

Research and evidence based practice in a rural Victorian cohort

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KEY WORDS

Evidence based practice, nurses, health organisations, research, eHealth

ABSTRACT

Background

There is little evidence of the prevalence of research driven evidence based practice (EBP) or the supportive nature of organisations in a rural Australian setting.

Objective

The aim of this paper is to identify the research capacity and value of research that translates to EBP in organisations in rural Victoria, Australia.

Design

A snowball technique was used for recruitment. Data was collected using a modified version of a survey originally developed by the Australian Nursing Federation to determine eHealth literacy. The survey was supplemented to measure respondent's perceptions relating to organisational research ability and value.

Setting

Hospitals, aged care facilities, and general practice surgeries.

Subjects

Nurses in rural Victoria, Australia.

Main outcome measures

Use of research, ability to locate and analyse research, to determine if research was valid, high quality, relevant and applicable, organisations value of research and EBP, linkage of research to quality care of organisation.

Results

Approximately a third of respondents report they have skilled staff for research and evidence assessment. However more than 50% report limited time to research or gather evidence. Research is reported as a priority for the organisation by approximately 40% of respondents. The translation of research to EBP was noted by approximately 50% of respondents who report that decision makers in their organisations consider high quality relevant research when making choices about quality care activities.

Conclusions

This paper demonstrates a need to improve the ability to access quality research and to improve organisations uptake of research and its translation to EBP.

INTRODUCTION

The nursing profession makes up an integral part of the healthcare system. The healthcare system is under ever-increasing pressure from nurses and other healthcare practitioners to continually change and adapt as a result of the amount of new knowledge generated and reported through research. In response to these expectations, evidence-based practice (EBP) in nursing has evolved to encourage the reinforcement of interventions, new ideas in patient care, and enduring outcomes to benefit patients.

The last three decades have showcased the importance of EBP within the nursing profession (Winters et al 2007; Fink et al 2005; Olade 2004; Rycroft-Malone et al 2004; LeMay et al 1998). A huge emphasis has been placed on EBP in the workforce and the concepts and ideas surrounding EBP have been introduced into the nursing curricular, emphasising a commitment to the cause. Specifically, knowledge translation and implementation research are emerging as important reference material from within the healthcare system. It has been suggested the discipline of nursing has fallen behind other health professionals and the discipline has been measured when considering research output and its translation into improved patient care (Bonner and Sando 2008; Olade 2004; Nagy et al 2001; Haynes et al 1995).

The prevalence of clinical interventions based on EBP in the US, UK and Europe is wide ranging from approximately 25-70% (Haines et al 2004; LeMay et al 1998). Despite this lack of translation from research into practice, there is an expectation that nurses will incorporate best practice into their clinical decisions. Research is at the forefront of informing EBP and nurses therefore need skills in accessing, retrieving, appraising and applying research to clinical situations (McCaughan et al 2005)

Rycroft et al in 2004 suggest that getting evidence into practice is dependent on more than an individual practitioner's motivation and that organisational input is likely to be influential. Getting evidence into practice involves more than identifying high quality research evidence; it requires integration of robust research, clinical experience, patient experience and information from the local context (Rycroft-Malone et al 2004). McCaughan et al (2002) conducted a study in the north of England and reported that nurses who were confident with research based information felt that organisational support was a significant block to the use of EBP. Organisational support has been recommended as a requirement of a receptive environment for EBP to flourish (Bonner and Sando 2008; LeMay et al 1998).

There is little evidence of the prevalence of EBP implementation and the supportive nature of organisations for EBP in the rural Australian setting. The aim of this paper is to identify the research capacity of organisations of health professionals in rural Victoria. Additionally this paper explores the value of research in organisations across rural Victoria.

