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Original research

What and how … but where does the why fit in? The disconnection between practice and research evidence from the perspective of UK nurses involved in a qualitative study

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ABSTRACT

An emphasis has been placed on evidence during nurse training and practice over recent decades. A qualitative study was undertaken to explore the meaning of and involvement in evidence-based practice for recently qualified general nurses.

A purposive sample of 11 general nurses was recruited. Semi-structured interviews were conducted between March–June 2017. All were audio-recorded and transcribed verbatim. Thematic analysis was applied to transcripts.

An overarching theme of disconnection between research and evidence and the participants' perceptions of contemporary nursing practice was underpinned by three themes: 1) We should be using it … but we're not; 2) Leaving research behind at graduation; 3) Research is other people's business. Participants had been exposed to evidence-based practice during their training, but once qualified they appeared to move into a culture where this was not seen as a priority. Nurses on wards were unaware of research taking place locally and had limited contact with research staff in their organisation.

Approaches to overcoming the disconnection between research/evidence and practice could include how it is introduced during training, and changes in nursing culture and leadership. This could include placements for student nurses within research teams.

1. Background

Polit and Beck (2018:2) defined nursing research as a form of "systematic inquiry designed to develop trustworthy evidence about issues of concern to nurses and their clients." Evidence, on the other hand, is broader, incorporating research along with clinical experience and patient preferences (Kitson et al., 1998). This sits with the notion of evidence-based practice (EBP) as the process for decision making that combines research findings with patient values and clinical knowledge (Sackett et al., 2000). Hence, use of evidence can involve drawing on research that provides answers to a specific question.

Nurses at all levels are expected to use evidence in an explicit, judicious and conscientious manner (Hannes et al., 2007), and to have the necessary skills for retrieving, appraising and applying research findings to practice (McCaughan et al., 2005). Texts have been developed to support them in such endeavours (Barker et al., 2016; Holland and Rees, 2010). Yet it has been shown that nurses prefer to access information through other sources, such as knowledge gained from experience in the workplace and from colleagues (Gerrish et al., 2011). Guidelines have been identified as a means of facilitating EBP within nursing (Thomas, 1999). However, studies conducted in America, Canada and the UK highlight that external, structural factors like time, training in their use and familiarity with their content (Abrahamson et al., 2012; Ring et al., 2005; Sinuff et al., 2007), alongside a resistance to changing practice (Ring et al., 2005; Sinuff et al., 2007), may act as barriers to their uptake.

Fineout-Overholt et al. (2010) propose that discussions about EBP during nurse training must be delivered in a way that enables students to see its relevance to the clinical environment; otherwise, learners will be engaged on an academic level, but it will not be incorporated into their repertoire of practice skills. EBP has been widely integrated into the curriculum of nursing schools (Moch et al., 2010). However, there is

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a lack of literature on plans for implementing measures within the curriculum to enable nursing students to apply EBP in clinical settings (Moch et al., 2010). A research–practice gap is therefore present; simply being taught about research is not enough to ensure that learning translates into practice. Seymour et al. (2003) warn that while more nurses than ever are now judged to be academically skilled and knowledgeable in the theory of research, it does not guarantee the transfer of these skills and knowledge into practice.

Barriers to nurses' use of research in practice have been extensively reported from studies conducted in a variety of countries; these include insufficient time due to heavy workloads, inadequate knowledge about locating and understanding relevant research, negative views on benefits of research to practice and its contribution to nursing, or limited support from colleagues (Gifford et al., 2018; Hart et al., 2008; Moloney, 2013; Nkrumah et al., 2018). Leadership has also been shown as central in advancing evidence-based nursing (Newhouse, 2007). Nurse managers are in a position to encourage colleagues to use research (Gifford et al., 2007), but may have limited knowledge in this area, making it difficult for them to guide recently qualified nurses who are not as experienced in clinical practice, but who have an education in research (Seymour et al., 2003).

Previous studies looking at research and nursing have tended to focus on barriers. Conversely, little attention has been given to studying what research and evidence mean to nurses in their day-to-day role. No previous qualitative research has explored how recently qualified general nurses practicing in the United Kingdom (UK) describe using research and evidence. This is important as these individuals represent the next generation of nurse leaders, who will have the power to influence use of research and evidence in practice.

