Community- and hospital based nurses' implementation of evidence-based practice: are there any differences?

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Abstract

The aim of this paper is to discuss the impact of nurses' beliefs, knowledge and skills on the implementation of evidence-based practice (EBP) in hospital and community settings. EBP refers to the implementation of the most up-to-date robust research into clinical practice. Barriers have been well-documented and traditionally include negative beliefs of nurses as well as a lack of time, knowledge and skills. However, with degree entry nursing and a focus on community health care provision, what has changed? A comprehensive search of contemporary literature (2010-2015) was completed. The findings of this review show that the traditionally acknowledged barriers of a lack of time, knowledge and skills remained, however, nurses' beliefs towards EBP however were more positive, but positive beliefs did not affect the intentions to implement EBP or knowledge and skills of EBP. Nurses in hospital and community settings reported similar barriers and facilitators.

KEYWORDS: evidence-based practice, barriers, facilitators, community nurse, literature review

INTRODUCTION

Evidence based practice (EBP) is defined as "integrating individual clinical expertise with the best available external clinical evidence from systematic research" (Sackett et al,

1996, p. 71). The integration of the latest research evidence into practice is associated with patients receiving improved care and obtaining better outcomes (Melnyk et al, 2012). Robust systematic research is only one form of evidence nurses may access to influence their practice. Other forms of evidence include: clinical guidelines from recognised bodies such as the National Institute for Health and Care Excellence (NICE), objective case note reviews and even subjective experiences of patients can inform EBP (Hewitt-Taylor 2011).

Professional nursing organisations including the Nursing Midwifery Council (NMC) and the International Council of Nurses (ICN) include the expectation of nurses to deliver EBP in all settings. The NMC (2015) The Code: Professional standards of practice and behaviour for nurses and midwives, states that it is the responsibility of each nurse and midwife to maintain their knowledge and skills and to practice within the best available evidence.

A variety of barriers have been identified which challenge nurses when trying to implement EBP, such as a lack of time, short staffing, heavy patients loads, and family commitments outside of work. All these factors restrict nurses from engaging in research which could support their practice (Bonner and Sando 2008; Brown et al. 2009). Further evidence suggests nurses are not routinely implementing EBP because of their negative beliefs, limited knowledge and limited academic skills (Melnyk et al. 2004). However, recent changes in nurse education and the focus of healthcare provision in the community might have impacted on these past research findings. In the UK nurse education has changed to degree entry only since 2013, with an emphasis on both clinical and evidence-based practice. Nursing education now routinely includes research modules that support nurses in evaluating evidence from research papers, understanding which sources are credible, and how to analyse and critique articles (Johnson et al, 2010).

The focus of health care provision in the community, has developed community nurses who are tasked with undertaking multi-dimensional complex health, social and psychological assessments and provide appropriate care and treatment in patient's homes (Burke 2014). In response to this demand institutions/providers of community healthcare have focused on supporting their nurses to provide EBP, this is evident from policies such as the Community Nursing Research Strategy implemented by NHS Wales (Welsh Assembly Government 2009), which supports an infrastructure for community nurses to work together and be involved in the creation of evidence for their own practice (Kendre et al. 2013).

A major limitation of the traditional research exploring nurses' beliefs, knowledge and skills of EBP was the focus on nurses who work in acute hospital settings. The aim of this review is to understand current EBP beliefs, knowledge and skills of nurses who work in either an acute hospital or a community setting, and to identify if differences exist.

METHODS

A literature review of empirical research published between 1 January 2010 and 31 December 2015 was completed. Databases searched included CINAHL and MEDLINE. Inclusion criteria were: empirical research study; community or hospital setting; exploration of nurse beliefs, knowledge and skills of EBP and/or barriers and facilitators of implementing EBP. Exclusion criteria were: the inclusion of other healthcare professionals without a separate reporting of nurses' beliefs, knowledge and skills of EBP or barriers and facilitators of implementing EBP. The last exclusion were studies which focused on senior nurse managers' and/or nurse leaders' experience of implementing evidence based practice, as it is recognised more senior nurses tend to have higher levels of education which impacts on their understanding and ability to implement changes to practice (Heydari et al. 2014; Underhill et al. 2015; White-Williams 2013).

