Evolving from a positivist to constructionist epistemology while using grounded theory: Reflections of a novice researcher.

Kim Ward,* Teaching Fellow, Doctoral candidate, PGDipHsc, RGN, k.ward@auckland.ac.nz

*School of Nursing, The University of Auckland, New Zealand, Level 2, Building 505, 85 Park Road, Grafton, Auckland, 1023, Private Bag 92019

Dr. Karen J. Hoare, * Senior Lecturer, NP Children & Youth PHC, PhD, RGN

Prof. Merryn Gott, * Associate Deputy Vice Chancellor (Research) & Director of Research, PhD

Abstract

Specifying epistemology guiding health research provides evidence of a researcher's worldview and thus the rationale for methodological choices. A challenging quagmire of epistemological options exists for the novice nurse researcher, often difficult to navigate, particularly in the absence of a philosophical grounding.

During her doctoral journey, the first author (KW) explored living with overnight mask ventilation for sleep apnoea using a social constructionist grounded theory. Choosing this methodology required that KW reconcile her background in evidence-based nursing practice with the various theoretical legacies underpinning grounded theory.

In this article, the philosophical roots of both evidence-based nursing and grounded theory are explored. The influence that both context and the researcher's relationship with their participants and data have upon knowledge construction is also considered. Parallels are drawn between a developing awareness of epistemology and the evolution of grounded theory research from positivism to social constructionism.

This paper will assist novice researchers to consider assumptions about the origins of knowledge and subsequently be of help when choosing a research methodology.

Keywords: epistemology, positivism, social constructionism, nursing research, grounded theory, evidence-based practice

What this paper contributes

This paper fills a gap by documenting considerations given to epistemological and methodological choices. Specifying and reconciling the tensions between an evidence-based nursing background and qualitative research contributes to wider epistemological debates. Moreover, this paper contributes to qualitative research literature by offering clarity to some of the ambiguities that exist between constructivist and constructionist grounded theory. This paper will be of particular interest to researchers seeking to understand the links between epistemology and methodology and those interested in reconciling tensions between evidence-based nursing and qualitative research.

Conflicts of interest

The authors declare that there is no conflict of interest.

Funding

This paper received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Introduction

Epistemology, identified as best 'fit' with a researcher's study methodology, acts as a 'lens' through which a research topic is approached (Kelly, 2010; Lipscomb, 2008). Denzin and Lincoln (2000) identify 'ontology' as what is known to be real, and 'epistemology' as concerning the "relationship between the inquirer and the known" (p.16). Documenting the ontology and epistemology underpinning health research is a way of evidencing a researcher's worldview (Welford et al., 2011; Holloway and Wheeler, 2010). However, few papers examine the considerations that researchers give to their epistemological and methodological choices. Typically, documented accounts of the tensions that exist between a positivist evidence-based clinical nursing background and the epistemologies underpinning qualitative methodologies, including grounded theory, are limited to theses. For the novice researcher, the varieties of epistemological options that exist are difficult to navigate particularly where philosophical grounding is absent from academic training. This paper documents the tensions experienced between a nursing career founded upon the evidence-based movement and a current social constructionist epistemology recognised while conducting a grounded theory research project.

Grounded theory (GT), a popular choice with nurse researchers, is useful to explore how people experience and act within their everyday worlds (Stern and Porr, 2011; Corbin and Strauss, 2008a). We chose this methodology to explore people's experiences of overnight mask ventilation (CPAP) for sleep apnoea. Nurses have influenced the development of GT including Jeanne Quint Benoliel, who worked with the founders of GT on the seminal Awareness of Dying study (Glaser and Strauss, 1965). Other nurses include Juliet Corbin, who collaborated with Anselm Strauss, Phyllis Noerager Stern and contemporary authors Mills and Birks (Birks and Mills, 2011a; Corbin and Strauss, 2008a; Stern, 2012). Traditionally, the medical model and more recently the evidence-based practice (EBP) movement have influenced nursing. Both influences rely upon objectively quantifying evidence and a positivist epistemology (Feinstein and Horwitz, 1997; Goldenberg, 2006). The positivist epistemology underpinning nursing might be considered at odds with the epistemologically 'other' world of GT. Nurse, and grounded theorist, Juliet Corbin (2009) alluded to an epistemological discord when she reflected that,

> "I found the quantitative part of the class pretty dry. … However, when the class presentation turned to a discussion of qualitative research methods, I said, "What is this? Tell me more." There was something about qualitative research that I found very appealing, though at the time I couldn't have told you what that was." (p.36)

The following reflective account reconciles an unquestioning positivist upbringing in healthcare as a nurse trained in the hospital system with a growing awareness of my epistemology as a grounded theorist and addresses theoretical issues and contradictions in academic nurse-researcher development. The different philosophical underpinnings of prominent grounded theorists Glaser, Strauss and Charmaz reflect an evolution similar to mine as a nurse and researcher: from positivism to constructionism. In this paper, the evolution of GT methodology/methods are used to parallel changing beliefs about epistemology that emerged during research and offers clarity to the ambiguities between constructivist and constructionist GT.

