

Towards a nursing science of the unique: Evidence, reflexivity and the study of persons

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Towards a nursing science of the unique

Evidence, reflexivity and the study of persons

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'General Knowledge is Remote Knowledge; it is in Particulars that Wisdom consists and Happiness too.'

(William Blake, *The Last Judgement* 1818)

Abstract In this paper we attempt to counter the tendency for reflection and reflective practice to be marginalised by the growing dominance of evidence-based practice in nursing. We resist the assimilation of reflection into a hierarchy of evidence dominated by the findings from 'hard science', and argue instead for an alternative science of nursing based on the premise that nursing is a series of individual and unique encounters which cannot be described by a science of large numbers. The resulting 'science of the unique' is concerned with *persons* rather than people, with *wet* data from the clinical setting rather than dry data from the laboratory and clinical trial, and with the individual practice encounter as the site of reflexive research. In particular, we argue that the traditional concept of evidence from formal research is merely the starting point for the on-the-spot generation of reflective/reflexive evidence by nurses themselves as part of everyday practice.

Keywords evidence-based practice, reflective practice, nursing science, reflexive research

Reflection and evidence-based practice

Reflective nursing practice came to prominence in the UK in the 1990s and although originally introduced as a means of exploring and learning from practice, it was also briefly promoted as a process of generating knowledge; that is, as a research methodology in its own right (Rolfe,

1998; Kim, 1999), before falling out of favour over the past few years. It is perhaps no coincidence that the demise of reflective practice as a research methodology coincided with the rise of evidence-based practice in nursing. Indeed, the very first published paper on evidence-based medicine asserted that:

Evidence-based medicine de-emphasises intuition, unsystematic clinical experience, and pathophysiologic rationale as sufficient grounds for clinical decision-making and stresses the examination of evidence from clinical research.
(Evidence-Based Medicine Working Group, 1992: 2420)

This privileging of evidence from what is often referred to as 'hard' research over knowledge from reflection and other forms of 'unsystematic clinical experience' has been reiterated many times in the past decade (EBMWG, 1992; Greenhalgh, 1997; French, 1998; Muir Gray, 2001), and can be seen clearly in almost every published 'hierarchy of evidence' in nursing and other health-related disciplines (DoH, 1999; Aslam, 2000; Evans, 2003; Joanna Briggs Institute, 2004).

This particular formulation of evidence-based practice (EBP) has resulted in a polarisation of methodologies in which evidence from randomised controlled trials (RCTs) and other quantitative methodologies have been set in opposition to evidence from qualitative research, personal experience and anecdotes (Aslam, 2000), leading to such divisive statements as:

What precisely has qualitative research contributed to patient care? I am not saying that it has contributed nothing but the list will not be very long.
(Watson, 2002: 274)

In its most extreme formulation, findings from RCTs have been promoted in opposition to practice based on the 'rituals' (Parker, 1999) and 'folklores' (Phillips, 1994) of a pre-evidence-based age. The implication is that there is no middle ground; that practice is based either on 'hard' research findings or on ritual and folklore.

The repercussions of this tension between 'hard' research and 'soft' reflection have been felt not only in the diminished status of reflection as a research method(ology), but also as a form of nursing practice and as an educational tool. Thus, reflective practice is criticised for lacking an evidence-base:

Much of the published evidence regarding [reflection's] impact on clinical practice appears to be based on personal anecdote and . . . evidence in support of its impact on patient care is of a mainly qualitative and descriptive nature.
(Mackintosh, 1998: 556)

Even some supporters of reflection are cautious about employing it in practice. Thus, whilst Atkins and Murphy (1994: 50) acknowledge that

'reflection does seem to have real potential for nursing practice', they are concerned that 'there is as yet little research to support the use of reflection'. Similarly, FitzGerald and Chapman (2000: 1) call for 'research that provides evidence regarding the effectiveness of the technique [of reflective practice] in nursing'.

