>3, 4, 7, 8, 9</td>
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<tr>
<td>The conscientious, explicit and judicious use of theory derived, research based information in making decisions about care delivery systems and in consideration of internal and external consumer needs and preferences</td>
<td>EBN</td>
<td>Ingersoll (2000)</td>
<td>2, 3, 7, 8, 9, 10, 11</td>
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<tr>
<td>EBP is about integrating best available research evidence with information about patient preferences, clinical skill level and available resources to make decisions about care</td>
<td>EBP</td>
<td>Ciliska et al. (2001)</td>
<td>3, 4, 7, 8, 10</td>
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<td>The process of making clinical decisions based on the most valid and relevant information currently available</td>
<td>EBP</td>
<td>Pearson (2001)</td>
<td>4, 7, 11</td>
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<td>A process by which nurses make clinical decisions using the best available research evidence, their clinical expertise and patient preferences</td>
<td>EBN</td>
<td>Di Censor et al. (1998)</td>
<td>4, 7, 10, 11</td>
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<tr>
<td>A process, which encompasses the use of best available evidence alongside clinical expertise and the patients’ perspective, to plan care as well as evaluating the performance through a process of self-reflection or peer assessment</td>
<td>EBN</td>
<td>Flemming (1998)</td>
<td>3, 4, 5, 8, 10, 11</td>
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<tr>
<td>The incorporation of evidence from research, clinical expertises and patient preferences into decisions about the health of individual patients</td>
<td>EBN</td>
<td>Mulhall (1998)</td>
<td>1, 2, 3, 8, 10, 11</td>
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<td>An approach to decision making in which the clinician uses the best evidence available in consultation with the patient, to decide upon the option, which suits the patient best</td>
<td>EBP</td>
<td>Muir-Gray (1997)</td>
<td>4, 7, 10</td>
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<td>… Method of problem solving which involves identifying the clinical problem, searching the literature, evaluating the research evidence and deciding on the intervention</td>
<td>EBP</td>
<td>White (1997)</td>
<td>1, 2, 3, 6, 8</td>
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Rosswurm and Larrabee (1999) similar to Rycroft-Malone et al. (2004) offer an evidence-based model intended on guiding the process of change linked to EBP. The model includes six steps:

1. Assess the need for change;
2. Link problem with intervention and outcomes;
3. Synthesise best evidence;
4. Design a change in practice;
5. Implement and evaluate the change in practice;
6. Integrate and maintain the practice change.

This model offers a broad basis for implementing changes, however it does not specifically account for some of the key elements within the concept of EBN, including patient involvement. When attempting to implement Rosswurm and Larrabee’s (1999) evidence-based model, Thurston and King (2004) reported it as being a useful framework for change, however felt that it would need to be further customised to encompass EBN theories and strategies. When exploring the implementation of evidence-based health care, Gabbay & le May (2004) suggest that research for evidence can be transformed into knowledge at four main levels (Fig. 2).

As shown in Fig. 2 Gabbay et al. (2004) indicate that for evidence-based healthcare to occur (indeed by extension EBN, EBM, EBP), a social movement with clear philosophy, values and convictions is basic to introducing an evidence-base. The individual patient is placed at the top of the pyramid recognising the ultimate outcome of using an evidence-base is patient driven and centred. A patient driven and centred approach within the context of EBN is about engaging, encouraging and empowering the patients within the care processes (McSherry & Pearce 2007). Using the levels within the pyramid, evidence-based knowledge can be further explored and potentially adapted and applied to the process of EBN as demonstrated in Fig. 3.

As shown in Fig. 3 the first level, the broad EBHC movement could be seen to include research evidence in the form of national guidelines, policies and widely accepted empirical research. This would be used as a basis for instigating the process of EBN. Gabbay and le May (2004) suggest that level two includes local and EBHC policy. This would remain unchanged in the process of EBN as their value remains pertinent to the process by incorporating identified local needs in relation to the context of practice. Included within this level is also the evaluation and integration of nursing theory, again applicable in context. Level three involves the application and use of practitioner’s knowledge and experience prior to the final stage where the patient is involved in the decision-making contributing to implementation and evaluation of care. Critical evaluation needs to be ongoing and is integral within the process at all stages. The limitation of the process identified is the need to expand and explain each section, however it is considered that it may provide a useful stepping-stone for integrating evidence into nursing practice.