Keywords included: evidence-based practice, evidence-based nursing, beliefs, attitudes, knowledge, nurses, primary care, and community nursing.

RESULTS

The search resulted in 1438 hits of which 22 relevant papers were identified. The focus of the studies ranged from hospital nurses (n=14), community nurses (n=5), nursing home nurses (n=1), hospital and community nurses (n=2). The subject matter is of global importance as papers were from Austria (n=1), Canada (n=1), Iceland (n=2), Iran (n=1), Israel (n=1), Netherlands (n=1), Norway (n=2), Singapore (n=3), Spain (n=2), Sweden (n=1), Taiwan (n=1), Turkey (n=1), United Kingdom (n=1) and United States of America (n=4).

The most frequently reported barriers of EBP by nurses included time constraints, lack of knowledge and skills (refer to Table 1). These barriers are consistent with previous research. Other barriers included: lack of resources (Baker et al. 2010; Yoder et al. 2014), lack of organisational support (Gonzalez-Torrente et al. 2012; Chan et al. 2011; Pericas-Beltran et al. 2014) and lack of authority to change clinical practice (Chan et al. 2011; Tan et al. 2012; Garland Baird and Miller 2015). Positive beliefs concerning EBP were reported by eight studies of hospital nurses and two studies of community nurses. Positive beliefs were not associated with EBP knowledge or skills, or to the implementation of EBP. One study directly compared hospital and community nurses EBP knowledge and skills, no differences between these two groups were found (Eizenberg 2011). Only seven papers reported on facilitators of implementing EBP (refer to Table 2), although all papers provided recommendations.

Table 1: Overview of time constraints, beliefs, knowledge and skills of EBP reported by nurses

Theme	Workplace	Impact	Evidence
Time constraints	Hospital	Lacked time to: - search and find evidence - read research articles - implement changes in practice	Breimaier et al. (2011); Chan et al. (2011); Dalheim et al. (2012); Foo et al. (2011) Maaskant et al. (2013); Majid et al. (2011); Tan et al. (2012); Yip et al. (2013)
	Community	Lacked time to: - read research articles	Garland Baird and Miller (2015); Gerrish and Cooke (2013); Gustafsson et al. (2014)
	Nursing Home	Lacked time to: - implement changes in practice	Chang et al. (2011)
Lacked knowledge and skills	Hospital	Lacked the confidence/ability to - search electronic databases - understand statistical terms - understand technical jargon - evaluate the quality of the research - reviewing the evidence and synthesize information	Baker et al. (2010); Breimaier et al. (2011); Chan et al. (2011); Dalheim et al. (2012) Foo et al. (2011); Masskant et al. (2013); Majid et al. (2011); Thorsteinsson (2013); Yip et al. (2013); Yoder et al. (2014)
	Community	Lacked confidence/ability to: - search and find research - read research articles - evaluate the quality of the research	Gerrish and Cooke (2013)
	Nursing Home	Lacked confidence/ability to: - understanding statistical analysis	Chang et al. (2010)

Table 2: Overview facilitators of implement EBP reported by nurses

Workplace	Facilitators	Evidence
Hospital	Protected time Financial support Organisational support – to complete research and to implement change On-the-job training Working in a teaching hospital	Tan et al. (2012); Yoder et al. (2014)
Hospital and Community	Computer and internet facilities Access to a library	Eizenberg et al. (2011); Thorsteinsson (2013)
Community	Culture of acceptance of change Lead nurse/managers support Support from colleagues	Garland Baird and Miller (2015); Gerrish and Cooke (2013)
Nursing Home	Computer and internet facilities Education to enhance research knowledge	Chang et al. (2010)

TIME

Lack of time to engage in EBP activities such as searching for evidence, reading research articles and implementing change in practice was reported by nurses working in hospital and community settings. Community nurses reported not having the time to read articles, but time to read guidelines, standards and policies as these were viewed as part of their role and supported their EBP (Garland Baird and Miller 2015). Hospital nurses reported a heavy workload impacted on their ability to engage in EBP activities (Majid et al. 2011), whilst community nurses reported sacrificing some of their private life and family obligations to engage in EBP activities (Gustafsson et al. 2014).