METHODS

Recruitment of respondents for this study consisted of an information letter and the survey being attached to the pay slips of nurses and allied health professional staff of participating organisations. Consent was implied by the return of a completed survey. The target group comprised nurses and allied health professionals over 18 years of age and less than 70 years of age from health services across rural Victoria. Non English speaking professionals were excluded. Approximately 711 surveys were distributed through health services from Alexandra, NEH Wangaratta, Moira and Seymour. These health services included rural hospitals, small (less than 50 beds) and medium (more than 100 beds) in size, aged care facilities and general practices.

A survey previously used by the Australian Nursing Federation to determine eHealth literacy levels and confidence with computers formed the basis of this survey (Hegney et al 2006). Specific questions were added to measure respondents perceptions of research ability in their participating organisations. Respondents were asked several questions relating to some common themes. These include: if their organisation used

research, looked for research in the right places, if the research was valid and of high quality, if research was relevant and applicable, if research was valued and if research was linked to quality care activities. Univariate statistical analysis was conducted for all questions in the study using SPSS Version 17. Ethical approval was granted from the University of Melbourne, Human Ethics Advisory Group.

FINDINGS

The overall response rate was 33% (n=234). The average age of respondents was 46 years (SD 10.4) with the majority being aged between 45-54 years (45%, n=99). The majority reported working in a hospital (68%, n=157) with the balance working in residential aged care, general practice or other community health facilities. The types of care delivery provided was reported as hospital based, in or out patient services (58%, n=135), residential care (11%, n = 26), 15% (n=15) community based work, 6.9% (n=16) non clinical work, and the balance other type work not specified.

Respondents were asked to describe their main role, the majority (71%, n=161) were clinicians, 12% (n=27) were managers, 3.9% (n=9) were educators, 0.9% (n=2) were researchers and 13% (n=29) reported other not specified. The average number of years worked was 21 years (SD 12.0). There was a fairly even spread with 15% (n=34) having worked for less than five years, 14% (n=33) worked between six and ten years, 18% (n=41) worked between 11 and 20 years, 30% (n=70) worked between 21 and 30 years, and the remaining 22% (n=53) working for up to 41 years.

Respondents were asked to use a scale to answer questions relating to several research domains including use of research, validity and quality of the research, relevance and applicability of the research, value of research and linkage of research to quality care activities. Results of these domains are presented below in Tables 1 to 4.

Table 1: Does organisation use research?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
	N (%)	N (%)	N (%)	N (%)	N (%)
Have skilled staff for research (N = 158)	13 (8.2%)	25 (16%)	61 (39%)	49 (31%)	10 (6.3%)
Staff has enough time for research (N = 155)	21 (14%)	62 (40%)	50 (32%)	17 (11%)	5 (3.2%)
Staff has incentive to do research (used in decision making) (N = 157)	12 (7.6%)	38 (24%)	58 (37%)	45 (29%)	4 (2.6%)
Staff has resources to do research (N = 159)	10 (6.3%)	42 (26%)	53 (33%)	47 (30%)	7 (4.4%)

Respondents were asked to report if their organisations were able to look for research in the right places, response options ranged from research not being done or being done poorly to being done with consistency and being done well.

Table 2: Does organisation look for research in the right places?

	Don't do	Do Poorly	Do inconsistently	Do with some consistency	Do well
	N (%)	N (%)	N (%)	N (%)	N (%)
Look for research in journals (N = 203)	19 (9.4%)	14 (6.9%)	56 (28%)	75 (37%)	39 (19%)
Look for research in non-journal reports (grey literature) library, Internet access (N = 190)	23 (12%)	14 (7.4%)	57 (30%)	68 (36%)	28 (15%)
Look for research in databases such as Cochrane Collection (N = 186)	31 (17%)	14 (7.5%)	54 (29%)	53 (28%)	34 (18%)

The value of research to an organisation was assessed using a series of questions.

Table 3: Is research valued in organisation?

