

Expert qualitative researchers and the use of audit trails

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Submitted for publication 9 December 2002

Accepted for publication 25 June 2003

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CUTCLIFFE J.R. & MCKENNA H.P. (2004) *Journal of Advanced Nursing* 45(2), 126–135

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Background. Determining the credibility of qualitative research findings remains a contested area and leaves the way open for additional theoretical and methodological discussion.

Aims. In this paper we focus on audit trails and confirmability, within the context of ‘expert’ qualitative researchers. Having outlined the audit trail process, we develop existing arguments about the ‘expert’ qualitative researcher. We then juxtapose the two, highlighting a number of issues in an attempt to advance the debate.

Discussion. These issues discussed are: (1) The shifting sands of methodological orthodoxy – the historical context in which audit trails emerged. (2) The individual construction of logic. (3) ‘Grounded in the data’ or ‘going beyond the words’ – the key differences between descriptive and interpretive findings. (4) The singular relationship between qualitative researcher and their data. (5) The growing acknowledgement that method alone is insufficient. (6) The challenging example of visionaries.

Conclusion. We argue that using audit trails as a means to achieve confirmability of qualitative research findings is an exaggeration of the case for method, and may do little to establish the credibility of the findings. We also introduce a preliminary case for testing the credibility of theory induced by expert qualitative researchers, in part by means of its usefulness; its ‘fit and grab’, rather than by the researcher’s adherence to contemporary methodological orthodoxy. In other words, the absence of audit trails does not necessarily challenge the credibility of qualitative findings, particularly if an expert qualitative researcher produced the findings.

Keywords: nursing, expert qualitative researchers, audit trails, establishing credibility, methodological orthodoxy

Introduction

Determining the credibility of qualitative research findings remains a contested area. Whilst a growing literature exists (see Cutcliffe & McKenna 1999 for a recent review), there are still many debatable issues, unanswered questions and challenging dichotomies on this matter. This leaves the way

open for additional theoretical and methodological discussion. Accordingly, this paper will focus on audit trails and confirmability, particularly in the context of ‘expert’ qualitative researchers. Although there is evidence that the debate around audit trails has progressed since Lincoln and Guba’s (1985) seminal work, there is also evidence that it may not have progressed too far from these original conceptualiza-

tions (see for example Koch, 1994, Andrews *et al.* 1996, Barry *et al.* 1999). Therefore, the paper begins with a brief overview of the audit trail process, followed by an overview of the notion of the expert qualitative researcher. Following this, we juxtapose the two and use this synthesis to addressing the question: expert qualitative researchers and the use of audit trails – exaggeration of the case for method or path to enhanced credibility?

Brief overview of the 'audit trail' process

The origins of audit trails in qualitative research appear to reside in the work of Lincoln and Guba (1985). In their influential publications, Lincoln and Guba (1985, p. 318/319) regarded audit trails as one of the principal techniques for establishing the 'confirmability' of qualitative findings. Their work, in turn, draws heavily on a PhD dissertation by Halpern (1983), whose study clearly has underpinnings of (or is influenced by) mathematical audit or audit of fiscal accounts. According to Halpern (1983), this audit algorithm can be used for *all forms of inquiry* (emphasis added). Further, it identifies six categories of information that can/should be collected to inform the audit process, and these are listed in Box 1. Interestingly, Lincoln and Guba (1985) add a caveat, which indicates that not all of these six categories may be appropriate for a qualitative study.

Lincoln and Guba (1985, p. 321) make another important point when they state:

So auditors may not be consulted until the study is virtually complete. Indeed, there may be utility in waiting until the end to avoid the possibility that the auditor may be co-opted.

Thus, despite Halpern's (1983) algorithm having a pre-entry stage, there is a clear sense in Lincoln and Guba's (1985) conceptualization of an audit trail, that an auditor (second party) will audit the decisions, analytical processes, and methodological decisions of the primary researcher (first party), and that this will occur *ex post facto*. Furthermore, they intimate that this auditor will remain 'separate' from the study (and thus not be co-opted.)

