Through the looking glass: the rabbit hole of reflective practice

Paul Mahon and Mary O'Neill

ABSTRACT

Reflective practice is a common feature of nurse education. Indeed, the development of nursing practice is associated with being a 'reflective practitioner'. However, how we see ourselves or interpret past events is often influenced by our own unconscious biases. While it is reasonable to hold favourable views of one's ability, biased or lack of self-insight might mean that one is actually unskilled and unaware of it. In the ambiguous clinical context where an act or omission can have potentially devastating consequences, the implications of this are significant. The questions of whether and how reflection addresses unconscious biases are relatively unexplored in the nursing literature. Given that accurate self-assessment is integral to reflective practice, this article attempts to explore the potential impact of unconscious bias on reflection. The authors conclude that while biases may limit our ability to learn from reflection, this is not a reason to dispense with reflective practice, but rather, is even more reason to critically engage with the process. Nurses of all levels must be encouraged to reflect on both their practice, and their reflection.

Key words: Unskilled ■ Unaware ■ Reflection ■ Unconscious bias ■ Self-assessment

Reflection on, and in, practice is an integral part of nursing, with professional organisations and accrediting bodies calling for the inclusion of reflection at all levels of undergraduate, postgraduate and continuing nurse education (Aronson, 2011; Coward, 2011; Nursing and Midwifery Board of Ireland, 2015; Nursing and Midwifery Council (NMC), 2018; Donohoe, 2019). Proponents of reflective practice advocate strongly for its inclusion in curricula, arguing that reflection is intrinsically aligned to intended modular and programmatic outcomes with the potential to enhance learning by enabling students to reflect on, reconcile and reconceptualise their practical experiences with theoretical instruction (Price, 2005; Grealish et al, 2018). In addition to the coalescence of theory and practice, it is claimed that structured reflection enables the exploration of one's beliefs, emotions, and theories; thus, informing plans for future learning (Aronson, 2011) and moving practitioners from a position of unconscious incompetence (novice) towards a position of unconscious competence (expert) (Benner, 1984).

Indeed, it is generally accepted that the unconsciously incompetent do not know what they do not know, and that through reflection they can gain valuable insights and learning from which to improve their practice. However, research conducted by social psychologists David Dunning and Justin Kruger challenges this commonly held belief. Kruger and Dunning (1999) propose that the unconsciously incompetent are dually burdened in that, not only do they not know what they do not know, their incompetence robs them of the self-insight to realise it. Consequently, the unconsciously incompetent tend to overestimate their ability while conversely those who perform well presume that others do so too, and thus, tend to underestimate their performance (Kruger and Dunning, 1999). In relation to reflective practice, this may create an ironic situation where those most likely to benefit from reflecting on their practice are also those who are least likely to be able to do so effectively (Pennycook et al, 2017). As one of the prerequisites of voluntary self-improvement is actually to recognise the need for improvement in the first place (Pennycook et al, 2017), this may have far-reaching implications for nursing.

Aim

In the ambiguous clinical context where act or omission can have potentially devastating consequences, there is a heavy price to pay for being unskilled and unaware of it (Kim et al, 2015). Inspired by the seminal work and subsequent discussion of the Kruger and Dunning (1999) theory, this article aims to examine reflective practice in the context of cognitive bias and limited self-insight. The authors propose that a variety of cognitive biases, self-serving illusions and heuristic decision-making processes may, unbeknown to the nurse, limit their ability to reflect on, and learn from, practice. As an underexplored area in the nursing literature, this article broadly frames the issue, which it is hoped will prompt further discussion, research, analysis and, indeed, insightful reflection.

How do we 'know'?