Similar critique has more recently been directed at reflection as an educational strategy (Carroll et al., 2002), with Newell (2002: 43) posing the question: how would patients feel about being told that a reflective nursing curriculum 'is based on almost no evidence that it made a difference to their well-being?' Clearly, when these writers bemoan the lack of research evidence for reflective practice, they are referring to evidence from the top end of the hierarchy. Indeed, the complaint by Macintosh that the evidence in support of reflection 'is of a mainly qualitative and descriptive nature' is founded on the assumption that neither the process nor the product of reflection (nor, for that matter, of qualitative research) should be considered as having very much to contribute to research evidence.

This shift towards the values and rigours of the 'hard' sciences is graphically illustrated in two recent editorials of the journal *Qualitative Health Research*, where the editor appears to be rejecting many of the basic tenets of the qualitative paradigm in an attempt to align herself more closely with her scientific colleagues:

It is often written that qualitative inquiry is a creative act. I disagree, for *creative* implies inventive and imaginative. We have enough problems in qualitative research, without implying that our research methods are 'creative', hence not solid enough to be taken seriously.

(Morse, 2004a: 739)

And later:

I am concerned that the popularity of alternate representation [poetry, drama, visual art and popular (non) fiction] will mean that . . . qualitative inquiry will be further alienated from mainstream science.

(Morse, 2004b: 887–888)

The message could not be clearer: invention, imagination and 'alternative' forms of representation such as narrative are no longer to be taken seriously, even by eminent qualitative researchers.

We might conclude that reflective practice and even qualitative research are barely tolerated by many advocates of evidence-based nursing. As we have seen, qualitative research is held by some in very low esteem, used only 'to complement quantitative research' (Muir Gray, 2001: 160) and 'should be linked to quantitative methodologies . . . for it to have any meaning' (Gournay and Ritter, 1997: 442). Reflection is similarly tolerated as a supplementary activity whose product of experiential knowledge is not valued unless it is validated by 'hard' scientific research.

Wet and dry data

If quantitative research in general, and the RCT in particular, really does represent a 'gold standard' of evidence, then there can be little complaint from qualitative researchers and reflective practitioners about the relegation of their preferred types of evidence to the bottom of the hierarchy. However, we wish to argue that the concepts of a gold standard of research and a hierarchy of evidence are inappropriate for the discipline of nursing, and that the RCT provides only a limited source of evidence on which to base nursing practice. We believe that the practice of nursing is *fundamentally* different from the practice of medicine and requires a fundamentally different view not only of evidence, but of what it means for practice to be *based* on evidence. We do not believe that nursing should capitulate to the standards and rigours of the medical discourse, which can at best result only in a watered down, second-rate flaccid science, neither truly hard nor soft.

Perhaps nurse researchers are using the wrong metaphor. The feminist writer Pauline Bart observed that the terms 'hard' and 'soft' have male sexual overtones in which the former is clearly privileged over the latter:

We speak of hard data as being better than soft data, hard science being better than soft science, hard money better than soft money. . . . This is of course a male sexual metaphor, so since discovering this, I have substituted a metaphor based on female sexual experience and refer to wet and dry data.

(Bart, 1974: 1)

By referring to the 'hard' sciences as 'dry', and the 'soft' sciences as 'wet', the power dynamic is changed. Wet research findings are immersed in experience, whereas dry findings are remote and detached. Wet data originate in Schön's 'swampy lowlands' of practice, whilst dry data are derived from the 'high hard ground' of the laboratory and the controlled environment of the clinical trial. As Schön asks:

Shall [the practitioner] remain on the high ground where he can solve relatively unimportant problems according to prevailing standards of rigor, or shall he descend to the swamp of important problems and nonrigorous inquiry?

(Schön, 1987: 3)

There is little doubt about Schön's answer to the above question, nor to the importance of getting our feet wet in the search for research findings of relevance to practice.

We must refrain from regarding qualitative and reflective research as an inferior 'soft' cousin to the 'hard' sciences. Rather, we must rise to the challenge of developing a complementary 'wet' science, in no way inferior to 'dry' biomedical science, but rather a science attuned to the prac-

tice of nursing which can stand side-by-side with medical science without apology or concession.