Having agreed the terms of the audit, the auditor then needs to become familiar with the study, its methodology,

Box 1 Halpern's 1983 six categories of information for an audit trail

1. Raw data
2. Data reduction and analysis products
3. Data re-construction and synthesis products
4. Process notes
5. Materials relating to intentions and dispositions
6. Instrument development information

design, substantive focus, findings and conclusions. The most crucial (and we would add problematic) stage of this audit process is the assessment of *confirmability*. Lincoln and Guba (1985, p. 323) describe several sub-steps to this process, for example:

...ascertain whether the findings are grounded in the data – a matter easily determined if appropriate audit trail linkages have been established;

...reach a judgement about whether inferences based on the data are logical, looking carefully at analytical techniques used, appropriateness of category labels, quality of interpretations;

...the auditor will wish to make an assessment of the degree and incidence of inquirer bias.

Therefore, based on these types of information, the auditor makes an independent assessment of the study and, as a result, can 'confirm' the findings reported.

Overview of the notion of 'expert qualitative researcher'

In this section we consider the concept of the 'expert' qualitative researcher and in so doing, suggest that such individuals are analogous to expert nurse practitioners. We will elaborate on the preliminary arguments put forward by May (1994) and then will consider the relationship between expert qualitative researchers and the practice of producing audit trails.

Benner (1984) introduced the notion of the expert nurse practitioner. Expertise, she suggested, develops when the clinician tests and refines propositions, hypotheses and principle-based expectations in practice situations. Experience, she argued, is a prerequisite for expertise, and expert nurses use a different process of problem-solving from less expert nurses. Experts use knowing or the grasp of a situation built on a background of similar and dissimilar situations and embodied intelligence. They rely on perceptual ability based on prior experience, and this makes human decision-making possible: it enables a holistic understanding. Benner (1984, p. 31) asserted most strongly that expert practitioners no longer rely on an analytical principle (rule, guideline, maxim) to connect their understanding of the situation to an appropriate action. As a result of their extensive and cumulative experience, they have an *intuitive grasp* (emphasis added) of situations and zoom in on the accurate region of the problem.

Benner (1984) transplants Dreyfus and Dreyfus (unpublished data) model of skills acquisition onto the discipline of nursing. According to Dreyfus and Dreyfus beginners need to follow the rules and as a result their performance is halting, rigid and mediocre. In contrast, the expert is no longer

consciously aware of features and rules and as a result, their performance becomes fluid, flexible and highly proficient. Crucially, the decisions made by experts in guiding this fluid performance are not easy to articulate or teach. When asked why an expert carried out a certain act or took a particular path rather than another, the reply is likely to be:

Because it felt right, my intuition prompted me, I just knew that was what was needed.

Benner *et al.* (1999) used the term intuition to refer to pattern recognition, a sense of salience, and a sense of concern or heightened attentiveness based on experiential learning in whole, past, concrete situations. Thus, to guide their practice, experts draw upon their intuitive knowing or aesthetic knowledge (Carper 1978, Benner 1984). Because this knowledge is difficult to articulate, less expert nurses may find their practice difficult to understand and re-create.

Therefore, in describing expert qualitative researchers we argue that several important features of their practice need to be highlighted:

- 1 Expert qualitative researchers need to be experienced. Accepting Benner's argument about experience and the development of expertise, we can assert with a degree of confidence that expert qualitative researchers are also experienced. However, more contentious issues remain unanswered. For example, how much experience does a qualitative researcher need before they can be described as expert? Is it a simple matter of a linear, proportionate relationship between length of time and level of expertise? Furthermore, the experience should be good. Just as a nurse can work in a clinical area where they get bad experience, so too a qualitative researcher could have bad research experience. Are there other variables that will influence the development of expertise in qualitative research? Whilst it appears logical that some experience is required, we are reluctant to suggest arbitrary limits on the required level of experience before a qualitative researcher can be regarded as expert. Similarly, as these arguments are relatively underdeveloped (and under-researched), it might be considered prudent to acknowledge that a range of variables and processes may be bound up with the development of expertise.
- 2 Expert qualitative researchers use a different process of qualitative data analysis from less expert nurses (Rose & Webb 1998, Webb 1999). Just as expert nurse practitioners see the 'big picture', or see the problem as a whole (Benner 1984), the expert qualitative researcher can often see the over-riding or underlying dynamic, principle or process. This is particularly important in attempting to uncover more capacious terms (Giorgi 1985), when