KW's experience of evidence-based nursing

I (KW) learned my craft as a nurse during the late 1980s as publications, such as the Briggs Report (1972), catalysed a move towards evidence-based practice (EBP). The confidence in EBP demonstrated by healthcare providers and policymakers contributed to the dominance of positivist scientific reasoning within health and supported the authority of EBP to claims of objective truth and knowledge (Mykhalovskiy and Weir, 2004; Goldenberg, 2006; Creath, 2013). The scholarship of key nursing figures like Alison Kitson, Brendan McCormack, and organisations such as the Joanna Briggs Institute argued for the salience of EBP as a framework for nursing (Kitson et al., 1998). EBP was given a 'gold standard' status and was based upon the positivist assumptions that experience and fact are separate. Moreover, the concept of EBP supported the notion of truth as 'out there' awaiting discovery (Benzi, 2001; Welford et al., 2011; Duncan et al., 2007; Goldenberg, 2006). Therefore, evidence-based nursing required assumptions be made about reality and what constitutes knowledge. Namely, that human responses to healthcare can be objectively measured, causation can be identified, responses can be predicted and that such predictions can be generalised (Ramprogus, 2002). Questioning the tenets of evidence-based nursing practice did not occur to me, nor that 'evidence' was anything other than proven by objective, quantitative enquiry. Practice as an intensive care nurse further reinforced the tenets of a hegemonic positivist enquiry due to

increased exposure to evidence-based medicine in this setting. Indeed, for physical health nursing at this time, this was 'normal science' (Kuhn, 1970).

In the decades since, I have come to believe that truth and reality are 'slippery' concepts reliant upon personal experiences and beliefs: the patient's physical body is not nursed in isolation from their mental self, their beliefs, their experiences or their social worlds. To do so would take the patient as a person out of context. For example, if experiencing pain is "what the [patient] says it is" and therefore subjective, then so are other experiences of healthcare (McCaffery, 1968, p.95). Consider the asthma patient who, counter to current knowledge on best practice, insisted on nebulised medication and became agitated at any attempt to persuade her to use an inhaler with a spacer (Kelly and Lynes, 2011). At this moment, I used practice-based evidence by administering nebulised medicine instead of an inhaler, which would have been evidence-based practice (Reed and Lawrence, 2008). Stern et al., (1984) said that as a patient "a positivistic approach to patient care leaves one pleading, 'Nurse, listen to *me*!'(pg.371). I listened. Thinking about this change in my practice prompted other questions about my patient's experiences and my practice. In particular, I wondered what people who used CPAP as a treatment for sleep apnoea thought of this therapy (Giles et al., 2008). How did they go about living with CPAP, what was it like living with CPAP, and how was the experience for them? Objectively quantifying answers to these questions seemed incongruous – answers from the patients themselves would be relative to their experience and their versions of truth. Employing a positivist paradigm would, therefore, be problematic.

Problems with belief in a knowable world

The dualist epistemology and realist ontology of positivism - reality as objectively observable, fixed, predictable and generalisable - is based upon "belief in a knowable world" (Gergen, 1990: p. 25; Lincoln et al., 2011). Judging knowledge by meeting criteria for level one on the hierarchy of evidence, reifies the objectively knowable, such as the systematic review of homogenous randomised-controlled trials (RCT) (Phillips et al., 2009; Evans, 2003; Pearson, 2010). Accordingly, the positivist (realist) focus on absolute truth, where one version is legitimate, *transcends* context. The risk is that EBP is too rigidly applied (Duncan et al., 2007). For example, a realist based nursing concept such as reducing obesity reduces ill health, taken out of context means a healthy Polynesian athlete with a body mass index >30 is deemed a

health risk (French, 2002). Equally, dualism views the mind as separate from the body: the mind operates independently of the physical world, and the knower (subject) is separate from the known (object) (Buetow, 2007). This idea appears to suggest the mind works independently of the brain but does not account for the change or compromise to mental-self observed following head trauma (Hart, 1996; Benzi, 2001).

Nursing scholars of the 1980s and 90s grappled with and cautioned against defining EBP as a panacea to improve practice and patient outcomes (Kitson, 1997; French, 1999). Should practice be based upon a hierarchy of best evidence, headed by RCT and systematic review, or based upon discerning use of all forms of available evidence (Porter and O'Halloran, 2009; Feinstein and Horwitz, 1997; Mantzoukas, 2008)? Later nurse scholars questioned what constituted 'evidence', and the dominance of the EBP discourses of 'normal science' (French, 2002; Rolfe, 2005; Rycroft-Malone et al., 2004). Other scholars applied energetic postmodern critique to attempts by the EBP movement to define nursing practice (Holmes et al., 2006b; Holmes et al., 2006a).

The emergence of post-positivist and postmodern epistemologies signified attempts to acknowledge the difficulty in defining truth as solely objective. During the 1960s and 70s, the realisation that 'hard' science had diminished meaning to people caused a rejection of realist ontology. This rejection led to new interpretive modes of research, like grounded theory, and the development of epistemologies like social constructionism (Goldenberg, 2006; McIntyre, 2010).

Grounded Theory as an evolving method

GT is a strategy for systematically collecting, analysing and constantly comparing qualitative data to develop mid-range theories regarding the hows and whys of social life (Charmaz, 2008a). Findings are presented and grounded in the participants' words about their experience. Glaser and Strauss sought truth in the everyday, ordinary and marginalised. They elevated the status of those studied by drawing attention to the complexity of everyday experiences as illustrated *in Awareness of Dying* (Glaser and Strauss, 1965; Bryant and Charmaz, 2007a). By explaining action, GT is useful for exploring peoples' responses to health problems. Examples include Quint Benoliel's (1967) work about nursing the dying, Charmaz's

(1990) exploration of self-identity in chronic illness and more recently Bowers' (2014; 2001a; 2001b) collaborations exploring peoples' experiences of residential and aged care.