KNOWLEDGE AND SKILLS

Complexity of research was the most significant issue reported by both hospital and community nurses and included: research methodology (Maaskant et al. 2013), statistical analysis (Chang et al. 2010), and research jargon (Majid et al. 2011). An area of concern for both hospital and community nurses was how to evaluate the quality of the research (Foo et al. 2011), and this impacted on the nurses ability to critically review and synthesise evidence with relevance to practice (Garland Baird and Miller 2015). Although not as widely reported, some nurses did report difficulties in searching electronic databases (Thorsteinsson 2013) and identifying relevant research articles and journals (Gerrish and Cooke 2013).

BARRIERS

Lack of organisational support was highlighted by hospital nurses (Chan et al. 2011) and community nurses (Pericas-Beltran et al. 2014; Gonzalez-Torrente et al. 2012). In one study community nurses reported that a lack of institutional support to change clinical

standards, even with the presentation of scientific evidence lead to former clinical practice prevailing (Pericas-Beltran et al. 2014).

Lack of authority to change clinical practice was highlighted by hospital nurses (Chan et al. 2011; Tan et al. 2012) and community nurses (Garland Baird and Miller 2015). However, community nurses reported confidence in updating their practice and their workplace was receptive to change, but felt they did not have the authority to implement change to institutional guidelines and policies (Garland Baird and Miller 2015).

BELIEFS

Hospital and community nurses' beliefs and attitudes of EBP were positive, although this did not lead to the implementation of EBP (Thorsteinsson and Sveindsdottier 2014) or was related to EBP knowledge or skills (White-Williams et al. 2013).

FACILITATORS

Facilitators for hospital, community and nursing home staff were access to libraries and opportunities to work on computers with internet access (Eizenberg et al. 2011; Thorsteinsson 2013; Chang et al. 2010). Only nursing home staff reported education as facilitating enhanced research knowledge (Chang et al. 2010).

Facilitators for hospital staff included protect time, financial and organisational support, training and working within a teaching hospital (Tan et al. 2012; Yoder et al. 2014). Facilitators for community nurses included a culture of acceptance and change, support from managers and colleagues (Garland Baird and Miller 2015; Gerrish and Cooke 2013).

DISCUSSION

Changes to nurses' beliefs and skills towards EBP have occurred, nurses' beliefs are more positive and knowledge and skills have developed. However, the main barriers reported by nurses to implement EBP were unchanged and included an envisaged lack of time, knowledge and skills. Other barriers reported by nurses included a lack of resources, organisation support and authority to change clinical practice. Hospital and community nurses face many of the same barriers and facilitators, and their nurses had comparable EBP skills and knowledge.

Nurses reporting a lack of time to engage in EBP has been well documented and the current review confirms this has not changed. The nurses' impressions of research and EBP appear to be overwhelmingly perceived as an additional pursuit which is undertaken beyond their normal workload (Gray et al. 2012). Protected time was acknowledged as a facilitator by many nurses, and a recommendation from numerous studies. However, building protected time into existing roles in the current healthcare climate appears overtly simplistic and logistically unlikely. The development of new roles and support of clinical nurses through active dissemination of research maybe more practical and achievable.

Lack of knowledge and skills of EBP remained a concern for many nurses, who expressed a need to understand the complexities of research in more depth. A few nurses still reported difficultly in searching electronic databases and identifying relevant research articles and journals (Gerrish and Cooke 2013). Hospital and community initiatives are being developed to address these issues, for example the provision of a clinical librarian in ward environments to support nurses, although this does not replace the need for nurses to be competent in such skills (Maatta and Wallmyr et al. 2010). A community intervention for school nurses included an online journal club, which improved their collegial connections and intention to share evidence with stakeholders to enable a change in practice (Sortedahl 2012).