	Strongly disagree N (%)	Disagree N (%)	Neither agree nor disagree N (%)	Agree N (%)	Strongly agree N (%)
Using research is a priority in organisation (N = 185)	2 (1.1%)	28 (15%)	74 (40%)	71 (38%)	10 (5.4%)
Corporate culture values and rewards flexibility, change and continuous quality improvement with resources to support values (N = 202)	8 (3.9%)	24 (12%)	85 (42%)	72 (36%)	13 (6.4%)
Organisation has arrangements with experts who use critical appraisal skills and tools for evaluating the quality of methodology used in research	10 (4.9%)	31 (15%)	100 (49%)	54 (27%)	7 (3.5%)
Staff can relate their research to their organisation and point out similarities and differences	6 (2.9%)	13 (6.3%)	94 (45%)	85 (41%)	9 (4.3%)

Respondents were asked to report on quality care activities within an organisation linked to research.

Table 4: Does organisation link research findings to quality care activities?

	Strongly disagree N (%)	Disagree N (%)	Neither agree nor disagree N (%)	Agree N (%)	Strongly agree N (%)
Decision makers in organisation give formal consideration to any recommendations from staff who have developed or identified high-quality and relevant research (N = 203)	7 (3.5%)	18 (8.9%)	82 (41%)	86 (43%)	9 (4.5%)
Staff who provide evidence and analysis usually participate in decision-making discussions (N = 203)	7 (3.4%)	23 (11%)	79 (39%)	87 (43%)	7 (3.4%)

DISCUSSION

There have been numerous studies conducted that assess research and EBP use and barriers. Previous work however has not focused solely on a rural organisational context.

The response rate to this study was 33%; this is not dissimilar to other Australian studies (Mills et al 2009; Bonner and Sando 2008; Gething et al 2001; Retsas and Nolan 1999). Our findings show an average workforce age of 46 years, with 64% being aged between 35 and 54 years. This is consistent with other Australian studies (Mills et al 2009; Bonner and Sando 2008; Olade 2003). Average time in the workforce was 21 years, a finding uncommon in other Australian or International studies. Although this finding may not be wholly reflective of rural workforces. Most studies report between 12.2 years (Hutchinson and Johnston 2004; Retsas 2000) and 18.3 years (Mills et al 2009; Bonner and Sando 2008; Fink et al 2005; Olade 2003, 2004; Retsas and Nolan 1999) in the workforce.

Respondents in this study were asked if there was enough time to research. Consistent with the literature, 54% disagreed with this statement. This is a finding in line with other Australian and International studies where lack of time has been identified by both nurses and their managers from an individual and organisation

viewpoint.(Bonner and Sando 2008; Roxburgh 2006; Fink et al 2005; McKenna et al 2004; Hutchinson and Johnston 2004; Olade 2004, 2003; Eller et al 2003; Gething et al 2001; Parahoo 2000; Retsas 2000; LeMay et al 1998)

Respondents were also asked to report if their organisation had enough skilled staff for research, with a third (37%) reporting this was the case. Similarly a third (32%) of respondents reported that they had enough incentive to do research. Results of a study by Roxburgh et al (2006) concluded that nurses report a limited knowledge of the skills required to undertake research and specifically skills in the research process (Retsas 2000; Retsas and Nolan 1999). In this study almost equally a third agree (34%) with regard to sufficient resources to do research. Another study reported that lack of resources is a major barrier for the use of research in practice (Hutchinson and Johnston 2004; Parahoo 2000; Retsas and Nolan 1999).

Mills et al in 2009 differ in this opinion reporting 51% strongly disagreed there are insufficient resources for research use however this was in the community general practice setting. The bulk of evidence supports the findings of this current study in that there is a gap in the provision of resources to search for evidence. This study highlights that a lack of skilled staff, a lack of time and resources are limiters to research that precedes adoption of EBP.

Around one third (30%) of respondents reported their organisation has staff with or external arrangements with experts who use critical appraisal to determine the validity of studies. Similar studies also report on the low confidence of judging the quality of research reports by nurses (Mills et al 2009; Hutchinson and Johnston 2004; Parahoo 2000; Retsas and Nolan 1999). Likewise low competency results were noted for respondents being able to use evidence to change practice (21% competent, 31% quite skilled, 48% complete beginner/novice) (Mills et al 2009).