attempting to uncover a core variable (Glaser 1992), or when attempting to maximize the parsimony of the emerging findings/theory.

- 3 Expert qualitative researchers no longer rely on an analytical principle (rule, guideline, maxim) to connect their understanding/analysis/explanation of the phenomenon to findings that have 'fit', 'grab', authenticity, and credibility. Perhaps this is one of the contributing factors that make it so difficult to teach qualitative methods. In keeping with Dreyfus and Dreyfus (unpublished data) model, students and novice qualitative researchers require structure, or step by step guides to help them undertake qualitative data analysis. Similarly, less expert researchers need to see and think of things in sequential, logical progressions and processes that have clear demarcations and boundaries. This may particularly be the case when the student comes from a positivist background or has greater familiarity with quantitative methods. Yet expert qualitative researchers rarely (if ever) conduct research in this way. They often require non-linear, cyclic and simultaneous analytical skills/processes to occur (Glaser & Strauss 1967).
- 4 As a result of their extensive and cumulative research experience (including data collection and analysis), expert qualitative researchers have an *intuitive grasp* (emphasis added) of qualitative data analysis and zoom in on the core variable, key theme or central, important features of the findings.
- 5 Expert qualitative researchers are no longer consciously aware of features and rules of qualitative research analysis and, as a result, their analysis becomes fluid, flexible and highly proficient.
- 6 The analytical decisions made by experts in guiding this fluid performance are not easy to articulate, and are most often associated with preconscious processing (Glaser 1998, Cutcliffe 2003). When asked how an expert qualitative researcher arrived at certain insights or was able to look 'beyond the words' and reach a certain finding, the reply is likely to be:

Because it felt right. My intuition prompted me – I just knew that was what was needed.

To further explain points 4–6, this intuitive, often tacit, knowledge that expert qualitative researchers draw upon is often (if not exclusively) 'discovered' or used in a spontaneous manner. Such spontaneous insights, acts, thoughts and choices are not congruent with step-by-step protocols or rigid methodological procedures. May (1994, p. 15) makes similar comments when she refers to the case for 'magic' in method. She states that this 'magic' in method refers to immeasurables

and unobservables such as intuition and creativity, and that 'ignoring the role of creativity and intuition in qualitative work is also inappropriate because there is a growing consensus in the scientific community that method is not enough'.

Just as the expert practitioner has difficulty explaining to others how they function, so too expert qualitative researchers may have difficulty explaining their analytical processes, particularly to a less expert qualitative researcher. They would have even more difficulty explaining them to an expert quantitative researcher. They may have problems in saying 'how' they know. Consequently, if their findings are judged predominantly on their adherence to methodological procedure, particularly methodological procedure that less expert qualitative researchers require, then their findings are likely to lack credibility. This leads us logically to the next section of the paper.

Considering audit trails in the practice of expert qualitative researchers

Having outlined the practice of audit trails and drawn attention to some of the key features of expert qualitative researchers, we now need to juxtapose these and in so doing, attempt to answer the question posed at the beginning of this paper: would the use of audit trails by expert qualitative researchers be an exaggeration of the case for method or a path to enhanced credibility? In response to this question, we highlight a number of issues that appear to shed some light on this matter. These are listed in Box 2 and are addressed in more detail below.