2. Methods

2.1. Aim

To explore in-depth the meaning of EBP and its role in the everyday working lives of recently qualified general nurses.

2.2. Design

A qualitative approach was chosen because the study aimed to explore in detail the aim listed above.

2.3. Sample

Participants were recruited from a large National Health Service (NHS) Foundation Trust in England, consisting of three hospital settings. Inclusion criteria were general nurses qualified within the last five years because these nurses would have been trained when EBP was established within the curriculum, and because their time at university was not too long ago, assisting with recall of events. Participants were recruited from lists of recently qualified nurses who had gone through a preceptorship programme at the Trust. A purposive sampling technique was used to include maximum variation in terms of age, gender, length of time post qualification and speciality area. This helped to boost the depth of information relevant to the research topic and provided diversity within the sample (Griffiths, 2009). Data continued until clear themes had been developed and key new ideas were not emerging. Interviews were conducted with 11 adult general nurses (see Table 1 for details); 5 each from 2 different hospitals and 1 participant from a third hospital. The final sample size provided sufficient data in terms of producing "a rich, contextualized understanding of human experience through the intensive study of particular cases", allowing for the development of "higher level concepts and themes …" (Polit and Beck, 2010: 1452).

2.4. Data collection

Semi-structured, face-to-face interviews were conducted to enable individuals to depict events in their own words. They were conducted between March–June 2017 and tended to last about 50 minutes. Initial questions sought to build rapport. These were followed by open-ended questions and related prompts to explore key aspects of the research. Pilot interviews were conducted with two staff members to confirm the topic guide was likely to encourage participants to speak freely; their responses were excluded from the final analysis as these pilot interviews were not in-depth and were not recorded. The topic guide was altered throughout data collection. For example, a question about revalidation (http://revalidation.nmc.org.uk/) was added after one participant discussed this (revalidation refers to the process whereby nurses in the UK, every 3 years, have to renew their nursing registration to ensure they are fit to remain in practice). Types of questions asked included:

- What does the term research mean to you?
- What does the term evidence mean to you?
- What role does evidence play in your day-to-day practice as a nurse?
- What did you learn about research and evidence within your nurse training?

2.5. Analysis

Inductive thematic analysis was undertaken, involving the following phases: a) becoming familiar with the data, b) generating initial codes, c) searching for themes, d) reviewing themes, e) defining and naming themes, f) producing the report (Braun and Clarke, 2006). Interviews were conducted by the first author, who did not know participants in advance. Both authors engaged in initial coding together. After coding the first three transcripts, the authors discussed how codes could be clustered to develop a preliminary coding scheme. This was then revised whilst analysing the other eight transcripts and reapplied to all data. Table 2 indicates how raw data were developed into the final themes and sub-themes.

2.6. Ethical considerations

The University of Warwick provided ethics approval. After reading and understanding a study information sheet, all participants provided written consent to their involvement and use of their data. They were made aware that taking part was voluntary and that they could decline to answer questions posed during an interview.

2.7. Reflexivity and rigour

A pre-existing interest in the topic held by both researchers guided

Table 1
Information about nurses taking part in interviews.

Gender	Age	Time since qualification	Qualification	Areas of work
10 = females 1 = male	Average = 30 years (range 21–47 years)	Average = 2 years (range 6 months–4 years)	9 = BSc Honours in Nursing 2 = Nursing diplomas	Gynaecology, stroke, surgery, respiratory, theatres, medicine, accident and emergency, elderly care

Table 2
An illustration of how raw data were developed into the final themes.

Data extract	Preliminary views on this extract	Code	Theme and sub-theme
P02: "We just do something and put it into practice because that is the way that it is and that is how the guidelines and the procedures tell you how to do something, you just do it that way because that is how it's got to be done."	Being told, research not part of environment	Research not part of professional milieu	**Theme 1:** *We should be using it … but we're not* **Sub-theme: 1.1**: *Nursing as practical and tradition-based*
P03: "I mean I think we just take that they know cause they're the pain team, so yeah I think we just take it on. It's likely that they know, I think yeah."	Take on trust	Taking information from others on trust	**Theme 2:** *Our voice doesn't count* **Sub-theme: *2.2*** *Outsourcing knowledge to others*
P10: "No, never (get to hear about what research is going on in the hospital). You never see any posters or anything like that."	Not seeing research activity, don't get information about research	Don't get to hear about research that is going on	**Theme 3**: *Research is other people's business* ***Sub-theme: 3.1*** *A divide between people doing research and nurses on the ground*

Table 3
Summary of themes derived from data analysis.