In the swampy lowlands of the clinical setting (Schön, 1983; Rycroft-Malone et al, 2004), empirical ('hard science') ways

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Table 1. Common reflective models in nursing

Johns (1995)	Gibbs (1998)	Rolfe et al (2001)
Aesthetics: ■ What was I trying to achieve? ■ Why did I respond as I did? ■ What were the consequences of that for the patient, others or myself? ■ How was this person(s) feeling? ■ How did I know this? **Personal:** ■ How did I feel in this situation? ■ What internal factors were influencing me? **Ethical:** ■ How did my actions match with my beliefs? ■ What factors made me act in incongruent ways? **Empirical:** ■ What knowledge did or should have informed me? **Reflexivity:** ■ How does this connect with previous experience? ■ Could I handle this better in similar situations? ■ What would be the consequences of alternative action for the patient, others or myself? ■ How do I feel about the experience? ■ Can I support others and myself better as a consequence? ■ Has this changed my ways of knowing?	**Description:** ■ What happened? **Feelings:** ■ What were you feeling? **Evaluation:** ■ What was good and bad about the experience? **Analysis:** ■ What can you learn from the event? **Conclusion:** ■ What could you have done differently in addition? **Action plan:** ■ If it happened again what would you do?	**What:** ■ Is the problem/difficulty/reason for feeling bad? ■ Was my role in the situation? ■ Was I trying to achieve? ■ Actions did I take? ■ Was the response of others? ■ Were the consequences for the student/ myself/others? ■ Feelings did it evoke in the student/ myself/others? ■ Was good/bad about the experience? **So what:** ■ Does this tell me/teach me/mean? ■ Was going through my mind as I acted? ■ Did I base my actions on? ■ Other knowledge can I bring to the situation? ■ Could/should I have done to make it better? ■ Is my new understanding? ■ Broader issues arise? **Now what:** ■ Do I need to do in order to make things better/ improve/resolve the situation? ■ Broader issues need to be considered if this action is to be successful? ■ Might be the consequences of this action?

of knowing do little to fully explain the complexity of nursing practice. Indeed, while few would argue against the delivery of patient-centred care based on the scientific method, the knowledge that informs our practice is also based on subjective previous experience, our sense impressions and our thought processes (Kant 1781; Carper 1978). As such, our epistemology (theory of knowledge) is a product of both what, and how, we know. We attain knowledge and truth by comparing and contrasting one idea with the next, and we only come to this through exposure to different stimuli. Distinct from the empirical approach, the strength of this interpretive approach thus comes from subjective, personal ways of knowing, such as reflective practice. This reflection allows us to think about our practice, to grow, to learn and to gain an understanding of our lived experiences (Schön, 1983; Benner, 1984; Saylor, 1990; Street, 1991).

However, the human mind is not without its weaknesses. Our memory may fail us, our interpretation of past events may be clouded, or we may be biased in how we think. Cognitive bias is a disposition to think, feel or act in a particular way based on our prior knowledge, experience and personal attributes (Kapur, 2015). When these cognitive biases occur without our awareness, they become unconscious biases (Cuellar, 2017). This happens for many reasons, such as in situations when there is either too much information, not enough meaning, a need to act fast or where there is uncertainty about what to remember (see http://bit.ly/31rS0fr for an interactive map). It is important to note that these mental blind spots can lead to erroneous decision-making (Kapur, 2015), which ultimately limits our ability to objectively think, and reflect on, our practice.

Nonetheless, elucidating the existence and impact of cognitive bias through reflective practice may result in learner defensiveness and scepticism (Schultz and Baker, 2017) as our need to maintain harmony between our attitudes and behaviour (cognitive consistency), and our need to avoid disharmony (cognitive dissonance) (Festinger, 1957) drives us to view ourselves positively. Additionally, as the human mind can only process a certain amount of information at any one time (known as cognitive load), when these situations occur, we tend to revert to a 'rule of thumb', mental short-cut decision-making process, called heuristics. Heuristics simplify decisions and reflections by filtering information based on our prior experience and preferences. For example, when a patient receives frusemide, a heuristic decision would be to check the patient's potassium level. While it might not be possible to reduce cognitive load, or eliminate our predisposition towards mental shortcuts and cognitive biases, understanding that these exist can be useful when making decisions and reflecting on practice.