The shifting sands of methodological orthodoxy: the historical context in which audit trails emerged

In her insightful paper on the 'journey' that qualitative research has undergone during the last 20 years, Hutchinson (2000, p. 506) points out that, during the 1970s and up to the mid 1980s, 'a time of physics envy prevailed'. Nursing research has

Box 2 Importance issues in understanding audit trails

1. The shifting sands of methodological orthodoxy: the historical context in which audit trails emerged
2. The individual construction of logic
3. Grounded in the data – or 'going beyond the words': the key differences between descriptive and interpretive findings
4. The unique relationship between a qualitative researcher and his/her data
5. The growing acknowledgement that method alone is insufficient
6. The challenging example of visionaries

a history of being influenced by the medical profession (Pearson 1992), and in the 1970s and 1980s many nurse researchers adopted the philosophical, epistemological and methodological beliefs of the biomedical model. Thus, positivistic philosophies, quantitative methods and the hegemony of randomized control trial designs can be seen in many nursing research reports produced at that time. Such a widespread preoccupation led Munhall (1982, p. 177) to state:

The assumption was that human meaning and behaviour are orderly, lawful, predictable and countable

and consequently:

Nursing asserted the similarity of the physical and psychosocial worlds and, in so doing, quantified everything, including clients' beliefs about chemotherapy, parents' experiences with handicapped children, and attitudes towards death.

In the middle of this paradigmatic struggle, some qualitative researchers sought to convince their quantitatively-oriented peers of the value of qualitative methods. Typical criticisms were that qualitative research studies lacked control, lacked validity and were subject to bias. Such was the epistemological climate in which Lincoln and Guba (1985) produced their work on audit trails. Whether included purposefully or otherwise, the rationale underpinning the need for audit trails reflects, at least in part, positivistic concerns and thus can be seen to be addressing claims about lack of control, validity and bias. This point needs further explanation.

As stated previously, one of the tasks of the auditor is to check for the incidence and degree of inquirer bias (here it is implied that even a person's bias can be measured). However, the axiomatic position of qualitative research is that there is always bias in a qualitative study (Morse 1998) – bias that is both necessary and purposeful. There is deliberate bias in the decisions made about which literature to access, choice of setting and selection of participants. Furthermore and importantly, there is purposeful bias in that qualitative researchers strive to maintain the subject–subject position (Walters 1995). They are both part of the study, and yet separate from the study. There is a necessary and conscious choice to bring to the study all of the researcher's creativity (Cutcliffe & McKenna 2002), tacit knowledge (Altheide & Johnson 1994) and intellectual entrepreneurship (Cutcliffe 2003). As a result, any competent auditor should be able to detect the bias present in such a study. But given contemporary understandings of the methodological underpinnings of qualitative research, detecting such bias would not be indicative of a limitation of the study. What it would indicate (at least in part) is a study that is congruent with qualitative research methodology.

Individual construction of logic

Another task of the auditor is to make a judgement based on the logic of the inferences from the data. In other words, the auditor ought to be able to track back through the various categories of information and follow (or understand) the conceptual progression of the findings. This raises other distinct problems such as the very nature of 'logic' and the recognition that logic is not an absolute and fixed concept. The Collins dictionary (1991) defines logic as:

The science of reasoning, proof, thinking or inferences, a chain of reasoning, a particular scheme or treatise.

It follows that one person's chain of reasoning may well be different to another person's, yet both can be logical. These different chains of reasoning may even produce conflicting conclusions, but that does not necessarily indicate the presence of logic in one person's reasoning and the complete absence and application of logic in another's. In order to provide an example of this, we draw upon a current debate in mental health nursing, namely that regarding care of suicidal clients and the use of 'close/special observations'.