Glaser and Strauss' seminal text *The Discovery of Grounded Theory* (1967) was a response to concern that sociologists were preoccupied with verifying theory, rather than generating theory. Original (Glaserian) GT was located towards the end of the modernist second moment of qualitative research (post WWII to the 1970s), characterised by a belief in human progress achieved through a search for truth and knowledge (MacDonald and Schreiber, 2001; Denzin and Lincoln, 2000). As Charmaz (2006) stated, Glaser and Strauss challenged the thinking of the time by showing that positivist quantitative research was not the only legitimate form of inquiry (Bryant and Charmaz, 2007a). In *Discovery*, Glaser and Strauss (1967) incisively argued that GT research should be informed by both objectivist and constructivist methods (McCann and Clark, 2003; Clark et al., 2008). Glaser and Strauss (1967) advocated the researcher remain impartial and detached. Nonetheless, they departed from positivism by rejecting the notion of theory deduced from a priori assumption, instead believing in a blank theoretical slate ('tabula rasa') when embarking upon research.

Consequently, the theoretical context of original GT was influenced by Barney Glaser, a statistician loyal to the virtues of post-positivist critical realism, and Anselm Strauss who operated in the contrasting pragmatist and interpretivist paradigm of symbolic interactionism (McCann and Clark, 2003; Charmaz, 2003). At a time when realist positivist research dominated, the fusion of Glaser and Strauss' analytical research skills and philosophical views imbued qualitative research with a newfound credibility and respectability (Denzin and Lincoln, 2005; Hall et al., 2013; Charmaz, 2006). At the same time, the search for positivist evidence-based truth and knowledge was happening within nursing (Briggs, 1972; Kitson et al., 1998). For Glaser and Strauss, as for nursing, truth and knowledge were underpinned by a realism and objectivism that emphasised the real world, if looked for, is out there (Bryant and Charmaz, 2007a).

A new way of knowing in GT

While Glaser remained steadfast to the concepts of objectivist GT (researcher as impartial blank slate), Strauss asserted that symbolic interactionism should guide GT research, developing his approach in collaboration with nurse academic Juliet Corbin (McCann and Clark, 2003; Corbin and Strauss, 1990). For Strauss, symbolic interaction enabled interpretation of both the personal and social impact of, for example, a pain management regimen. In contrast, a Glaserian objectivist framework would overstress environmental factors and their influence upon individuals under treatment. Such differences in perspective created tensions that led to Strauss' departure from 'classic' Glaserian GT and beginnings of a move from post-positivist to constructionist GT (Corbin and Strauss, 1990; Corbin and Strauss, 2008a; Mills et al., 2006; Hoare et al., 2012a; Mills et al., 2007).

The movement of GT away from positivist associations reflected a growing awareness of the dominance of institutions like EBP and discord between evidence based on objectively researched data and real-life experiences. The developing focus of GT on contextual human action and interaction aligned with the concept of constructed and re-constructed meaning (Charmaz, 2008b; Corbin and Strauss, 2008b). Subsequently, Glaser and Strauss' student Kathy Charmaz, evolved GT via a constructionist epistemology that resonated with me (KW) (Charmaz, 2003; 2006; 2008a; 2014).

'Constructionist' or 'constructivist.'

The terms constructionism and constructivism are used interchangeably by various authors, including Charmaz, making any differences unclear (Mallon, 2008; Young and Collin, 2004; Charmaz, 2003; 2008a; 2009; Sismondo, 1993). Sismondo (1993) argues that depending on the author and context in which the terms are employed, constructions may be knowledge, facts or things. For example, in grounded theory research, theories and accounts are constructions based on data and observation.

Constructivism in part refers to learning theory, developed by Piaget and Vygotsky, relating to childhood developmental stages during which knowledge is *individually* constructed through experience (Ackermann, 1998; Harnett, 2007; Young and Collin, 2004). Though constructivist learning theory is commensurate with knowledge-as-constructed, it emphasises an individually constructed version of reality (Young and Collin, 2004; Bryant and Charmaz, 2007b). Sismondo (1993) and Andrews (2012) argue that constructivism also refers to the

construction of realities that, over time, become perceived as objective realities, such as the taken-for-granted institution of 'hospital' (Berger and Luckmann, 1991). Therefore, a constructivist GT would emphasise the participant's reality in the outcome without accounting for the influence the researcher has in the construction of the research process. For these reasons, constructivism does not fully align with socially constructed knowledge.

Social constructionism advances the premise that reality is constructed and re-constructed both individually from the sum of experience and in relationship and conversation with others (Birks and Mills, 2011a; Charmaz, 2006; Gergen, 2001; 2009). Knowledge and meaning are also acknowledged as culturally and historically situated and contextually bound (Kuhn, 1970). Constructionism, therefore, emphasises the socially interactive basis through which common knowledge is constructed and re-constructed via discourse (Charmaz, 2009; Corbin and Strauss, 2008b; Schwandt, 2000). Consequently, the co-construction of a grounded theory, by researcher and participants, remains inconsistent with positivist notions of truth and knowledge as objective (Crotty, 2003).

Furthermore, and despite calling her version of GT constructivist, Charmaz (2003; 2006; 2008a) argues for acknowledgement of the researcher as both co-constructer of the research outcome and the research process. In referring to "my constructionist approach," Charmaz (2008a: p.402) indicates her choice of term (constructivist or constructionist) is dependent on the context of the discussion: in a book about constructionist research for example. Charmaz (2008a; 2014) states her initial descriptor of *constructivist* was to distance her version of GT from both the objectivism of Glaserian GT, and the absolute relativist stance of radical constructionism (see Table 1).

Table 1: Knowledge and reality from objectivist to radical constructionist.