Overarching theme: Disconnection		
Theme 1: We should be using it … but we're not	*Theme 2: Our voice doesn't count*	*Theme 3: Research is other people's business*
1.1 Nursing as practical and tradition-based 1.2 Leaving research behind at graduation 1.3 Encountering external expectations	2.1 Being independent practitioners who do what they're told 2.2 Outsourcing knowledge to others	3.1 A divide between people doing research and nurses on the ground 3.2 Other health professionals are more comfortable with research 3.3 Limited understanding of research

the study's focus. The first author is a research nurse; her role involves co-ordinating studies (including trials) running at the NHS Trust where she works. The second author, a health services researcher without a clinical background, has supported nurses to use evidence within practice. The first author kept a study journal to record experiences of the research process. Notes were made before interviews, to outline expected responses to the topic guide, and as soon as possible following each interview. These notes included how the interview had been experienced as a social encounter (e.g. the environment in which it was conducted and observations on participants' non-verbal behaviours).

Yardley (2008) describes core principles for evaluating qualitative research as context, commitment and rigour, coherence and transparency, and impact and importance. Open-ended questions encouraged participants to answer freely and not to be constrained by the researchers' preoccupations, demonstrating sensitivity to context. Commitment and rigour were sought through an in-depth engagement with the topic, with both authors involved in coding and interpreting the data. Coherence and transparency were addressed by keeping a paper trail of all stages of the research. Disconfirmatory cases were discussed during analysis and in the findings to show that all data were considered. During the interview process, coherence was maintained with one researcher carrying out all interviews and transcriptions. During interviews, participants were prompted to explain unclear responses and paraphrasing was used to check understanding of what they said. The impact and importance of the study are considered in the discussion.

3. Results

Participants were asked at the beginning of an interview what 'research' and 'evidence' meant to them. Most were vague when giving a response and often used the terms interchangeably. However, some distinctions were made. Research was depicted as a process, a task completed by people who collected data to advance knowledge. Evidence was seen as an end product of research and linked strongly to statistics; it was associated with reliability and having the power to inform nurses' work:

> *"… results that they have gained from doing certain tests or things like that … some proof as to why they have started doing something new."* (P10)

3.1. Overarching theme: disconnection

An overarching theme developed from the data was that of *disconnection* – between research and evidence and participants' perceived reality of contemporary nursing. This notion of disconnection underpinned the themes (and associated sub-themes) that will now be discussed. Direct quotations from interviewees are presented to illustrate links between the data and final themes. A summary of the findings is presented in Table 3.

3.2. Theme 1: We should be using it … but we're not

Participants were unanimous in acknowledging that research and evidence linked to all aspects of their role and the care they delivered. They highlighted that research and evidence enabled nursing practice to be up-to-date. However, their narratives also reflected a disconnection between research and evidence and their daily role.

3.2.1. Nursing as practical and tradition-based

Despite all interviewees stating that research made a crucial contribution to nursing, they admitted to basing what they did in practice mostly on experience and learning from colleagues:

> *"… I've got a lot of things that I have learnt at university, could be best practice or best evidence that's given and it's kind of like you wouldn't, it's not in the norm to be doing it, it's the norm for them to do what they were doing 5, 6, 10 years ago and not change it to anything new."* (P02)

Nurses were said to be more likely to carry out something they had done successfully before and if it was easy or convenient. Interviewees did allude to the importance of questioning, adding that it could be difficult finding a balance between keeping up-to-date with evidence and patient care:

> *"But if you constantly scrutinise the code and the policies and the code of conduct and such, you neglect the patient."* (P05)

Due to their focus on immediate patient care, research and evidence were not depicted as part of nursing culture. For example, research

papers were not discussed with colleagues. Only one participant described doing so, and these conversations did not happen with nurses. Instead, they took place with other healthcare professionals, such as anaesthetists or surgeons.