Reflective practice as a way of knowing

Reflection on, and in, action is a long-standing teaching and learning strategy in many professions (Van Doran, 2017); the underlying premise being that by reflecting on what we do, we gain new insights, foster self-regulation and further

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Table 2. Selection of biases that may impact our reflection

Problem/bias	Basic premise	Example/how it might affect reflection
Lack of self-insight/ Kruger–Dunning effect 'What do you mean I am wrong?'	Those who do not know, do not know that they do not know and therefore overestimate their own ability. Conversely, those who do know, underestimate their ability because they assume everyone else has the same, or more, knowledge that they do	If we accept Kruger and Dunning's 'unskilled and unaware effect', then those most likely to benefit from reflecting on practice are those least likely to be able to do so. Ehrlinger et al (2008) suggested that, in addition to a lack of insight, the unaware also appear not to learn from feedback. This may manifest in learner defensiveness, a lack of critical reflection, and an unwillingness to change behaviour based on an erroneous belief that they are right all along Other related/similar biases: Lake Wobegon effect; illusory superiority effect
Overconfidence/ the hindsight bias 'I knew it all along!'	Hindsight bias is the tendency to be more confident about the predictability of events, after that event has occurred (Fessel et al, 2009; Knoll and Arkes, 2017; Hedden, 2019)	As people learn the details of a particular outcome, those details selectively activate information from memory that is consistent with the outcome (Fessel et al, 2009). Falsely assuming that you knew the predictability of events can limit reflection because other important questions are not asked (eg instead of stating 'I knew the patient was going septic!' the right question to ask might have been 'why did I not notice the upward trend of the patient's temperature?') Other related/similar biases: memory conformity; creeping determinism; egg of Columbus; curse of knowledge; historian's fallacy
Protection of self/the self-serving bias 'Mistakes were made, but not by me'	People tend to attribute positive events to their own character, but attribute negative events to things outside their control (Shepperd et al, 2008; Wang et al, 2017; Zhang et al, 2018)	A nurse who receives a positive performance review might think that that was because they have been working hard and caring for their patients well (internal characteristics). However, if that nurse received a bad review, they might put it down to the manager not liking them very much (factor outside their control). Instead of reflecting on their practice, they deny responsibility and assign blame to the manager Other related/similar biases: dissonance; defensive attribution error; fading affect bias; placement bias; selective perception; Semmelweiss reflex
Protection of self/the actor–observer effect 'There was nothing I could do!'	People tend to associate their own actions to external causes while attributing other people's actions to internal causes	When someone experiences something bad (eg a patient fell out of bed), they tend to say it was outside their control (eg 'I told the manager we didn't have enough staff'). However, when something bad happens to someone else, people tend to blame it on an internal characteristic of that other person (eg 'If they were watching their patients more closely, he wouldn't have fallen'). In this scenario, actor–observer effect could lead to conflict between a nurse and manager because each have their own actor–observer positions. It will also result in lack of in-depth analysis of past events Other related/similar biases: fundamental attribution error; self-serving bias
Erroneous thinking/ confirmation bias 'Wishful thinking'	People will tend to believe what they want to believe, and will ignore information that contradicts their beliefs	In confirmation bias, people will seek out information that confirms what they already believe or think (Allahverdyan and Galstyan, 2014). This stops the person looking for other information and can lead to errors in judgement and reflection on that decision. For example, a nurse caring for a patient with a history of gastro-oesophageal reflux notes that the patient has just finished their evening meal consisting of fries, battered fish and peas. The patient also ate a chocolate bar, a bag of crisps and two cans of cola. Shortly after, the patient complained of retrosternal chest pain. The nurse recalls the patients' history and meal, and decides that the patient must be suffering from gastro-oesophageal reflux. An antacid is administered; 20 minutes later the patient is cold, clammy, bradycardic and hypotensive. An ECG is performed that indicates an inferior myocardial infarction Other related/similar biases: illusion of control; conjunction fallacy; availability heuristic; negativity bias; choice supportive bias; hindsight bias; illusory correlation
Remembering past events incorrectly/ misattribution effect 'I remember it clearly'	Our memory of an event is not fixed, and can be distorted through false recognition, confusing the source of information or by being presented with different interpretations of the event. We might misattribute to such a degree that the memories we have are completely false	A nurse studying for a postgraduate diploma read many different articles in preparation for writing an assignment. Several weeks later, the nurse is shocked when the lecturer fails the assignment due to plagiarism. The nurse protests their innocence, claiming that they would never plagiarise. The lecturer shows the nurse where the assignment is similar to the published literature. Without realising it, the nurse had taken a significant portion of the thoughts and words of the articles that had been read, and thinking they were their own, wrote the assignment Other related/similar biases: cryptomnesia, source confusion
Over-investment/the IKEA effect 'A labour of love'	We place a disproportionate amount of value on something that we have even partially created	A nurse implements a new initiative on the ward and receives some constructive, well-intentioned feedback from colleagues that would actually help improve the initiative. That evening at home, the nurse reflects on the feedback and decides that their own way of doing it is best, and that the initiative is fine as it is Other related/similar biases: effort justification; sunk cost effect; not invented here syndrome