Constituents of ‘evidence’

The concept of evidence is often explicated in relation to notions of corroboration and plausibility in the form of empirical findings. When considering EBP and indeed EBN, the definitions controversy is highlighted when attempts are made to determine the constitutes of ‘evidence’. This is not an easy task as there is little agreement amongst nurses as to what constitutes evidence for EBN (Bradshaw 2000, Romyn et al. 2003). Pearson (2003) however, deems that it is vitally important to establish the credibility and value of evidence, particularly from the nursing perspective to inform decision-making in practice.

Hewitt-Taylor (2003) argues that high quality positivist research methods are often considered to provide the best

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Table 2 Key elements drawn from definitions

<table>
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<tr>
<th>Key element</th>
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<tbody>
<tr>
<td>1. Identification of research</td>
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<td>2. Evaluate research</td>
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<td>3. Application of research</td>
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<td>4. Use of best evidence</td>
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<td>5. Evaluate care</td>
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<tr>
<td>6. Problem solving</td>
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<td>7. Decision making</td>
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<td>8. Clinical/professional expertise</td>
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<td>9. Theory driven</td>
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<td>10. Patient involvement</td>
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<td>11. Process</td>
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Figure 2 Four levels of evidence based health care (adapted from Gabbay et al. 2004).
evidence with systematic reviews being purported to be one of the most accurate and strongest methods of generating evidence for practice. Bury and Mead (2000) present a hierarchy of strength of evidence (Table 3) although more complex formats are available.

Bury and Mead (2000) stipulate that systematic reviews are classified as the most appropriate method of providing sound scientific responses to health care problems and questions. Although a relatively new concept in nursing, Magarey (2001) believes that the number of systematic reviews conducted by nurses specifically evaluating nursing interventions has increased substantially and that are now increasingly seen in journals. Duffy (2005) believes that systematic reviews are invaluable in the development of EBN as they summarise research and define the boundaries of the known and the unknown.

Bury and Mead (2000), Feinstein and Howitz (1997), and Closs and Cheater (1999) suggest that RCTs follow closely within the hierarchy of evidence and are recognised as the medical gold standard of research. Sackett et al. (1996) advocate that EBM is not restricted to RCTs and meta-analyses but is about tracking down the best external evidence to answer clinical questions. According to, Van Meijel et al. (2004) RCTs have serious limitations when developing knowledge in nursing as they do not provide evidence for general laws, but allow only probabilistic conclusion. Within nursing, many issues pertinent to practice and individualised care are not always amenable to randomisation. While clinical trials can make an essential contribution to the delivery of quality, evidence-based health care, this should not be at the cost of investigation that has a different focus and seeks to respond to different questions (Taylor & Cable 2004). Non-experimental research can be advantageous in determining influencing factors which can affect care and care delivery and omission of findings from this type of research would be omitting knowledge that is valid for nursing practice. Mitchell (1999) vigorously supports this believing that traditional models of EBP cannot be directly transferred to nursing and its proponents have not grasped the reality that the knowledge base of nursing is theoretical; value laden, embedded in world views and theories that specify various explanations about the human health process. Fulbrook and Harrison (2001) support the notion that nursing is beginning to develop its own knowledge base and is making a distinct movement towards interpretive approaches employing qualitative methodologies. The Joanna Briggs Institute (2004) clearly accept this and indicate that qualitative evidence can be used as evidence and can also be ranked into three main levels of credibility (Table 4).

The Joanna Briggs Institute (2004) firmly promotes the use of all types of evidence and suggests that a combination can be successful. Rycroft-Malone et al. (2004) support this notion by suggesting that to practice EBN, practitioners need to draw on and integrate multiple sources of prepositional and non-prepositional knowledge informed by a variety of evidence-bases that have been critically and publicly scrutinised. In addition to research, they identify three further types of evidence-base available for use in clinical practice. These include; clinical experience, patients, clients and carers, local context and environment.