Epistemology:	Objectivism	Constructivism - individual	Constructionism - contextual	Radical (relativist) constructionism
Emphasis is on:	Knowledge exists, awaiting discovery.	Individual construction of knowledge.	Social construction of knowledge (including individual constructions).	Multiple versions of constructed knowledge.
Reality is:	Objective and external to our perception of it (Crotty, 1998; Charmaz, 2003; Charmaz, 2008a).	Individually constructed and reconstructed through interpretation of personal experiences (Bryant and Charmaz, 2007b; Charmaz, 2003; 2006; Young and Collin, 2004).	Constructed and reconstructed following personal experiences in concert with social, cultural and political contexts (Charmaz, 2008a; 2009; Lincoln et al., 2011; Schwandt, 2000).	Subjectively perceived in multiple differing ways, arising from multiple, and differing, worldviews (Schwandt, 2000).

Note Glaser and Strauss' student, Phyllis Noerager Stern, refuted that they advocated grounded theorists assume an objectivist stance. Although, she does infer that Glaser believed a researcher's epistemological viewpoint should not impact upon a "good grounded theory" (Stern and Porr, 2011: p.35).

Prefixing constructionism or constructivism with the word 'social' situates the epistemology in a social context. As an alternative to positivism, constructionism enables negotiated (constructed) knowledge, reality and meaning as part of human experience in union with others (Welford et al., 2011; White, 2004). So the emphasis of a social constructionist GT is on the truth as understood by an individual or group, sharing a particular healthcare experience with those around them, to illuminate the mundane and everyday moments where living really happens (Charmaz, 2006). Within this dictum, Charmaz offered new ways to approach GT research that included contextually bound meaning, rejected the concept of tabula rasa, and required a repositioning of the researcher within the participant/researcher relationship.

Contextually bound meaning in constructionism

As already described, knowledge and meaning are acknowledged as culturally and historically situated and contextually bound (Kuhn, 1970). Unlike the positivist view that real truth is out there, constructionism aligns with truth and reality that are not discovered, but are re/constructed by people in the course of their everyday contexts (MacDonald and Schreiber, 2001; Charmaz, 2008a). Constructionism, as opposed to positivism, is *rooted in* context and meaning is contextually bound where different versions of truth are valid (Duncan et al., 2007; White, 2004). A difficulty with this idea for positivists may lie in interpreting constructions as 'made up'. Applying context to constructions may negate this difficulty by situating them in the real world of personal and social experience. Re-consider the example of the patient who *knew* she needed nebulised asthma medication. Someone with long-standing respiratory disease, always 'successfully' treated with a nebuliser, may refuse an inhaler and spacer out of anxiety and mistrust (Kelly and Lynes, 2011). Insistence on inhaler and spacer may increase anxiety with negative health consequences. So the context of this patient's constructed beliefs became a significant contributor to this instance of practice-based evidence (Reed and Lawrence, 2008). Consequently, a constructionist nursing concept, with emphasis on understanding shared meaning, shifts its meaning dependent on context (Duncan et al., 2007).

Repositioning the researcher and tabula rasa

Since constructionist GT emphasises collaboration, co-construction and dialogue the position of the researcher relative to the participant is changed (Charmaz, 2006; 2008a; Gergen, 2001). Early objectivist Glaserian GT, much like evidence-based research, placed the researcher apart from the participant; an impartial elsewhere objectively observing the data and not part of the process (Hoare et al., 2012a). The outcome was obtained through methods unbiased by researchers' values or ideals (Gergen, 1990). However, a constructionist approach to research incorporates the researcher. Not only is the participant's socially constructed view of reality valued, but also the investigator's prior knowledge is recognised, and their influence upon the research process scrutinised (Charmaz, 2003; 2006; 2008a). By interpreting the data, Charmaz asserts that researchers contribute to – co-construct – theory development rather than remotely observing and reporting (Charmaz, 2003; Birks and Mills, 2011b; Lincoln et al., 2011). As mentioned, a constructivist GT would emphasise the participants' reality in the outcome,

without accounting for the influence the researcher upon the construction of the research process. Therefore, Charmaz (2006) maintains, the researcher must scrutinise their own,

> "research experience, decisions and interpretations in ways that bring the researcher into the process and allow the reader to assess how and to what extent the researcher's interests, positions and assumptions influenced inquiry" (p. 188).

Consequently, from a dualist EBP viewpoint, co-construction means that an unbiased stance is no longer possible. Starting with an unbiased and a-theoretical blank slate means not pre-supposing what the results will be while being open to coming across a priori theories in the data (Glaser and Strauss, 1967). However, researchers do have theoretical perspectives and a priori assumptions when commencing research. For example, Glaser counselled against a literature review before collecting data to mitigate bias. However, no research proposal or ethics application is complete without a review of the topic and context of the research (Walls et al., 2010). Once the review is done knowledge gained cannot be unknown so the slate cannot be blank (Thornberg, 2011).

Accordingly, in constructionist GT researchers' tacit knowledge and the existing literature are valued as 'sensitising concepts' within the research process (Mills et al., 2006; Hoare et al., 2012b). Specifying and critiquing tacit and existing knowledge during the research process also maintains transparency and situates the study (Thornberg, 2011; Birks and Mills, 2011c; Mruck and Mey, 2007). Prior experience and knowledge influence research decisions, which in turn influence the outcome; it made sense that I was not remote from the research process. As Charmaz (2014) and Thornberg (2011) caution, not detailing a priori assumptions, as may happen with positivist based methodologies, leaves the research outcome "prone to all manner of prejudices and preconceptions, which are no less powerful for remaining subliminal" (p.246).