Persons and people

The first step in building a new science of nursing is to look critically at the currently accepted gold standard for generating nursing knowledge. The notion of the RCT as the gold standard methodology for nursing research gained widespread acceptance in the 1990s, particularly following the publication by the Department of Health (DoH) of the Report of the Taskforce on the Strategy for Research in Nursing, Midwifery and Health Visiting (DoH, 1993). This document defined research as 'rigorous and systematic enquiry . . . designed to lead to generalisable contributions to knowledge' (1993: 6, our emphasis). Whilst the report did not specifically single out the RCT (except to praise the efforts of the Cochrane Collaboration), the emphasis on generalisability as the cornerstone of the strategy pointed clearly to the clinical trial as the gold standard methodology. The justification for the gold standard status of the RCT (and more recently, the meta-analysis and systematic review of several RCTs) thus rests largely on the twin concepts of ensuring a large and representative sample through randomisation and controlling for spurious variables:

It can be argued that multicentre RCTs provide the best evidence for the effectiveness of an intervention because the results have been generated from a range of different populations, settings and circumstances. The findings from systematic reviews are generated in a similar manner, and so also provide rigorous evidence. As a result, the robustness and generalisability of evidence from both these approaches are better than what is generated by other research designs.

(Evans, 2003: 80)

However, whilst generalisability is usually considered as the justification for the gold standard status of the RCT, acceptance of generalisability itself as a desirable attribute of nursing research is usually taken as self-evident.

The strength of generalisable research lies in the validity of its findings beyond the sample to the population as a whole. This is clearly desirable in the disciplines from which most of our nursing research methodologies originate, such as the social sciences and (in the case of the RCT) agricultural research, where the focus of study is the population rather than the individual. Sociologists wish to *theorise* about the behaviour of social groups; agriculturists need to know (for example) the effects of a particular pesticide on an entire species of crop. In both cases, researchers and practitioners are concerned with the science of large numbers; that is, with populations rather than with individuals. And arguably, when the discipline of nursing decided to align itself methodologically with

agriculture and the social sciences in the 1960s and 1970s, it was because nursing was also concerned with large social groups.

This was certainly the view expressed at the time by professional bodies such as the Royal College of Nursing (RCN) in the UK, which stated in 1971 that:

To see nursing as a one-to-one relationship, even when that relationship is between the individual nurse and the individual patient, is to narrow down the concept of the nurse's role. The individual must be seen as a member of a group, and the group within the context of society.

(RCN, 1971, no pagination)

Clearly, if nursing is regarded from this macro perspective, then there can be little dispute about the status of the RCT as the most effective and rigorous method for generating nursing knowledge. However, the past 30 years have seen significant changes in the way that we view nursing, such that it is now more usually regarded as 'interactions between unique individuals, with unique experiences . . . in unique situations' (Sarvimaki, 1988), that is, as patient-centred rather than as task-oriented. Thus, whilst the RCT might with some justification be accorded gold standard status within the traditional sociological paradigm of nursing, it is of limited value in producing knowledge about particular unique interactions between particular unique individuals in particular unique settings.

The educationalist Max van Manen refers to the need for a 'theory of the unique'. Although he is writing about teaching, his comments apply equally to nursing:

Pedagogic situations are always unique. And so, what we need more of is theory not consisting of generalisations, which we then have difficulty in applying to concrete and ever-changing circumstances, but *theory of the unique*; that is, theory eminently suitable to deal with this particular pedagogic situation, this school, that child, or this class of youngsters.

(van Manen, 1997: 155, his emphasis)

Similarly, if nursing is to regard itself as a science, then it is not a science of large numbers or a science of the general, but rather a *science of the unique*. To paraphrase van Manen, we require a science suitable to deal with this particular nursing situation, this hospital, that patient or this client group.

Another way of distinguishing between a science of the general and a science of the unique is to conceptualise the former as the study of *people* and the latter as the study of *persons*. Our dictionary tells us:

Person/noun a human being considered as having a character of their own, or as being different from all others.

People/pl noun human beings in general; a group of persons considered collectively.