Interviewees tended to only search for information if they encountered unusual clinical situations or conditions. When they did search for information, they relied upon a narrow set of familiar resources - the Nursing Times, the Trust intranet and Google. Accessing research was depicted as an add-on to everyday work, something done in their own time, even though they had been taught how to do this during training.

A distinction was made between what some participants described as "old school" nurses and a newer generation. There was a suggestion that old school nurses did not appreciate the need to change:

> *"… they say I've been in my job for 20 years I'm so experienced … why should I have to go to these training events?"* (P08)

They were also seen to have difficulty with technology, particularly computers. However, old school nurses were described as more patient orientated, thorough and hands-on. In contrast, some interviewees felt that newer generation nurses disliked personal care. Yet, they were painted as more open to change because they had been taught about EBP at university:

> *"… the academic flyers, as I would say, they are good, they know their knowledge, but some of them haven't got the people skills."* (P09)

3.2.2. Leaving research behind at graduation

Participants discussed their experience of research and evidence whilst training. Most who had completed a BSc honours degree tended to enjoy completing their dissertation because they could choose their own study area. Conversely, a nurse who undertook a diploma suggested learning little about research at university; the only experience she had was using papers to reference assignments, a process she had undertaken simply to pass her course:

> *"… all we used it for was to back up our assignments. Because you have to have so many references … you probably weren't learning anything … you were just finding them to back up your work to pass."* (P07)

Some interviewees, like participant 08, talked about hands-on experiences of research during their nurse training, which were viewed as beneficial, enabling them to see research in action:

> *"When I initially thought about research I thought oh yeah you just kind of look at data and things like that. But to actually see the participant as a person and to know people go through trials and everything you are just like, oh this is how people actually get the results."* (P08)

Regardless of experiences in training, interviewees suggested that research involvement was something left after graduation and no longer part of their day-to-day role; a disconnection from the skills and knowledge developed in training, which they were unable to apply to practice:

> *"I think it's easier for newly qualified to get into the patterns and ways of a more experienced member of staff who has probably guided them through and helping them learn the way of the ward or department … they could forget about the research and evidence side of things."* (P10)

3.2.3. Encountering external expectations

Participants recalled being expected to use research and evidence to keep themselves and patients safe, and to give best care. This expectation came, in part, from the Trust they worked for, which was criticised for focusing on mandatory training in the workplace, which was not clearly evidence-based:

> *"I went on my nurse induction recently and … there is nothing … that talks about the way the research is done … there's a lot of information … but they don't tell you … this is what research says about certain things …"* (P03)

Trust policy and procedure guided interviewees' practice. They felt this meant they were working in an evidence-based manner. At the same time, they were unsure how these documents were written, from what sources and by whom:

> *"I am guessing it's like your head nurses … I suppose a lot of people work together to do it don't they … I suppose they have to do their research and probably look at other Trusts as well."* (P11)

Interviewees suggested that using policy and procedure gave them peace of mind, protecting them from litigation. However, policies and procedures could be long winded and, therefore, were only looked at when specific information was required. It was also noted that although policy and procedure guided nursing care, their interpretation was shaped to meet individual patients' circumstances:

> *"… cause the papers do say the evidence is there but then like you know it's about using it for each patient and every patient is different so I think it's, I think it's looking at it, looking at individual levels sometimes …"* (P03)

As well as the Trust, interviewees said they were expected to follow evidence by the Nursing and Midwifery Council (NMC) (www.nmc.org.uk/). Revalidation formed part of this expectation, which some participants said helped nurses keep up-to-date with learning needs and to reflect on their career progression:

> *"I feel it keeps you more organised as a nurse and aware of certain training or competencies … it also makes you reflect on your three years … how nursing is going and certain areas where you need to be more exposed to."* (P10)

Conversely, one participant suggested revalidation was difficult to understand, involved additional work, and did not require nurses to show learning from research:

> *"It's not going to be anything to do with evidence-based practice. You are showing your evidence … but you are not showing that you have had to use research evidence."* (P09)

3.3. Theme 2: Our voice doesn't count

A hierarchy within healthcare was depicted by participants as existing between and within professions. This social structure could be a cause of the disconnection interviewees painted between themselves and their use of research and evidence, as explored in the following subthemes.