The evidence in this area is consistent in suggesting that 'close/special observations' can be considered to be a woefully weak intervention for the care of suicidal mental health clients, as up to 25% of people 'under' observations still manage to commit suicide (Department of Health 1999, 2001). Two conflicting arguments have arisen in attempting to remedy this situation. The first states that it is the quality of the observations that needs addressing. If nurses were better trained at carrying out 'observations', then the intervention would be more effective and fewer people would commit suicide when 'under observations'. The second argument suggests that the very practice of close observation as a means to care for a suicidal person is flawed. People facing such existential crisis, it is argued, need more sophisticated forms of care than somewhat crude custodial observations. People with complex inter- and intrapersonal crises, such as the intent to commit suicide, need increased hope, to feel there are choices and options, and to examine/understand the genesis of their suicidal ideas. By gaining this deeper understanding, increased hope and greater awareness of choices and options, fewer people would commit suicide (Cutcliffe & Barker 2002).

From this brief example it can be seen that both arguments follow a chain of reasoning, both consider the same problem, both appear to be logical, and both arrive at very different conclusions. Which argument, then if either, is the more logical? It follows that even if the auditor draws different conclusions and inferences from the data than the primary

researcher, this does not necessarily mean that the primary researcher's analysis is any less (or more) logical than the auditor's. Thus, the purpose of conducting an audit appears to be undermined.

Grounding the data or 'going beyond the words': key differences between descriptive and interpretive findings

A further problem arises in the auditor's attempts to determine if the findings are grounded in the data. According to Lincoln and Guba (1985), this should be easy if the appropriate audit trails have been established. The inference here is that, if such grounding is not easy to do, then perhaps the appropriate audit trail linkages are missing. This would undermine the credibility of the study, and suggests the alarming conclusion that the primary researcher must have either 'forced' their own 'pet theory' onto the data (Glaser 1998), or that they conjured the findings out of thin air. Perhaps it is easy to determine if the findings are grounded in the data if the conceptual level of the findings stops at description. In other words, the primary researcher can use similar words and phrases to those used by the participants. More capacious or 'umbrella' terms can then encapsulate several similar and/or related terms and thus leave a visible audit trail.

Whilst there is nothing inherently wrong with descriptive level studies we, as a scientific community, need to do much more in our current research than describe. Indeed, the most illuminating qualitative findings go far further than description: they interpret, explain, and solve problems. This is perhaps a key feature of 'expert' qualitative researchers' work that sets them apart from less expert researchers. Expert qualitative researchers go beyond the words, see past the obvious, access the underlying and the hidden, and enlanguage the often present yet invisible process/culture/experiences. Consequently, in such denser and more complex conceptualizations, we contend that it would not be easy for an auditor to determine whether or not the findings are grounded in the data, and thus the purpose of conducting an audit is further undermined.

The singular relationship between qualitative researchers and their data

Several authors have recommended enlisting the help of colleagues to help verify the findings, confirm the logical path that the researcher has taken, or help minimize bias (i.e. the work of an auditor) (Burnard 1991, Appleton 1995). However, we (Cutcliffe & McKenna 1999) and Sandelowski

(1993, 1998) have written elsewhere that there are several philosophical and epistemological difficulties with this practice. The processes of theory induction and qualitative data analysis depend upon the singular creative processes between the researcher and their data (Munhall & Boyd 1993, Schutz 1994). Given the unique interpretive relationship that each qualitative researcher has with the data – an auditor following the primary researcher's audit trail will not necessarily uncover the same findings (Sandelowski 1998). This is especially the case if the primary researcher has been involved in all stages of the research process and the auditor, as Lincoln and Guba (1985) advocated, has joined the study towards the end. This problem is exacerbated further by the attempts of the auditor to remain separate from the study and thus stay 'unco-opted' or uncontaminated. This is an instance of Lincoln and Guba's (1985) original conceptualization of the auditor, at least in part, as one who attempts to remain in the position of object:subject. Indeed, the very design of the audit process is engineered to maintain such a position.