Facilitators reported by community nurses suggest a culture of acceptance and change, and support from manager and colleagues, although this is not enough to change practice as nurses felt they did not have the authority to implement change (Garland Baird and Miller 2015; Gerrish and Cooke 2013). Lack of authority of nurses can be addressed through the development of shared governance systems where nurses and administrations work together and have an equal voice in decision making and policy changes that affect patient care and work environments (Dunbar et al. 2007). Shared governance systems can support the drive of research and EBP to improve clinical practices and patient outcomes (Harris et al. 2007).

Degree entry into nursing has only recurrently occurred in the UK, in countries where degree entry into nursing has been established for a number of years the impact on nurses intentions to become involved in research and EBP has been modest, particularly at the beginning of their careers (Forsman et al. 2010; 2012). Suggesting, the change in nursing education alone is not sufficient to impact on the implementation of EBP by nurses. However, a possible confounding variable in the current research is the inclusion of all practicing nurses, the nursing workforce is an aging workforce which suggests that a large proportion did not complete research of EBP studies as part of their nursing education (Melynk 2012).

All nurses should be provided with the opportunity to receive appropriate training and are confidant in their abilities to undertake research and implement change. Nurses working in the UK registered with the NMC are responsible through the process of revalidation to ensure their knowledge and skills are up to date through regular learning and professional development (NMC 2015). The revalidation process focuses on nurses continued ability to practice safely and effectively, although includes the development of new skills and

responding to the changing needs of the public and fellow healthcare professions, which encompasses evidence-based practice.

Nurses' positive beliefs and understanding of the need to implement EBP was apparent in all of the studies included in this review. However, nurses reported the implementation of clinical guidelines rather than being involved in research was important to inform their practice. Nurses' reported not feeling empowered to make changes in practice from evidence of research findings, but supported changes in practice based on clinical guidelines. These guidelines were viewed as the amalgamation of national guidelines and research by more senior and specialist nurses in their institutions, which supported and maintained their practice as current and based on contemporary evidence.

There are a number of limitations regarding the studies included in this review; firstly although the results of these studies were published between 2010 and 2015, some of the data collection occurred as early as 2006. Secondly, the contribution is from a wide range of countries with differing healthcare structures and systems, although this does suggest commonality of the issues discussed. The approach of supporting nurses to implement EBP appears unanimous across countries, including resources such as mentoring, journal clubs, policies, procedures and national guidelines. Lastly, there remains a predominance of this work to concentrate on acute hospital based nursing.

CONCLUSION

There is continued international interest in EBP (Eizenberg 2011). It is essential that all nurses receive the appropriate training and are confidant in their abilities to evaluate research and implement evidence-based change. Care provided by nurses occurs globally in many different situations and contexts. However, the evidence from this review suggests that many of the barriers and facilitators that nurses face when trying to implement evidence-based

practice appear remarkably similar. Innovative approaches are required to engage nurses in EBP that supports their practice and are not viewed as an extra workload or burden. Guidance from such approaches can be taken from around the world and adapted to local healthcare structures. Lastly, it has been recognised that it can take up to 17 years, before research findings are assimilated into healthcare practice (Morris et al. 2011), but it appears it may take just as long for the impact of education changes and focus on community care to be reflected in research.

References

Baker KA, Ellett ML, Dudley-Brown S (2010) Evidence-based practice of gastroenterology nurses. *Gastroenterolo Nurs* **33**(4): 263-266.

Bonner A, Sando J (2008) Examining the knowledge, attitude and use of research by nurses. *J Nurs Manage* **16**(3): 334-343.

Breimaier HE, Halfens RJG, Lohrmann C (2011) Nurses' wishes, knowledge, attitudes ad perceived barriers on implementing research findings into practice among graduate nurses in Austria. *JCN* **20**: 1744-1756.

Brown CE, Wickline MA, Ecoff L, and Glaser D, (2009) Nursing practice, knowledge, attitudes and perceived barriers to evidence-based practice at an academic medical center. *JAN* **65**(2): 371-381.