Youngblut and Brooten (2001) like Rycroft-Malone et al. (2004) suggest that clinical knowledge generally refers to experience, anecdotal accounts, case histories and expert opinion, which is included within the fifth level of the hierarchy of evidence (Table 3), but some of which, e.g. case histories may be categorised into a higher classification within the levels of credibility (Table 4). Furthermore, Rycroft-Malone et al. (2004) argues that clinical knowledge can be generated from clinical experience and professional practice. Clarke (1999) accepts clinical experience as evidence as one aspect of a wide range of evidence, but does point out that different forms of evidence need not be in competition but need to be mutually supportive and informative with a pluralistic outlook to enhance best practice and patient outcomes.
Clearly, determinants of what constitutes EBN are now moving beyond the hierarchy of sound knowledge generated through RCTs and systematic reviews and alternative theoretical perspectives of knowledge base and acquisition are being both academically and clinically recognised. Hewitt-Taylor (2003) argues that qualitative approaches, which at one time did not attract the same standing in evidence-based literature as quantitative approaches, are now being more readily accepted. McKenna et al. (2004) believes this has evolved, as a plurality of methodological approaches is deemed necessary in today’s evidence-based health care. Although EBM does place a major emphasis on RCTs (Risdale 1998), McKenna et al. (2004) argue that this could be revised in aspects of nursing care and that the hierarchy of evidence reversed. Smith et al. (2004) reinforce this notion by advocating that if the concept of evidence as it is conceptualised within the biomedical framework is applied to nursing, it would result in the exclusion of fundamental areas of nursing practice and devalue the skills that nurses posses. Closs and Cheater (1999) suggest that EBN does not have to devalue individual nurse’s skills and that a wide range of evidence using a variety of approaches can be used to generate and enhance the body of knowledge within nursing further. Marks (2002) further adds that evidence needs to be broad and professional opinions will always be necessary and a valid contribution to EBP as each situation and each patient is unique. Indeed, as Webster (2002) highlights evidence is only one of several factors that influences decisions about best and effective patient care and outcomes.

**Conclusion**

In conclusion several salient issues have been addressed with an attempt to clarify definitions of concepts included within the evidence-based movement. This has been achieved by offering an alternative approach to reviewing what EBN means and what constitutes evidence. The rational for the implementation of EBN into health care has been identified and methods for encouraging nurses to engage with and apply the evidence into practice have been included by examining the various processes akin to EBN. In addition, the constituents of evidence have been analysed.

**Relevance to clinical practice**

The recurring problem of getting evidence into practice will only be resolved by offering a simple framework for the implementation of evidence into practice. Nurses need to have a sound understanding of the drivers for EBN and what the concept means and how it differs from other approaches to using evidence within the evidence-based movement. Furthermore nurses need to be made aware of and be able to engage with the process associated with getting evidence into practice and be able to identify what constitutes appropriate evidence to inform their decision and or actions in practice.

Table 3 Hierarchy of strength of evidence

<table>
<thead>
<tr>
<th>Strength</th>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
<th>VI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence</td>
<td>Strong evidence from minimum of one systematic review of multiple well designed randomised controlled trials</td>
<td>Strong evidence from at least one properly designed randomised controlled trial of appropriate size</td>
<td>Evidence from well-designed trials without randomisation, single group pre–post cohort, time series or matched case controlled studies</td>
<td>Evidence from well-designed non-experimental studies from more than one centre or research group</td>
<td>Opinions of respected authorities, based on clinical evidence, descriptive studies or reports of expert committees</td>
</tr>
</tbody>
</table>

Adapted from Bury and Mead (2000).

Table 4 Levels of credibility of qualitative evidence

<table>
<thead>
<tr>
<th>Level</th>
<th>Unequivocal</th>
<th>Credible</th>
<th>Unsupported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evidence</td>
<td>Relates to evidence beyond reasonable doubt, which may include findings that are matter of fact, directly reported/observed and not open to challenge</td>
<td>Relates to those findings that are, albeit interpretations, plausible in light of the data and theory. They can be logically inferred from data. Because the findings are interpretive, they can be challenged</td>
<td>When findings are not supported by the data</td>
</tr>
</tbody>
</table>

Adapted from Joanna Briggs (2004).
Contributions

Study design: KS; data collection and analysis: KS and manuscript preparation: KS, RMc.

References


NMC (2004a) Standards for Proficiency for Pre-registration Nurse Education. NMC, London.


Zeitz K & McCutcheon H (2003) Evidence based practice: to be or not to be, this is the question! International Journal of Nursing Practice 9, 272–279.