Yet, the widely accepted axiom of the qualitative researcher is that they strive to maintain the subject:subject position. The primary researcher wishes to immerse themselves in the world of the participants as they themselves describe it and as the researcher experiences it empathetically. Therefore, because the primary researcher and the auditor are operating from positions that are philosophically and methodologically polarized, it is difficult to imagine them producing the same findings or making the same interpretations. It is probable that the primary researcher and auditor will produce different findings or may disagree on paths of logic. According to Lincoln and Guba (1985), the audit trail exists to provide confirmability. However, given the unique nature of the relationship between the creative processes of the research and the data, the audit process is unlikely to produce confirmed findings. This begs the question: would the findings from a qualitative study have no credibility without having undergone the process of confirmation? Or to rephrase this: can there be no validity without confirmability?

It can be seen that the notion of confirmability is driven by positivistic underpinnings. Such endeavours are perpetuating the philosophical 'sacred cow' of objective reality and the associated methodological 'truism' that the accuracy of a representation of 'objective reality' increases as the number of people who *confirm* it increases. Popper's (1965) cogent arguments about theory testing and confirmation notwithstanding, such views are clearly at odds with the underpinning philosophies of qualitative research, where it is accepted that multiple realities exist, and that these realities are socially constructed and have multiple meanings.

The growing acknowledgement that method alone is insufficient

According to Chinn and Kramer (1995), there is an increasing realization of the value of 'know how' knowing and, importantly, 'know how' knowing cannot always be fully expressed. As the methods within the qualitative paradigm are inextricably linked with inducing 'know how' knowledge, it is not surprising that there is an acceptance or embracing of 'know how' knowledge by qualitative researchers. It is surprising, then, that there may be less enthusiasm for accepting the authenticity or credibility of qualitative research findings unless they can be *confirmed* by audit trails. In other words, unless the findings can be confirmed by an 'unco-opted' auditor, then to some extent they have less credibility.

As alluded to above, May's (1994) 'magic' in method means that it is inappropriate to ignore the role of creativity and intuition in qualitative research because there is more to a study than the method. Neither May (1994) nor we are advocating that the researcher has *carte blanche* to abandon the hard work that accompanies qualitative data analysis. Indeed, as Glaser (1978, 1998) and May (1994) pointed out, hard intellectual work and allowing one's tacit knowledge, creativity and intuition to interact with the data are close affiliates. Glaser asserted that in grounded theory analysis the conceptual elements of the theory will *emerge* (original emphasis) if the researcher engages in the hard work and compares labels with other labels. Similarly, May (1994) argued that intuition and intellectual agility are most often found operating in the context of rigorous attention to method.

These arguments appear to indicate a fundamental though often unstated premise, namely that for some it is more important that researchers can articulate how they reach certain findings (i.e. the method and design) rather than judge the value of the findings by the application of the same (i.e. the product). Such a phenomenon has been described by Kvale (1995, p. 36) as a 'mania for legitimation'. We all wish to produce qualitative findings and conduct qualitative studies that are valuable, credible and that make a difference to the knowledge base and to practice. Yet we continue to attempt to judge qualitative studies less by their fit, grab and application, and more by their method and design.

The challenging example of visionaries

It needs to be acknowledged that in the academic world people's minds sometimes work differently from the 'norm' and, as a result, they can have insights, without perhaps being

What is already known about this topic

- Establishing the credibility of qualitative research findings remains a contested area of debate.
- Some qualitative researchers have used audit trails as a means to enhance confirmability and thus, the credibility of their studies.
- Theories pertaining to development of nursing practice expertise currently exist.

What this paper adds

- This paper juxtaposes the context of 'expert' qualitative researchers and their use of audit trails.
- Using audit trails to achieve confirmability of qualitative research findings is hyperbole of the case for method, and may do little to establish the credibility of the findings.
- The absence of audit trails does not necessarily challenge the credibility of qualitative findings, particularly if an expert qualitative researcher produced the findings.

able to articulate how they did this (e.g. John Nash). Similarly, Einstein formulated the theory of relatively many years before the technology existed to test it. Likewise, such people are able to talk about the destination and what it feels and looks like to be there, without perhaps being able to describe in detail the journey that brought them to that point. Such a situation is very challenging to those who cannot fully understand the journey, and this may lead to scepticism. To others these people can be quite forbidding, and they may even critique their findings on the grounds that they do not conform to established hegemonies or used accepted methods/pathways to the discovery of knowledge. Yet the examples of John Nash and Einstein show us that, with hindsight, and as the scepticism subsides, there can be huge merit in such work. In other words, despite the historical doubt, and perhaps lack of conventional method, the truth and the value of the findings lie in the findings themselves and in their operationalization /application, i.e. with use of the theory.