Burke M (2014) Modelling district nurse expertise. *British Journal of Community Nursing* **19**(12): 608-11.

Chan GK, Barnason S, Dakin CL, Gillespie G, Kamienski MC, Stapleton S, Williams J, Juarez A, Li S (2011) Barriers and perceived needs for understanding and using research among emergency nurses. *J Emerg Nurs* **37**(1): 24-31.

Chang HC, Russell C, Jones MK (2010) Implementing evidence-based practice in Taiwanese Nursing Homes: Attitudes and perceived barriers and facilitators. *Journal of Gerontological Nursing* **36**(1): 41- 48.

Dalheim A, Harthug S, Nilsen RM, Nortvedt W (2012) Factors influencing the development of evidence-based practice among nurses: a self-report survey. *BMC Health Services Research* **12**: 367.

Dunbar B, Park B. Berger-Wesley M, Cameron T, Lorenz B, Mayes D et al (2007) Shared governance: making the transition in practice and perception. *J Nurs Admin* **37**(4): 177-183.

Eizenberg MM (2011) Implementation of evidence-based nursing practice: nurses' personal and professional factors? *JAN* **67**(1): 33-42.

Forsman H, Rudman A, Gustavsson P, Ehrenberg A, Wallin L (2010) Use of research by nurses during their first two years after graduating. *JAN* **66**(4): 878-890.

Forsman H, Rudman A, Gustavsson P, Ehrenberg A, Wallin L (2010) Nurses' research utilization two years after graduation—a national survey of associated individual, organizational, and educational factors. *Implement Sci* **7**: 46.

Foo S, Majid S, Mokhtar IA, Zhang X, Luyt B, Chang Y-K, Theng Y-L (2011) Nurses' perception of evidence-based practice at the National University Hospital of Singapore. *J Contin Educ Nurs* **42**(11): 522-528.

Garland Baird LM, Miller T (2015) Factors influencing evidence-based practice for community nurses. *British Journal of Community Nursing* **29**(5): 233-242.

Gerrish K, Cooke J (2013) Factors influencing evidence-based practice among community nurses. *JCN* **27**(4): 98-101.

Gonzalez-Torrente S, Pericas-Beltran J, Bennasar-Veny M, Adrover-Barcelo R, Morales-Asencio JM, De Pedro-Gomez J (2012) Perception of evidence-based practice and the

professional environment of Primary Health Care nurses in the Spanish context: across-sectional study. *BMC Health Services Research* **12**:227.

Gray M, Joy E, Plath D, Webb SA (2012) Implementing Evidence-Based Practice: A Review of the Empirical Research Literature. *Res Social Work Prac* **23**(2): 157–166.

Gustafsson LK, Mattsson K, Dubbleman K, Snoljung A (2014) Aspects of nursing with evidence-based when nursing frail older adults: a phenomenological analysis of interviews with nurses in municipal care. *Scand J Caring Sci* **28**: 793-801.

Harris K, Spinweber C, Doherty M, Milligan I, Addy I, Hydro B (2007) The integration of a nurse model to increase clinical excellence. *J Nurses Staff Dev* **23**(3): 12-9.

Hewitt-Taylor J (2011) *Using Research in Practice*. Palgrave Macmillan: Hampshire.

Heydari A, Mazlom SR, Ranjbar H, Scurlock-Evans L (2014) A study of Iranian nurses' and midwives' knowledge, attitudes and implementation of evidence-based practice: The time for change has arrived. *Worldvi Evid-Based Nu* **11**(5): 325-331.

Johnson N, List-Ivankovic J, Eboh W et al (2010) Research and evidence based practice: Using a blended approach to teaching and learning in undergraduate nurse education. *Nurse Education in Practice* **10**(1): 43-47.

Kenkre J, Wallace C, Davies R, Bale S, Thomas S (2013) Developing and implementing the community nursing research strategy for Wales. *British Journal of Community Nursing* **18**(11): 561-566.