Reconciling a positivist 'upbringing' with constructionist grounded theory

Burr (2003) considers social constructionism an overarching theoretical position under which various types of research can be conducted. Mallon (2008) further suggests a social constructionist standpoint may not be as anti-realist as it appears to be. The increase of mixed methodology studies reflects this idea (Flemming, 2007; Holloway and Wheeler, 2010). Even positivist methodologies can be viewed through a social constructionist lens (Goldman, 2010).

Kitson (2013) supports the notion of such "methodological pluralism" as a means to inform evidence-based practice and cautions that positivist definitions of evidence do not provide all the evidence for nursing practice (p.536). This point is illustrated by Traynor et al.'s (2010) study showing that nurses' personal clinical experiences strongly influence decision making. Indeed, constructionist GT may permit methodological pluralism during the analysis process, since exploring the properties of the way that something *is* requires consideration from different angles (Thornberg, 2011; Charmaz, 2006; 2008a; 2008b). A positivist stance towards GT might limit the depth of the exploration by asking *why* questions, instead of *how* and *what* questions (Charmaz, 2008a).

Following a positivist nursing upbringing, it would be reasonable to expect a choice of Glaserian GT. Such an 'upbringing' certainly validates realist precision and control of methods that verify and predict hypotheses and causal relationships (Buetow, 2007). Without positivist research, penicillin, principles of contemporary clinical examination and advances in wound care would not exist (Akbari et al., 2009; Marcus, 2006). However, I struggle with the notion of a blank slate and the researcher as an impartial observer. The logic of not discounting the influence of the researcher upon the research process and outcome remains compelling. Additionally, the absolute relativist stance of radical constructionism, where differing realities remain valid, renders a viable research outcome with application to practice unlikely (Lincoln et al., 2011; Schwandt, 2000). For this reason, and perhaps because of a foundation in EBP, I rejected radical constructionism and settled upon social constructionism.

Concluding reflections on an evolving epistemology

Kuhn (1970: p.85) depicted paradigm change as sciences' version of "picking up the other end of the stick" to question the meta-narrative of EBP as 'normal science' (Freshwater et al., 2010). In scrutinising assumptions as Kuhn depicted, this paper has documented how a foundation in evidence-based nursing, underpinned by a positivist epistemology, has been reconciled with a social constructionist worldview developed whilst conducting a grounded theory research project. Documenting this journey will be of help to other novice researchers.

The growing popularity of qualitative scientific enquiry, particularly grounded theory, over the last twenty years has challenged the sovereignty of quantitative enquiry (Buetow, 2008; Denzin and Lincoln, 2000). However, the popularity of either methodology does not infer one

scientific paradigm is better than the other, only that questions each can answer are different (Buetow, 2007; Green and Britten, 1998). Acknowledging this prevents one paradigm from being the privileged arbiter of what stands as valid knowledge, and permits dialogue between scientists to explore multiple ways of knowing. Equally, exploring a problem from conflicting perspectives maintains an open dialogue between scientists to sustain conversations and find practical clinical solutions (Reed and Lawrence, 2008).

Like my nursing career, the development of GT represents an evolution from positivism to constructionism (Hall et al., 2013; Mills et al., 2007). In terms of my evolving epistemology, the belief that the knower constructs reality in concert with others and within context is congruent with a choice of constructionist grounded theory and research topic. Having reached this point, it is also important to acknowledge that a professional upbringing in EBP contributed to what is now a social constructionist epistemology. I now understand that not only are other methodologies valid options, it is also possible to employ them via a social constructionist lens.

Consequently, a background in EBP provides an appreciation for the value of differing paradigms, allowing the researcher to align with whichever paradigm a research problem requires while also understanding personal epistemological influences. This knowledge enables the researcher to be consciously versatile in their methodological choices: even though GT has evolved, constructionist grounded theorist researchers may still choose to undertake Glaserian GT. In the same way, I can appreciate quantitative research underpinning evidence-based nursing practice and also move forward with a constructionist epistemology. This versatility is, perhaps, a reason for the popularity of grounded theory, and why I can reconcile a positivist upbringing with a social constructionist epistemology.

References

Ackermann E. (1998) New trends in cognitive development: Theoretical and empirical contributions. *Learning and Instruction* 8(4): 375-385. doi: 10.1016/s0959-4752(97)00027-3

Akbari SA, Flemming K, Cullum NA, et al. (2009) Therapeutic ultrasound for pressure ulcers. *Cochrane Database of Systematic Reviews 2006*, Issue 3(Art. No.: CD001275): 1-16. Available at: http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001275.pub2/abstract

Andrews T. (2012) What is Social Constructionism? *The Grounded Theory Review* 11(1): 39-46.

Benzi G. (2001) Dualism. In: Floridi L and Terravecchia GP (eds) *The Free On-line Dictionary of Philosophy Version 3.* SWIF Sito Web Italiano per la Filosofia (Italian Web Site for Philosophy), 191 192. Available at: http://www.swif.uniba.it/lei/foldop/

Berger PL and Luckmann T. (1991) *The social construction of reality: a treatise in the sociology of knowledge,* London: Penguin Books.

Birks M and Mills J. (2011a) *Grounded theory: A practical guide,* Los Angeles: Sage Publications.

Birks M and Mills J. (2011b) Positioning the researcher in a grounded theory study. In: Birks M and Mills J (eds) *Grounded theory: a practical guide* Los Angeles: Sage, 49-64.