There is a further point that is worthy of consideration. This relates to discourse analysis and the notion of one discourse being dominant and having power and control over other alternative discourses. If, for example, the dominant discourse in qualitative methodologies currently is attention to methodological rigor, purity, confirmability and audit trails, then any findings produced by studies that do not conform to the 'laws' of this discourse will be regarded as

flawed. Yet, at the very least, one thing an examination of the history and development of qualitative methods tells us is that the methods are rarely static. Criteria for judging the quality of qualitative research are not 'set in concrete', and huge advances in method and findings have occurred as a result of researchers moving away from established norms and challenging hegemonies (Turner 1981, Cutcliffe & Goward 2000).

Conclusion

In this paper we have provided an overview of the audit trail process, and have developed the notion of the expert qualitative researcher. In juxtaposing these, we have highlighted that they are perhaps incongruous and incompatible. In so doing we have put forward arguments that using audit trails as a means to achieve confirmability of qualitative research findings appears to be an exaggeration of the case for method, and may do little to establish the credibility of findings.

Furthermore, we have offered a preliminary case for testing the credibility of theory developed by expert qualitative researchers by considering its usefulness – its fit and grab – rather than the researcher's adherence to contemporary methodological orthodoxy. If the theory explains, predicts and solves problems for the group for which it was produced, then it may be of less importance that it has little credibility *vis a vis* recognizable methodological patterns. In other words, the absence of audit trails does not necessarily challenge the credibility of qualitative findings, particularly if an expert qualitative researcher produced the findings.

It is possible that some of the concerns about the credibility of findings reside in the fear of 'maverick' qualitative researchers inventing concepts and theories, which then have neither methodological rigor nor practical application. Such concerns may be unfounded when considered 'in the light' of recent exhortations that have appeared in the qualitative research methodology literature. There are recent calls for qualitative researchers to be more bold (Morse 1994) and for greater intellectual entrepreneurship (Cutcliffe 2003). Perhaps challenging (and rejecting) the practice of audit trails might be regarded as one form of boldness, or entrepreneurship. This is particularly the case when the substantial limitations of audit trails and their incongruity with expert qualitative researchers are considered.

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Commentary: Expert researchers and audit trails

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Cutcliffe and McKenna (2004), in their paper *Expert Qualitative Researchers and the Use of Audit Trails* argue that audit trails are an exaggeration of the case for method and do little to establish the credibility of the findings. Rather, they put forward the case that expert researchers are able to generate credible research precisely because they are experts.

Does this paper advance the debate of rigour in qualitative research? I believe it does, but not through the juxtaposition of audit trail and expert researcher. The way in which these authors describe audit trails refers to literature from the 1980s and to Lincoln and Guba's (1985) naturalist inquiry which, they claim, is based on the work of Halpern (1983). The audit trail, Cutcliffe and McKenna argue, presents a modernist project. Credibility is judged by application of the rules, which they termed 'methodological orthodoxy'. Few examples are given in their text where these rules are applied rigorously. Terms to describe rigour, such as credibility and confirmability, have not been defined by Cutcliffe & McKenna.

Whilst there are useful applications of audit trails (Koch 1994, 1996, Koch & Harrington 1998), these are ignored by the Cutcliffe and McKenna. What constitutes an audit trail is narrowly conceived. What have been put forward are rules from the work of Halpern (1983), and these rules are used to further the argument that their application in qualitative research does not enhance the credibility of a study. This approach is limited by its own criteria of what constitutes an audit trail. As suggested, there is literature that expands on the notion of audit trail and pushes its application beyond Halpern (1983), and it may be worth considering these before rejecting audit trail as an approach toward enhancing a study's rigour.