3.3.1. Being independent practitioners who do what they're told

Participants expressed a conflict between following policy and procedure and being expected to be independent thinkers:

> *"… a lot of people are scared to … do it in a different way, it will come back on you if something goes wrong … And it can contradict itself because the NMC code does say that as a nurse you need to be able to act autonomously and working in the best evidence that's given at the time."* (P02)

The voice of a newly qualified nurse appeared to lack influence; job title and seniority were described as distinguishing between those who had access to information and could instigate change. One participant noted that newly qualified nurses received instructions from senior staff, but were not always told why a change was required, indicating a hierarchy of how information was cascaded and a disconnect from needing to know why:

> *"… we get emails off matrons saying … this is the new paperwork coming*

out and things like that. But we don't see the research behind why. Not the backdoor stuff, because I suppose we are not in that kind of job role. We are the ones who are doing it rather than researching it." (P11)

Some interviewees described being able to question others' practice if they felt it was not up-to-date. However, participant 10 suggested that newly qualified nurses would cause upset if they queried established practices on a ward. Likewise, participant 05 said that newly qualified nurses simply wanted to get on with colleagues, so refrained from questioning. Nevertheless, the need to understand and being able to justify approaches taken to care were defined by several interviewees as imperative to protect their professional registration:

"… because at the end of the day you've got your own pin number … and no one else is going to look after that for you so I think if you're doing something you should be aware of why you are doing it." (P06)

In this respect, a distinction was again raised between "old school" nurses and the newer generation by participant 09; she described the former as less likely to query practice because they were used to doing what they were told, whereas newer generation nurses were painted as more up-to-date with research and the idea of questioning. However, these newer generation nurses still felt unable to act as change agents, due to their lack of status and experience in the role.

3.3.2. Outsourcing knowledge to others

In contrast to the previous sub-theme, which was about nurses doing what they were told and not having a voice, this one is about where nurses seek information. A disconnection was present within the data between being individually responsible for care provided to patients and relying on experts or senior staff for direction. All participants described using colleagues as one of their main sources of information, in part to save time:

"… when I am unsure sometimes I will ask questions and they [colleagues] are more than happy to answer them, which I'm really grateful about because … I will quickly straight away without much effort get information …" (P01)

Some interviewees expressed caution over who they asked for information, proposing they would go to senior colleagues who were more experienced and should know the answer. Participants also relied on specialist nurses for advice; these nurses were regarded as key sources of information and it was expected that what they said would be evidence-based:

"I mean I think we just take that they know because they are the pain team so yeah I think we just take it on." (P03)

Some participants recalled how specialist nurses highlighted the research behind guidance they provided. Hence, specialist nurses could help to bridge the disconnection between nurses and research and evidence. Participant 11 also talked about link nurses (ward-based nurses who are an intermediary between specialist and clinical areas, such as infection control). This role was painted as a way for nurses to keep up-to-date with evidence because these individuals met regularly with specialist nurses for new information, which they cascaded to their team:

"They bring the information to us, the tissue viability nurses do. They say this has been updated or this has been changed then we have to tell all of the staff …" (P11)

3.4. Theme 3: Research is other people's business

Participants described being cut off from research processes and output; research was something that took place without them and from which they were excluded. This included the way in which research and evidence were communicated, in a non-accessible manner.