Maaskant JM, Knops A, Ubbink DT, Vermeulen H (2013) Evidence-based practice: A survey among pediatric nurses and paediatricians. *Journal of Pediatric Nursing* **28**: 150-157.

Maatta S, Wallmyr G (2011) Clinical librarians as facilitators of nurses' evidence-based practice. *JCN* **19**: 3427-3434.

Majid S, Foo S, Luyt B, Zhang X, Theng YL, Chang YK Mokhtar IA (2011) Adopting evidence-based practice in clinical decision making: nurses' perceptions, knowledge, and barriers. *J Med Libr Assoc* **99**(3): 229-236.

Melnyk BM, Fineout-Overholt E, Feinstein NF, Li H, Small L, Wilcox L, Kraus R (2004) Nurses' perceived knowledge, beliefs, skills and needs regarding evidence-based practice: Implications for accelerating the paradigm shift. *Worldvi Evid-Based Nu* **1**(3): 185-193.

Melnyk BM, Fineout-Overholt E, Gallagher-Ford L, Kaplan L (2012) The state of evidence-based practice in US nurses: critical implications for nurse leaders and educators. *J Nurs Admin* **42**(9): 410-417.

Morris ZS, Wooding S, Grant J (2011) The answer is 17 years, what is the question: Understanding time lags in translational research. *J Roy Soc Med* **104**(12): 510-520.

Nursing and Midwifery Council (2015) *The Code: Professional standards of practice and behaviour for nurses and midwives.* London: Nursing and Midwifery Council.

Nursing and Midwifery Council (2015) *Revalidation*. London: Nursing and Midwifery Council.

Pericas-Beltran J, Gonzalez-Torrente S, De Pedro-Gomez J, Morales-Asencio JM, Bennasar-Veny M (2014) Perception of Spanish primary healthcare nurses about evidence-based clinical practice: a qualitative study. *Int Nurs Rev* **61**: 90-98.

Sackett DL, Rosenberg WM, Gray JA, Haynes RB, Richardson WS (1996) Evidence based medicine: What it is and what it isn't. *BMJ* **312**(7023): 71-72.

Sortedahl C (2012) Effect of online journal club on evidence-based practice knowledge, intent and utilization in school nurses. *Worldvi Evid-Based Nu* **9**(2): 117-125.

Tan M, Sahin ZA, Ozdemir FK (2012) Barriers of research utilization from the perspective of nurses in Eastern Turkey. *Nurs Outlook* **60**(1): 44-50.

Thorsteinsson HS (2013) Icelandic nurses' beliefs, skills and resources associated with evidence-based practice and related factors: A national survey. *Worldvi Evid-Based Nu* **10**(2): 116-126.

Thorsteinsson HS, Sveinsdottir H (2014) Readiness for and predictors of evidence-based practice of acute-care nurses: a cross-sectional postal survey. *Scand J Caring Sci* **28**: 572-581.

Underhill M, Roper K, Siefert ML, Boucher J, Berry D (2015) Evidence-based practice beliefs and implementation before and after an initiative to promote evidence-based nursing in an ambulatory oncology setting. *Worldvi Evid-Based Nu* **12**(2): 70.

Welsh Assembly Government (2009) A Community Nursing Strategy for Wales. http://gov.wales/topics/health/cmo/professionals/officechiefnursing/cno-publictions/community/?lang=en

White-Williams C, Patrician P, Fazeli P, Degges MA, Graham S, Andison M, Shedlarski A, Harris L, McCaleb A (2013) Use, knowledge and attitudes toward evidence-based practice among nursing staff. *J Contin Educ Nurs* **44**(6): 246-254.

Yip WK, Mordiffi SZ, Liang S, Ang ENK, Xue Z, Majid S (2013) Nurses' perception towards evidence-based practice: A descriptive study. *Singapore Nursing Journal* **40**(1): 34-41.

Yoder LH, Kirkley D, McFall DC, Kirksey KM, StalBaum AL, Sellers D (2014) Staff Nurses' Use of Research to Facilitate Evidence-Based Practice. *AJN* **114**(9): 26-37.