The other question is, 'Who audits?'. I would argue that it is the reader who decides whether a study is believable. Are not readers of research the ultimate auditors?

Audit can be taken to mean tracking all decisions that are made in the process of research. Guided by Gadamer (1994, p. 559), 'All science involves a hermeneutic component and...receives legitimacy only through the context of research'. This means explicating what is going on throughout the research process. In keeping a reflexive 'journal', the researchers record what they are doing in the course of their research. Tracking methodological developments/decisions,

theoretical insights and recording one's own emotions and responses are subjects recorded in the daily journal. We record what we think about, ideas that have influenced us, and what has confronted or disturbed us. When we are uncomfortable we ask further questions about the nature of the discomfort. Reflections are analysed and often instigate action, perhaps reshaping the way in which the research is progressed. Thus, journal jottings become data for reflection and analysis, and are woven into the research text and show readers how an interpretation was made.

In the world of multiple interpretations, different readers may not arrive at the same interpretation, but the journal data will provide the trail to describe the researcher's particular interpretation at a particular time. I say this because interpretations are always on the move as new information is gathered. The interpretation offered in the text is the most sophisticated account available, given the thinking and resources at the time. I reject the Cutcliffe and McKenna's narrow application of their understanding of audit. An audit trail can be a creative way to shape the text and, if signposts are offered along the way, readers can decide whether a piece of work is credible or not.

What is it about this paper that advances the debate about rigour in research? I am attracted to the idea that 'expert' researchers can afford to abandon rules and methodological orthodoxies. Although committed to the notion of an audit trail as an analysed journal account that shows readers what has transpired whilst researching, I am often tempted to analyse data intuitively rather than adhere to 'rules'. I would claim that it is research experience that provides the confidence to do so. As an experienced researcher who has poured over many transcripts and raw data, I can reach an interpretation through reading and re-reading, dwelling with the text, drawing out the most significant statements, and reorganizing these into a cohesive account or story line that answers the question being asked. Validation of these accounts can be pursued with research participants (if possible) and/or with colleagues in terms of the acceptability of the interpretation or new understanding of the area being explored. Yet when working with novice researchers, I recognize that rules are necessary. A novice researcher wants rules and looks for prescriptive approaches that offer guidance. Hence it has been necessary to write guidelines for data generation, journaling

and analysis. When novice researchers follow these guidelines, we can be encouraged to believe that the product of their research will be credible and trustworthy.

It is possible to make a theoretical connection here to Benner's (1984) work describing excellence and power in clinical nursing practice 'From Novice to Expert'. If we understand and articulate what constitutes 'expert', we may be able to teach ways of becoming an expert researcher. In my opinion, one of the characteristics of an expert is that they have the courage and confidence to break the rules. In reflecting on what makes an expert, I have learned through exposure to multiple data scripts generated myself as an active researcher, by PhD students and by colleagues from individual interviews, and from data generated through a participatory action research (PAR) process. It strikes me that the speed and confidence with which I can question a script, grasp meaningful statements, and convey these meanings in writing have developed over the past decade. Tracing and articulating my learning experiences would be the next activity (Benner 1984), but it is beyond the scope of this commentary to show ways in which experts are 'made', except to say two things.

First, developing or using a systematic process in transforming interview/group/journal data into a meaningful story line is essential. It is a systematic process not unlike maintaining an audit trail in terms of sequencing, recording, analysing and reporting data. Secondly, working with the participants of research means that we build understandings together. Whenever possible, individual

story lines are returned to participants and revisions are made (member checking), and the cyclical process inherent in PAR means that our (researcher and participant) interpretations are being reshaped as we move through the process.

I believe that the 'expert' seriously considers rigour throughout the entire process of research. I agree with Cutcliffe and McKenna that the expert may abandon methodological orthodoxy, but creative ways to enhance the rigour of the study must remain the central concern.

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