3.4.1. A divide between people doing research and nurses on the ground

Interviewees said they did not know about research taking place within their Trust. They spoke of not understanding the role of a research nurse, stating that this was not a career option considered when newly qualified, or a vacancy they saw advertised. One interviewee suggested that universities expected students to be employed in clinical, ward-based environments:

"… when I was a student they automatically want you to go into a ward and they automatically want you to go into the settings that you have chosen, or in the district, but they never want you to branch out into something else." (P08)

Another suggested that staff could be made more aware of the research nurse role by spending time with research teams when newly qualified:

"… the patient was really poorly on the ward, and you know people were coming down asking them to take part in a study … but now you understand afterwards the reason behind it and you would be more supportive of it …" (P02)

3.4.2. Other health professionals are more comfortable with research

Throughout interviews, participants referred to other professionals, like doctors, anaesthetists and pharmacists, as the ones that conducted research, who got to know about it and discuss it. Interviewees noted that the details of research were not filtered down to nurses:

"… it informs the high up people like the doctors and that what they're going to use to prescribe the drugs …" (P07)

Participant 08 said that doctors had a culture for learning and reading, and were academic, which was not the case in nursing:

"… you would hardly see a nursing student in there (the library) because we were on the wards and we were doing all of the care … you would always see medical students in there … because they are allocated this time …" (P08)

She added that sometimes nurses themselves believed they did not need to know about research and evidence. Hence, the culture of nursing could inhibit an awareness of or involvement in EBP. This contrasts with the medical role, where research and EBP were painted as essential. Participant 11 explained that this was because doctors had more responsibility, meaning they needed to be aware of and involved in research:

"I just think that they are more important. Not more important but they have more responsibility and they are out there making the decisions …" (P11)

Data on this sub-theme highlighted that knowledge was not shared across professional groups. Hence, one participant, when asked what the Trust could do to support general nurses, suggested creating a culture where staff discussed or distributed the latest, relevant research more readily across professional boundaries:

"… creating a sort of society where everyone can share knowledge … or just the latest research can be shared with each other …" (P06)

3.4.3. Limited understanding of research

Participants felt that research was difficult to understand and not written in an accessible manner. They described being perplexed by technical terms and lacking time to get to grips with the vocabulary used in journal articles; even though this had been covered during their training, some participants felt that research terms and designs had not been presented by lecturers in a helpful or memorable manner. This was regarded as unfortunate because they believed it was important for nurses to be able to critically appraise papers, to understand what research meant and if it was relevant to practice. Others said they

struggled to assess whether a paper reported on a good quality study:

> *"On the base of it, it looks fine but when you start reading it, it's a lot different … [it's] challenging to find out that it wasn't actually good research …"* (P03)

If nurses wanted to get more involved in research, they did not always know how to do this. Furthermore, research was painted as an endless cycle of questioning, which could deter nurses from getting more involved:

> *"… I suppose it could get really tedious … you think you are coming to a conclusion and something throws it out but yeah it can be difficult to get to the bottom of where you need to get to … it's very time consuming." (P04)*

4. Discussion

The overarching theme of disconnection provides a novel insight on the meaning of research and evidence from the perspective of general nurses. Participants had been exposed to EBP during their training. However, once qualified, they appeared to move into a culture where research and evidence were not seen as a priority for nurses.

Berthelsen and Holge-Hazelton (2016) propose that for a nursing culture based on evidence to transpire, an enquiring spirit must be fostered. Interview data suggested that novice nurses may have the energy and enthusiasm for new ways of working. Additionally, they are taught about the importance of questioning at university. However, the message from interviewees was that newly qualified nurses had to learn the basics when they started in clinical areas. As a consequence, inquisitive behaviours learnt at university were lost. This reflects existing research on barriers to nurses engaging with evidence, conducted in a range of countries (e.g. Berthelsen and Holge-Hazelton, 2016; Hannes et al., 2007; Gerrish et al., 2011; Seymour et al., 2003; Strandberg et al., 2014). It also fits with the interesting finding from the study that participants contrasted themselves with what were defined as 'old school' nurses; they felt these professionals were more patient-orientated yet less open to change or likely to question practice compared to their recently qualified peers. This area should be explored further in future research, as newly qualified nurses could act as a bridge between evidence and its application to practice.