Birks M and Mills J. (2011c) Quality processes in grounded theory research. In: Birks M and Mills J (eds) *Grounded theory: a practical guide* Los Angeles: Sage, 32-48.

Bowers B, Webber R and Bigby C. (2014) Health issues of older people with intellectual disability in group homes. *Journal of Intellectual and Developmental Disability* 39(3): 261-269. doi: 10.3109/13668250.2014.936083

Bowers BJ, Fibich B and Jacobson N. (2001a) Care-as-Service, Care-as-Relating, Care-as-Comfort: Understanding Nursing Home Residents' Definitions of Quality. *The Gerontologist* 41(4): 539-545. doi: 10.1093/geront/41.4.539

Bowers BJ, Lauring C and Jacobson N. (2001b) How nurses manage time and work in long-term care. *Journal of Advanced Nursing* 33(4): 484-491. doi: 10.1046/j.1365-2648.2001.01686.x

Briggs A. (1972) Report of the Committee on Nursing. London: HMSO.

Bryant A and Charmaz K. (2007a) Grounded theory in historical perspective: An epistemological account. In: Bryant A and Charmaz K (eds) *The Sage Handbook of Grounded Theory* London: Sage, 31-57.

Bryant A and Charmaz K. (2007b) Grounded theory research: Methods and practices. In: Bryant A and Charmaz K (eds) *The Sage Handbook of Grounded Theory* London: Sage, 1-28.

Buetow S. (2007) *Health research methods: a tabular presentation,* New York: Nova Biomedical.

Buetow S. (2008) Metatheory, change and evidence-based medicine. A commentary on Isaac & Franceschi (2008). *Journal of Evaluation in Clinical Practice* 14(5): 660-662. doi: 10.1111/j.1365-2753.2008.01072.x

Burr V. (2003) *Social constructionism,* London: Routledge.

Charmaz K. (1990) 'Discovering' chronic illness: Using grounded theory. *Social Science & Medicine* 30(11): 1161-1172. doi: 10.1016/0277-9536(90)90256-r

Charmaz K. (2003) Grounded theory: objectivist and constructivist methods. In: Denzin N and Lincoln Y (eds) *Strategies of qualitative inquiry.* 2nd ed. Thousand Oaks, CA: Sage, 509-535.

Charmaz K. (2006) *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis,* Thousand Oaks, CA: Sage.

Charmaz K. (2008a) Constructionism and the grounded theory method. In: Holstein JA and Gubrium JF (eds) *Handbook of constructionist research.* New York: Guilford Press, 397-412.

Charmaz K. (2008b) The legacy of Anselm Strauss in constructivist grounded theory. *Studies in Symbolic Interaction* 32127-141. doi: 10.1016/S0163-2396(08)32010-9

Charmaz K. (2009) Shifting the grounds: constructivist grounded theory methods. In: Morse J, Stern PN, Corbin J, et al. (eds) *Developing Grounded Theory: The Second Generation.* Walnut Creek, California Left Coast Press, 127-193.

Charmaz K. (2014) *Constructing grounded theory,* Thousand Oaks, California: Sage publications.

Clark AM, Lissel SL and Davis C. (2008) Complex Critical Realism: Tenets and Application in Nursing Research. *Advances in Nursing Science.* 31(4): E67-E69. doi: 10.1097/01.ANS.0000341421.34457.2a

Corbin J. (2009) Taking an Analytical Journey. In: Morse J, Stern PN, Corbin J, et al. (eds) *Developing Grounded Theory: The Second Generation.* Walnut Creek, California Left Coast Press.

Corbin J and Strauss A. (1990) Grounded Theory Research: Procedures, Canons, and Evaluative Criteria. *Qualitative Sociology* 13(1): 3-21.

Corbin J and Strauss A. (2008a) *Basics of qualitative research: techniques and procedures for developing grounded theory,* Newbury Park, California: Sage Publications.

Corbin J and Strauss A. (2008b) Introduction. In: Corbin J and Strauss A (eds) *Basics of qualitative research: techniques and procedures for developing grounded theory.* 3rd ed. Newbury Park, CA: Sage, 1-17.

Creath R. (2013) Logical Empiricism. In: Zalta EN (ed) *The Stanford Encyclopedia of Philosophy.* Spring 2013 ed. Stanford: Stanford University.

Crotty M. (1998) *The foundations of social research: meaning and perspective in the research process.,* St Leonards, NSW: Allen & Unwin.

Crotty M. (2003) *The foundations of social research,* London, England: Sage.

Denzin NK and Lincoln YS. (2000) *The Sage handbook of qualitative research,* Thousand Oaks: Sage.

Denzin NK and Lincoln YS. (2005) Introduction: The Discipline and Practice of Qualitative Research. In: Norman K. Denzin and Yvonne S Lincoln (eds) *The Sage Handbook of Qualitative Research.* 3rd ed. Thousand Oaks, CA: Sage Publications, 1-32.

Duncan C, Cloutier JD and Bailey PH. (2007) Concept analysis: the importance of differentiating the ontological focus. *Journal of Advanced Nursing* 58(3): 293-300. doi: 10.1111/j.1365-2648.2007.04277.x

Evans D. (2003) Hierarchy of evidence: a framework for ranking evidence evaluating healthcare interventions. *Journal of Clinical Nursing* 12(1): 77-84. doi: 10.1046/j.1365-2702.2003.00662.x

Feinstein AR and Horwitz RI. (1997) Problems in the "Evidence" of "Evidence-Based Medicine". *The American Journal of Medicine*, 103(6): 529-535. Available at: http://dx.doi.org/10.1016/S0002-9343(97)00244-1

Flemming K. (2007) The Knowledge Base for Evidence-based Nursing: A Role for Mixed Methods Research? *Advances in Nursing Science* 30(1): 41-51.