(New Penguin English Dictionary, 2001)

There is not only a quantitative difference between these two words, but a qualitative difference. When we bring several persons together as people, when we consider a group of persons collectively, something is lost at the expense of being able to make generalisations, and that something is *difference*. To study persons is to study a number of individuals, to study people is to study a homogenous group. The RCT is often justified in nursing research by comparing the testing of new drugs with the testing of new nursing interventions. It might be argued, for example, that since we would be reluctant to accept a drug that has not been fully tested by a clinical trial, we should also be reluctant to accept a nursing intervention that has not been tested in the same way. However, our discussion of people and persons would suggest that this is a mistaken comparison, since whilst drugs generally produce very similar effects on all *people*, nursing interventions operate on the level of the individual *person*.

Of course, it is *sometimes* useful for nurses to see the bigger, more general picture, for example when planning for future bed occupancy or when making decisions about overall ward policy. And as we have seen, the bigger picture is also required when prescribing and administering medication or when carrying out other technical procedures. However, we are arguing that there is a serious discrepancy when a discipline which is defined by its focus on unique interpersonal interactions has as its gold standard a research methodology which can offer little or no insight into those interactions. As we have seen, the situation is further compounded by the growing tendency for even those qualitative and reflective methodologies which *do* address questions of individual nursing encounters to seek evidence from RCTs to justify their use.

If we are serious about promoting nursing as a science of unique persons rather than a science of people in general, then we need to reconsider the methods and methodologies the discipline authorises and promotes for the generation of nursing knowledge. As Mulhall has observed:

Tiptoeing in the wake of the movement for evidence-based medicine, however, we must ensure that evidence-based nursing attends to what is important for nursing.

(1998: 4)

We wish to argue that this reconceptualisation extends well beyond simply replacing the RCT with some other research methodology as the gold standard for generating evidence. It even extends beyond the view expressed by some writers that there is no gold standard. Rather, it questions the fundamental concept of evidence-based practice as simply the

application of evidence of any kind to practice. We wish to argue that, if nursing is truly a science of the unique, then this is merely the first stage of the process of evidence-based practice, which must then generate further evidence from the nursing encounter itself in an ongoing reflective/reflexive cycle of action and evaluation.

Evidence *from* and evidence *for*

The traditional model of evidence-based practice relies solely on deduction. If research has demonstrated that a particular intervention is most effective for a general condition then, depending on the validity of the research study, the practitioner is obliged to apply that intervention to any patient suffering from the condition in the population described by the study. There may be exceptions, such as cases when the patient refuses to accept the treatment, or when the nurse decides that the patient is too frail or otherwise unsuited to the treatment (DiCenso et al., 1998), but as a general rule, generalisable findings from research are applied to individual cases which fall within the scope of the generalisation.

This model is based on a science of *people* which regards patients as members of a collective group, each of whom is likely to respond in a similar way to the same intervention. Although clearly there are ethical implications to this position of nursing people as though they were all the same, it is not simply a moral issue. Our intention is not to condemn nurses working under the traditional EBP model as not caring for or about their individual patients; rather, we are pointing out the logical impossibility of truly individualised care. The logic of generalising from a population to individuals within that population depends upon the assumption that each and every one of those individuals is fundamentally alike. If every person responded differently to a particular drug, then the RCT would no longer be an effective method for making judgements about drug treatments. If, then, we begin with the assumption that every patient will respond differently in each therapeutic encounter with each nurse, then the RCT is no longer an effective method for making judgements about nursing interventions.

However, the same argument could be applied to any research methodology: if each and every therapeutic encounter is unique, then we simply have no way of predicting its outcome in advance and hence no way of deciding what might be the most effective intervention. Statistical generalisations such as those produced by RCTs are of little use because the laws of probability do not apply in individual cases. But, by the same logic, the naturalistic generalisations of 'fittingness' (Sandelowski, 1986) or 'transferability' (Guba and Lincoln, 1989) from one case to another as advocated by qualitative researchers and reflective practitioners also do

not apply if every case really is unique. An ethnographic study of a particular ward culture will only have limited application to a different ward; a phenomenological study of the lived experiences of 10 nurses will not necessarily apply to an eleventh nurse; a reflection on my experiences with a particular patient will not necessarily tell me very much about even my next encounter with the same patient.

