

‘When I first came here, I thought medicine was black and white’: Making sense of medical students’ ways of knowing

Lynn Valerie Knight*, Karen Mattick

Peninsula Medical School, Universities of Exeter and Plymouth, Plymouth, Devon, UK

Available online 7 March 2006

Abstract

Personal beliefs about what knowledge is and how we understand, integrate and apply knowledge (known as personal epistemologies) are entrenched in the process of decision-making. Evidence-based medicine in all its forms brings with it the need for an ever more sophisticated appreciation of individual patients’ perspectives and ‘scientific’ perspectives within the clinical encounter. However, current theoretical perspectives on personal epistemology focus more on scientific ways of knowing where knowledge is abstracted and logical. We conducted semi-structured interviews to investigate medical students’ personal epistemological thinking towards the end of their second year of training at a new medical school in the South West of England. Whilst responses were varied, students appeared to express predominantly simplistic levels of epistemological thinking according to current developmental models of personal epistemology. However, the process of professional identity formation together with epistemological thinking brought together both scientific and experiential ways of knowing in a way that has largely been ignored by current theorists in the domain of personal epistemology.

© 2006 Elsevier Ltd. All rights reserved.

Keywords: Medical training; Professional knowledge; Epistemology; Evidence-based medicine; United Kingdom

Introduction

All research is about knowledge. Our personal beliefs on the nature of knowledge affect how we understand, integrate and apply that knowledge. With the advent of evidence-based medicine (EBM) in the 1990s, healthcare professionals need to engage in ever more complex thinking and reasoning processes (Evidence-Based Working Group, 1992). Understanding the qualities and limits of scientific knowledge and method is increasingly necessary (Upshur, 2000).

Additionally, there have been recent calls for the inclusion of qualitative research findings into the previously quantitative laden evidence base of medicine and healthcare (Barbour, 2000). Such an inclusion brings a different view of knowledge; rather than seeking objective truth, it proposes the existence of multiple viewpoints and that knowledge is constructed. Thus the inclusion of qualitative research within EBM brings closer the link between individual patients’ perspectives and ‘scientific’ perspectives within the clinical encounter. Indeed, the drive towards patient-centred medicine has been similarly advocated. This ideal requires clinicians to accommodate a metaphysical perspective of knowledge; an existential view within medicine that acknowledges the emotional, spiritual and unconscious (Evans, 2003).

*Corresponding author. Tel.: +44 7739020330;
fax: +44 1752238001.

E-mail addresses: lynn.knight@pms.ac.uk (L.V. Knight),
karen.mattick@pms.ac.uk (K. Mattick).

In practice, the inclusion of EBM into healthcare professionals work has added another layer of complexity to their decision-making process. Evidence from various research sources must now be integrated with a plethora of other information including ‘contextual factors’ of both patient and clinician (Clark, Potter, & McKinlay, 1991; Dobrow, Goel, & Upshur, 2004; Oswald & Bateman, 2000). Increasingly, clinical decision-making is a complex process requiring a level of thinking that goes beyond mere problem-solving due to the ill-structured nature of the problems (including diagnostic uncertainty). This process involves evaluating evidence and understanding from a number of levels, population and individual based, together with a number of financial and accountability constraints. Indeed, the complexity surrounding EBM may well be challenging for many existing doctors. Research in the domain of personal epistemology can help us understand how people evaluate new information, resolve conflicting information, and make fundamental decisions that can affect lives (King & Kitchener, 1994).

While the model in itself may not acknowledge it, evidence-based decision-making is situated in a context that requires an understanding of the nature of knowing and of knowledge that goes beyond lay conceptions of scientific knowledge (Robinson et al., 2004). Such conceptions include the difficulty of accepting clinician uncertainty both in the context of individual treatment and of research. The development from lay conceptions of knowledge, where science is considered to be a place of certainty and ‘truths,’ to an understanding of knowledge as being more contextual, contingent and fluid is an important transition for effective medical practice. Moreover, this understanding requires a concept of patient-centredness that holds existential conceptions of knowledge.

While there has been no systematic investigation into the transitions in medical students’ epistemological thinking, some studies have examined medical students’ approaches to uncertainty and their developing rhetoric of uncertainty. Medical students display different levels of uncertainty in the limits of their own knowledge, of evidence, of patient’s accounts and of scientific knowledge (Fox, 1957; Lingard, Garwood, Schryer, & Spafford, 2003). Lingard et al. (2003) reported how students participating in a paediatric clerkship learned to manage uncertainty within their developing professional discourse. For example, at the beginning of the clerkship they found that students used a

rhetoric of certainty, appearing to take at face value information acquired regarding a patient. However, these students quickly learned from interactions with clinical teachers to develop distancing strategies in their talk that suggested a level of scepticism and objectivity towards information obtained—“the parents claim” and “they’ve noticed.” Moreover, clinical teachers explicitly encouraged scepticism when evaluating information obtained from scientific knowledge. Such scepticism is required due to the contextual, uncertain and fallible nature of medical evidence (Upshur, 2000).

We present the findings of an exploratory study that investigated medical students’ epistemological beliefs and how these changed over the first two years at medical school. We suggest that current theoretical models of epistemological development fall short of being able to account for the complexities within our data. We propose an understanding of personal epistemological development should account for more existential, individual ways of knowing in addition to scientific, logical, abstracted ways of knowing. The central conception in this approach is the interplay between identity formation (becoming a doctor) and epistemological transitions.

Personal epistemology

Personal epistemology refers to beliefs that individuals hold about knowing; what knowledge is and how knowing is justified. Such epistemological premises are a component of the cognitive process of thinking and reasoning. Currently there are a number of theoretical models of personal epistemology that comprise common structural dimensions. While varying across models, four structural dimensions relating to the nature of knowledge and the process of knowing can be considered the core of individuals’ beliefs (Hofer & Pintrich, 1997).

How one conceptualises knowledge, and how this changes over time, underlies most personal epistemological models. This has been called the ‘nature of knowledge’ and can be considered across two structural dimensions; ‘certainty of knowledge’ and ‘simplicity of knowledge’ (Fig. 1). Beliefs about the process or nature of knowing (how we come to know), such as where knowledge comes from and how we make justifications, have been called the ‘nature of knowing.’ Similarly, this can be conceptualised along the structural dimensions ‘source

Download English Version:

<https://daneshyari.com/en/article/954310>

Download Persian Version:

<https://daneshyari.com/article/954310>

[Daneshyari.com](https://daneshyari.com)