The role of mediators of research, like specialist nurses, fits into the PARIHS framework (Promoting Action on Research Implementation in Health Services) for the successful implementation of knowledge into practice, which includes the following core constructs: facilitation, innovation, recipients and context (Harvey and Kitson, 2016; Kitson et al., 1998). It recognises the significance of individuals in the process and their role in determining the acceptance of new knowledge in practice (Harvey and Kitson, 2016). This highlights the importance of the culture within nursing teams or wards (e.g. views of colleagues towards EBP, exposure to research within the workplace, organisational support for use of evidence in practice) and suggests that if this is not conducive to change then attempts at implementing new evidence may be futile. As noted during interviews, and supported by other studies, translating research into practice can be problematic because of healthcare professionals' dislike of change (McCaughan et al., 2002; Nkrumah et al., 2018). Participants observed that newly qualified nurses lacked the status to be change agents.

One way to improve the culture may be to make nurses more aware of research taking place locally. Those who were interviewed felt that research happened above them and was not part of their role. Perry et al. (2008) highlighted that although nurses provide the majority of care to patients, the quantity of research produced by this professional group is disproportionate to the size of the workforce. Participants' accounts showed they regarded research as being for others, such as doctors, devaluing or dismissing their own abilities. This was also evident in a study completed by Hannes et al. (2007), who found that Belgian nurses tended to work under the direction of doctors, which leads to dependency and limited autonomous decision-making.

Relevance to practice: Educators and nurse managers need to think of ways to overcome the disconnection identified in this study between skills and knowledge about research developed whilst training and the reality of following tradition and colleagues once qualified. Revalidation may assist with this. The UK's NMC describes revalidation as "a process that allows you to maintain your registration" (NMC, 2017:3). This could mean it is deemed to be just another task and not really linked to EBP. Yet the NMC guidance also suggests that it aims to encourage nurses to stay up-to-date, and to foster a culture of sharing, reflection and improvement (NMC, 2017). Therefore, if promoted in the right way, revalidation is a method for highlighting the importance of research and evidence to nurses. That said, for EBP to be established in nursing, a cultural change is required, directed by those in positions of seniority (Newhouse, 2007). Cronje and Moch (2010) suggest that senior nurses, as opinion leaders, may lack the knowledge and skills to access and evaluate research. Hence, it may be important for education on EBP to be targeted towards senior staff, so this knowledge can be disseminated and role modelled to the whole team.

Nursing students are taught about research and evidence, placing them in a good position to inspire the adoption of EBP in a clinical setting once qualified (Brown et al., 2010). What was clear is that after only a relatively short time in the profession, participants saw themselves as distanced from research. Others have similarly found that research is regarded as academic and removed from practical nursing (McCaughan et al., 2002). It was evident from participants' words that they felt research was addressed mainly whilst completing their dissertation at university, towards the end of their training. What may work better in nursing education is to integrate principles of EBP throughout the curriculum (Brown et al., 2010). Furthermore, the link between research and practice could be achieved through hands-on experience, with placements in research offered during training. Any such exposure should be as positive and informative as possible, with opportunities for students to see research in action, not just research offices.

Strengths and limitations: Although participants were drawn from three hospitals, these were all part of the same NHS Trust and, therefore, only reflect one organisation's culture. Transcripts were not returned to participants for accuracy checks because a decision was made not to overburden those taking part. However, recordings were re-listened to by the first author alongside reading of the transcripts, to ensure they were an accurate report of what was said. This study was conducted with practitioners working in adult services. Further work is required to see if themes hold or need revising in paediatric, midwifery or mental health settings, or for nurses based in primary care. Only one male participant was involved, although this is reflective of the gender split among nurses working in the NHS. Finally, an awareness of preconceived ideas about the topic held by the researchers was required. This was achieved by the first author keeping a study journal, in which such ideas were documented and could be challenged by the second author.

5. Conclusion

This study provides an insight into the meaning of research and evidence for recently qualified nurses. A disconnection was influenced by issues to do with power, hierarchy, status and professional culture. Interview data suggested tensions when nurses strayed from normalised behaviour and this was painted as a challenge to the status quo. Training may prepare students with knowledge of research, but not provide them with the status or confidence to perform EBP. Hospital management need to consider ways of enabling newly qualified nurses to maintain and employ research knowledge and skills acquired whilst training. Promoting a culture of inquiry, which is open to change, would support this endeavour. Raising awareness of local research may

be another way of helping to breech the disconnection that participants expressed towards the use of evidence within practice.

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Conflicts of interest

Declarations of interest: None.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.nepr.2018.11.008.

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