Of course, whilst all therapeutic encounters are unique, they also share similarities, and so it is always possible to generalise to some extent. However, the inexorable logic of our position that each and every clinical encounter is unique is that the traditional and usually accepted model of evidence-based practice is only of limited use to the nurse. To some extent, the problem lies not with the quality or generalisability of the evidence, but with the very nature of what the term 'evidence' means in EBP. Our contention is that the theoretical literature on evidence-based nursing is confused and confusing about the meaning of the word 'evidence', and has no clear idea about what it means for nursing to be based on evidence. The dictionary tells us:

Evidence: an outward sign, an indication; something, especially a fact, that gives proof or reasons for believing or agreeing with something, e.g. by a court to arrive at the truth.

(New Penguin English Dictionary, 2001)

The word is derived from the Latin *ex videns*, meaning 'from what is seen'. Evidence, then, is the outwardly visible sign of an event, an indication that the event has taken place; for example, the visible signs left behind at a crime scene. This original meaning, in which 'evidence' is evidence from or evidence of, has more recently been supplemented by a second meaning; evidence for. Rather than being some empirical sign which has been left behind after the event, this new meaning regards evidence as being something already there which motivates the act.

This, of course, is the usage adopted by the evidence-based practice movement, and is, strictly speaking, incorrect. It makes no sense to talk about evidence preceding a crime, of collecting evidence before the crime had been committed. Events which have already occurred might be regarded as motivation for the crime, but the evidence comes afterwards. Similarly, the events leading up to a war, such as building up a stockpile of weapons of mass destruction (WMDs), might be regarded as motivation for that war, but not as evidence. Nevertheless, it suits governments to present WMDs as evidence rather than as motivation, since the term 'evidence' has forensic and scientific connotations, whereas the term 'motivation' is personal and subjective; we talk of 'hard evidence', but never of 'hard motivation'. Thus, when we talk of evidence for war or evidence for practice, we are not implying an empirical link between the

evidence and the action, but rather an *ideological* link. To say that there is evidence of the existence of weapons of mass destruction is to make an *ex videns* statement of empirical fact; the weapons have been seen, tested and photographed. To say that these weapons are evidence for war is to make a statement of belief or ideology; the weapons might or might not constitute a reason for war, depending on your views and beliefs.

Similarly, to say that there is evidence from a well-conducted randomised trial (RCT) is to make a statement of empirical fact; it is to accept the accuracy of the findings of the study and their generalisation to a wider population. However, to say that these findings constitute evidence for practice is to make a statement of belief or ideology that the findings from RCTs constitute a gold standard of data collection on which to base practice. The findings of an RCT might serve as *motivation* to act in a certain way, but they are not, strictly speaking, hard evidence for the action.

The EBP movement has taken advantage of the confusion surrounding these two quite distinct meanings of the word 'evidence', which continues to convey an air of scientific, forensic, objective, empirical authority, even when being employed in its second(ary) ideological sense. When Tony Blair spoke of 'evidence for war with Iraq', he was attempting to invoke an objective imperative, as though the link between WMD and military action is logical rather than ideological. Similarly, when researchers refer to the findings of RCTs as evidence for practice, they are also invoking an objective imperative, as though the link between research findings and practice based on those findings is logical rather than ideological.

Towards a reflexive model of evidence-based practice

If evidence from research has only an ideological relationship when used for practice, then it is at best merely a starting point for our nursing science of the unique. Clearly, if we wish to generate evidence which has a logical relationship to practice, then it can only arise from practice itself, in the same way that criminal evidence can only arise from the crime. What is generally regarded by the EBP movement as *evidence* for practice is seen by us as *motivation* for practice, and this might consist of findings from qualitative or quantitative research, findings from reflection on our practice, knowledge that we have about this particular patient, our 'gut feelings' (intuition), or the accumulated experience of colleagues and other professionals. These latter sources of knowledge are particularly contentious and are often dismissed by writers on evidence-based practice as opinion, clinical tradition, anecdote or folk law. Extending the comparison with criminal evidence, we prefer to view this rich accumulation of experiential knowledge in a more positive light as analogous to case law.