The lack of skills in evaluating or critically appraising the evidence could be related to a lack of skills in actually accessing research in the first place. Access to research was noted as a barrier in a study that reported 55-70% of their sample was unaware of research and 51-54% reported research articles were not readily available (Hutchinson and Johnston 2004; Parahoo 2000; Retsas and Nolan 1999). A lack of confidence or competence in using a computer to search for evidence based information is also a common finding (Mills et al 2009; McKenna et al 2004). In this current study respondents were asked a series of questions about where their organisation looks for evidence, approximately 20% look for evidence in databases such as Cochrane, evidence in non journals on the internet or evidence in journals. Further to this 45% reported they could relate research to their organisations and point out the similarities and the differences. This is similar to results found in a study by Nagy et al (2001), where 44% agreed research has relevance to their organisation.

This indicates a further barrier to those above specifically time and resources. This study results reinforces the evidence that research skills for the majority of nurses are lacking. Nurses are not equipped to locate the evidence they need to make informed decisions about changes in practice. Disappointingly when research is located, only half of the sample can determine the relevance to their organisations. This presents a significant barrier to the uptake of EBP.

Another objective of this study was to determine the value placed on research by organisations. If EBP is to be embraced by nursing staff it needs to be valued by management. It has been reported that the value of research in an organisation is an important factor in the uptake of EBP (Retsas 2000; LeMay et al 1998). Cultural support, or lack of, in Nagy et al's study was demonstrated by questions relating to the climate and supportiveness of particular staff management. Twenty nine percent (29%) agree the hospital had a climate which encouraged staff to pursue new ideas. However there was agreement that nurse unit managers and clinical educators (57% and 50% respectively) would be supportive to change practice on the basis of research (Nagy et al 2001).

In this study 42% of respondents agreed their organisations corporate culture values and rewards research. Respondents were also asked if their organisation valued research by asking if research is a priority, 43% agreed this was the case. It has been reported a lack of positive culture within hospital wards may play a part in the lack of uptake of research findings (Retsas 2000; LeMay et al 1998).

The results suggest whilst some organisations believe research and its translation to EBP is a priority and is a valuable commodity, a further half of the staff of these organisations surveyed do not think it is important to their organisations management. This leaves room for improvement at the higher management levels of organisations which can then filter down through to the nurses providing EBP at the patient's bedside.

In this study a unique focus was on the organisations ability to incorporate research into organisational decision making. Respondents were asked to report on their perceptions of 'consideration to staff from decision makers to any recommendations from high quality and relevant research' (48% agree) and that 'staff with evidence and analysis were asked to participate in decision making discussions' (47% agree). These results show that similar to above in some organisations respondents believe their contributions to research is valued however similarly there is room for improvement at an organisational level.

A strength of this study was that it was conducted in multiple settings in the North East of Victoria. There was however a low response rate. This suggests a bias in the results with the possibility that use of EBP based on research is even lower than reported and that organisational support is even less evident than this study suggests. This study is not the first to suffer from low response rates though and is a reflection of the methodology adopted with recognised low response rates when using postal surveys in primary care (McKenna et al 2004).

CONCLUSION

The major barriers such as time, resources and skills identified remain constant and may be deteriorating over time. Reducing the barriers of time at work, resources and improving skills should address some of these issues. It is encouraging that there are studies with positive reinforcement of the value of research and EBP and discouraging that there are others where the value is not clear. The reasons given that may provide an insight into these negative attitudes need to be explored further in relation to interventions that change these barriers to adoption of EBP. Improving uptake and providing mentors and champions within organisations that encourage and reinforce the use of EBP are also required. The encouragement of inclusion of staff in decision making processes, particularly staff who bring evidence from research that is of high quality demonstrated in this study should be further encouraged and highlighted as best practice for an organisation.

Changing individual practitioner's perceptions of research and EBP will remain a challenge however it is unlikely to change until there is a complete commitment from organisations in terms of value of research and evidence based practice and resources to support the rural workforce.

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