French P. (1999) The development of evidence-based nursing. *Journal of Advanced Nursing* 29(1): 72-78. doi: 10.1046/j.1365-2648.1999.00865.x

French P. (2002) What is the evidence on evidence-based nursing? An epistemological concern. *Journal of Advanced Nursing* 37(3): 250-257. doi: 10.1046/j.1365-2648.2002.02065.x

Freshwater D, Cahill J, Walsh E, et al. (2010) Qualitative research as evidence: criteria for rigour and relevance. *Journal of Research in Nursing* 15(6): 497-508. doi: 10.1177/1744987110385278

Gergen KJ. (1990) Toward a postmodern psychology. *The Humanistic Psychologist* 18(1): 23-34. doi: 10.1080/08873267.1990.9976874

Gergen KJ. (2001) *Social construction in context,* Thousand Oaks: Sage

Gergen KJ. (2009) *An invitation to social construction,* Los Angeles: Sage.

Giles TL, Lasserson TJ, Smith B, et al. (2008) Continuous positive airways pressure for obstructive sleep apnoea in adults. *Cochrane Database of Systematic Reviews 2008* (4): 1-103. doi: 10.1002/14651858.CD001106.pub3.

Glaser B and Strauss A. (1965) *Awareness of dying,* Chicago: Aldine.

Glaser B and Strauss A. (1967) *The discovery of grounded theory: strategies for qualitative research,* Chicago: Aldine.

Goldenberg MJ. (2006) On evidence and evidence-based medicine: Lessons from the philosophy of science. *Social Science & Medicine* 62(11): 2621-2632. doi: 10.1016/j.socscimed.2005.11.031

Goldman A. (2010) Social epistemology. In: Zalta EN (ed) *The Stanford Encyclopedia of Philosophy.* Summer 2010 ed. Stanford: Stanford University.

Green J and Britten N. (1998) Qualitative Research and Evidence Based Medicine. *British Medical Journal* 316(7139): 1230-1232.

Hall H, Griffiths D and McKenna L. (2013) From Darwin to constructivism: the evolution of grounded theory. *Nurse Researcher* 20(3): 17-21.

Harnett JA. (2007) Constructivism and sociocultural theory in context. *Changing learning conversations: An action research model of reflective professional development [Doctoral Thesis].* Albany, NZ: Massey University.

Hart WD. (1996) Dualism. In: Guttenplan S (ed) *A Companion to the Philosophy of Mind.* Oxford: Blackwell, 265-267.

Hoare KJ, Buetow S, Mills J, et al. (2012a) Using an emic and etic ethnographic technique in a grounded theory study of information use by practice nurses in New Zealand. *Journal of Research in Nursing*. Available at: http://jrn.sagepub.com/content/early/2012/05/16/1744987111434190

Hoare KJ, Mills J and Francis K. (2012b) Dancing with data: An example of acquiring theoretical sensitivity in a grounded theory study. *International Journal of Nursing Practice* 18(3): 240-245. doi: 10.1111/j.1440-172X.2012.02038.x

Holloway I and Wheeler S. (2010) *Qualitative Research in Nursing and Healthcare,* West Sussex, United Kingdom: Wiley-Blackwell Publishing.

Holmes D, Murray SJ, Perron A, et al. (2006a) Deconstructing the evidence-based discourse in health sciences: truth, power and fascism. *International Journal of Evidence-Based Healthcare* 4(3): 180-186. doi: 10.1111/j.1479-6988.2006.00041.x

Holmes D, Perron A and O'Byrne P. (2006b) Evidence, virulence, and the disappearance of nursing knowledge: a critique of the evidence-based dogma. *Worldviews on Evidence-Based Nursing* 3(3): 95-102. doi: 10.1111/j.1741-6787.2006.00058.x

Kelly C and Lynes D. (2011) Best practice in the provision of nebuliser therapy. *Nursing Standard* 25(31): 50-56.

Kelly M. (2010) The role of theory in qualitative health research. *Family Practice* 27(3): 285-290. doi: 10.1093/fampra/cmp077

Kitson A. (1997) Using evidence to demonstrate the value of nursing. *Nursing Standard* 11(28): 34-39.

Kitson A. (2013) The Cochrane Collaboration Twenty Years On. *Research in Nursing & Health* 36(6): 535-537. doi: 10.1002/nur.21564

Kitson A, Harvey G and McCormack B. (1998) Enabling the implementation of evidence based practice: a conceptual framework. *Quality in Health Care* 7(3): 149-158. doi: 10.1136/qshc.7.3.149

Kuhn TS. (1970) The response to crisis. In: Kuhn TS (ed) *The structure of scientific revolutions.* 2nd ed. Chicago: University of Chicago Press, 77-91.

Lincoln YS, Lynham SA and Guba EG. (2011) Paradigmatic controversies, contradictions, and emerging confluences revisited. In: Denzin NK and Lincoln YS (eds) *The Sage handbook of qualitative research.* 4th ed. Thousand Oaks: Sage, 97-128.

Lipscomb M. (2008) Mixed method nursing studies: a critical realist critique. *Nursing Philosophy* 9(1): 32-45. doi: 10.1111/j.1466-769X.2007.00325.x

MacDonald M and Schreiber R. (2001) Constructing and deconstructing: Grounded theory in a postmodern world. In: Schreiber R and Stern PN (eds) *Using Grounded Theory in Nursing.* New York: Springer Publishing Company 35-54.