Our initial nursing intervention is therefore motivated by some or all of these sources of knowledge, but as we have seen, they can only give clues to the unique clinical situation we find ourselves in. Importantly, then, we must seek feedback on the effects of our action and modify it accordingly. This initial feedback is, according to our definition, the first firm evidence that we have specifically about this unique situation, and is then used to affirm or disconfirm our initial motivation, which in turn directs our subsequent actions. Evidence-based practice is therefore a reflective/reflexive cycle in which we are gradually modifying our responses in the light of immediate feedback (Figure 1). This process has been variously referred to as reflection-in-action (Schön, 1983), nursing praxis (Rolfe, 1996) and action research (McNiff, 1993; Rolfe, 1998).

Although some writers have described such a process as the artistry of nursing (Picard, 1995; Johns, 2001), our view is that it is part of a long scientific tradition of single-case experimentation which involves forming and testing hypotheses and theory-generation. Indeed, Schön (1983) refers to this process as ‘experimenting-in-action’, adding that ‘when someone reflects-in-action, he becomes a researcher in the practice context’. Such research ‘in the practice context’ that is also a component of practice itself is, for us, the most valid and important form of research for the generation of evidence from practice.

Peter French comes close to our position when he writes of evidence-based practice that:

previous evidence needs to be evaluated and validated in the practitioner’s own context wherever possible. This brings forth a strong rationale for the undertaking of ‘small-scale’ research projects in the practice setting.

(French, 1999: 73)

We are simply taking this position to its obvious conclusion that ‘small scale’ research projects can be the personal reflective evaluations of practitioners of the consequences of their own interventions as part of an ongoing sequence of actions and evaluation of those actions. Evidence-based practice is therefore elevated from a dry, dispassionate judgement

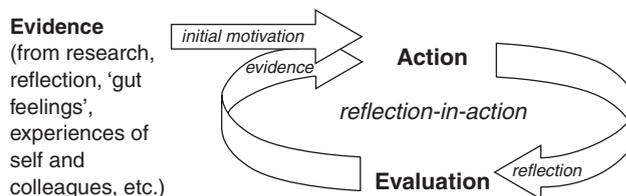


Figure 1 A reflexive model of evidence-based practice

about research validity prior to and remote from the practice setting, to a series of on-the-spot reflective clinical judgements made in the midst of an evolving practice situation. Seen in this way, evidence-based practice is not for the novice and neither is it for the faint-hearted. It requires not only quick thinking and advanced clinical skills, but also the skills of reflection in- and on-practice and the ability to evaluate a clinical situation clearly and rationally whilst it is ongoing. It also offers a means by which the practitioner can offer an individual and unique response to each and every individual and unique situation which she finds herself in.

Conclusion

We have attempted in this paper to counter the charges that reflection plays only a nominal role in evidence-based practice, and have instead placed it at the heart of the process. In doing so, we have suggested the outlines of a nursing science of the unique individual, rather than a science which strives for ever-larger samples through meta-analysis; a science which is concerned with differences between persons rather than with similarities between people; a science which prizes contextualised, situated 'wet' data from the swampy lowlands of practice rather than decontextualised 'dry' data from the high hard ground of the laboratory and the clinical trial. In particular, we have asserted that it makes as little sense to demand RCT evidence for the effectiveness of reflection as it does to demand reflective evidence for the effectiveness of the RCT.

We have argued strongly that nursing has a very different focus from sociology, medicine and agriculture, and that it must therefore develop its own scientific traditions and methodologies rather than submit to their criteria of rigour and validity. By incorporating EBP into a reflective/reflexive cycle that brings together practice and research, nurses can shift the focus of their care from people to persons and thereby develop a science of the unique that will respond to the needs of the individual. We hope that we have gone some way to opening a debate about what such a science might look like.

Key points

- Nursing is concerned with unique, individual, personal encounters between nurse and patient, and requires a 'science of the unique' rather than a generalisable science of large numbers.
- A science of the unique will be concerned with 'wet' data from clinical settings and will value reflection as a method of data collection.
- Evidence-based practice should entail not only the application of research findings to practice, but also the evaluation of the effectiveness of those findings in a reflexive cycle.

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