Mallon R. (2008) Naturalistic Approaches to Social Construction. In: Zalta EN (ed) *The Stanford Encyclopedia of Philosophy.* Winter 2008 ed. Stanford: Stanford University Press.

Mantzoukas S. (2008) A review of evidence-based practice, nursing research and reflection: levelling the hierarchy. *Journal of Clinical Nursing* 17(2): 214-223. doi: 10.1111/j.1365-2702.2006.01912.x

Marcus A. (2006) Medical marvels *The 100 greatest advances in medicine*. *The Journal of Clinical Investigation* 116(9): 2312-2312. doi: 10.1172/jci29869

McCaffery M. (1968, p.95) *Nursing practice theories related to cognition, bodily pain and main environment interactions,* Los Angeles: University of California

McCann TV and Clark E. (2003) Grounded theory in nursing research: Part 2 - Critique. *Nurse Researcher* 11(2): 19-28.

McIntyre R. (2010) Science and the life-world: Essays on Husserl's 'Crisis of European Sciences' *Notre Dame Philosophical Reviews.* Notre Dame: University of Notre Dame. Available at: http://ndpr.nd.edu/news/24415-science-and-the-life-world-essays-on-husserl-s-crisis-of-european-sciences/

Mills J, Bonner A and Francis K. (2006) The Development of Constructivist Grounded Theory. *International Journal of Qualitative Methods* 5 (March): 1-10.

Mills J, Chapman Y, Bonner A, et al. (2007) Grounded theory: a methodological spiral from positivism to postmodernism. *Journal of Advanced Nursing* 58(1): 72-79. doi: 10.1111/j.1365-2648.2007.04228.x

Mruck K and Mey G. (2007) Grounded theory and reflexivity. In: Bryant A and Charmaz K (eds) *The Sage Handbook of Grounded Theory* London: Sage, 516-538.

Mykhalovskiy E and Weir L. (2004) The problem of evidence-based medicine: directions for social science. *Social Science & Medicine* 59(5): 1059-1069. doi: 10.1016/j.socscimed.2003.12.002

Pearson A. (2010) Evidence-based healthcare and qualitative research. *Journal of Research in Nursing* 15(6): 489-493. doi: 10.1177/1744987110380580

Phillips B, Ball C, Sackett D, et al. (2009) *Levels of Evidence*. Available at: http://www.cebm.net/?o=1025 (accessed 17 April 2013).

Porter S and O'Halloran P. (2009) The postmodernist war on evidence-based practice. *International Journal of Nursing Studies* 46(5): 740-748. doi: http://dx.doi.org/10.1016/j.ijnurstu.2008.11.002

Quint Benoliel J. (1967) *The Nurse and the Dying Patient,* New York: Macmillan.

Ramprogus V. (2002) Eliciting nursing knowledge from practice: the dualism of nursing. *Nurse Researcher* 10(1): 52.

Reed PG and Lawrence LA. (2008) A paradigm for the production of practice-based knowledge. *Journal of Nursing Management* 16(4): 422-432. doi: 10.1111/j.1365-2834.2008.00862.x

Rolfe G. (2005) The deconstructing angel: nursing, reflection and evidence-based practice. *Nursing Inquiry* 12(2): 78-86. doi: 10.1111/j.1440-1800.2005.00257.x

Rycroft-Malone J, Seers K, Titchen A, et al. (2004) What counts as evidence in evidence-based practice? *Journal of Advanced Nursing* 47(1): 81-90. doi: 10.1111/j.1365-2648.2004.03068.x

Schwandt TA. (2000) Three Epistemological Stances for Qualitative Inquiry: Interpretivism, Hermeneutics and Social Constructionism. In: Denzin NK and Lincoln YS (eds) *Handbook of Qualitative Research.* 2nd ed. Thousand Oaks: Sage, 189-214.

Sismondo S. (1993) Some Social Constructions. *Social Studies of Science* 23(3): 515-553. doi: 10.1177/030631279302300304

Stern PN. (2012) Jeanne Quint Benoliel, 1920-2012. *Qualitative Health Research* 22(11): 1580-1581. doi: 10.1177/1049732312457853

Stern PN, Allen LM and Moxley PA. (1984) Qualitative research: The nurse as grounded theorist. *Health Care for Women International* 5(5-6): 371-385. doi: 10.1080/07399338409515667

Stern PN and Porr C. (2011) *Essentials of accessible grounded theory,* Walnut Creek, Calif.: Left Coast Press.

Thornberg R. (2011) Informed Grounded Theory. *Scandinavian Journal of Educational Research* 56(3): 243-259. doi: 10.1080/00313831.2011.581686

Traynor M, Boland M and Buus N. (2010) Autonomy, evidence and intuition: nurses and decision-making. *Journal of Advanced Nursing* 66(7): 1584-1591. doi: 10.1111/j.1365-2648.2010.05317.x

Walls P, Parahoo K and Fleming P. (2010) The role and place of knowledge and literature in grounded theory. *Nurse Researcher* 17(4): 8.

Welford C, Murphy K and Casey D. (2011) Demystifying nursing research terminology. Part 1. *Nurse Researcher* 18(4): 38-43.

White R. (2004) Discourse analysis and social constructionism. *Nurse Researcher* 12(2): 7-16.

Young RA and Collin A. (2004) Introduction: Constructivism and social constructionism in the career field. *Journal of Vocational Behavior* 64(3): 373-388. doi: 10.1016/j.jvb.2003.12.005