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Table 2 (continued). Selection of biases that may impact our reflection		
Problem/bias	**Basic premise**	**Example/how it might affect reflection**
We can be wrong in how we perceive others/ illusion of transparency 'I can see through you'	We believe that others know what we are thinking, or that we know what others are thinking	A nurse has had a 'bad day' on the ward—the patients were very sick, breaks were missed and everything just seemed to go wrong. No colleagues came to help. That evening at home, the nurse reflected on the day and thought 'Why didn't anyone help me—they knew I was busy and under pressure? They could have at least let me get a cup of tea!' What the nurse does not realise is that everyone had a similarly bad day and left thinking exactly the same Other related/similar biases: illusion of asymmetric insight; egocentric bias
We can be wrong in how we perceive others/ social comparison bias 'She thinks she is soooo great?'	We dislike or feel competitive towards people we see as better than ourselves	A nurse is telling colleagues about being accepted to speak at a conference. One colleague, who has spoken at several conferences, proceeds to offer some very useful advice. The nurse smiles graciously and thanks the colleague for the tips. Later that evening the nurse relates the conversation to friends, telling them that the colleague went out of their way to make the nurse look like a fool in front of the others
Response to threat/ Reactance 'You will never take my freedom'	We do not like to be told what we must, or cannot, do. When these situations happen, we experience a perceived loss of freedom and it might result in us doing exactly the opposite of what we have been told (Brehm, 1966)	Peripheral intravenous line sepsis rates are up on a ward. The issue has come to the attention of the hospital CEO, and the manager of the ward has been instructed to do something about it. The manager introduces a new, evidence-based documentation bundle for staff to clearly document their assessment and management of intravenous lines. Up until now, this information was sporadically documented in the nursing notes; however, the new approach will both simplify and improve the recording of this information. Some of the staff feel that there is nothing wrong with how they complete their notes and refuse to use the new documentation

develop as accountable, professional practitioners. While various professional groups tend to approach reflection from different perspectives and use different models, many of these frameworks share similar properties (*Table 1*). Common to all models is the requirement for practitioners to think about their part in, interpretation of, and meaning attributed to experience, by situating it in the context of internal and external sources of knowledge. Indeed, Schön (1983; 1987) offered his model of reflection as a critique of technical rationality, arguing that the learning gained from practical experience makes a significant contribution to knowledge development. Similarly, Boud (2009) argued that, when used properly and responsibly, reflection acts as a valuable force for good in nursing practice, enabling nurses to challenge any inconsistencies between what they practise and the values and belief systems they espouse. Reflection is considered such an important learning tool that, in addition to its integration into many undergraduate and postgraduate nurse education programmes, it also forms the basis of portfolio development and is a professional requirement for qualified nurses in some jurisdictions (NMC, 2018).

While accepting that reflection is an important learning tool, we must acknowledge that it has also been described as misunderstood, misinterpreted, lacking in conceptual clarity (Kinsella, 2010), failing to offer a critique of technical rationality, and falling short of providing a new philosophy of nursing practice and education (Rolfe, 2014). Indeed, Coward (2011) argued that reflective models are now viewed by nursing students and some nurse educators as a compulsory chore, often administered as overly structured academic assignments that restrict, rather than enrich, thinking. Such critique is far removed from the original objective of Schön and one must wonder why, and where, the practice of reflection lost its way. One potential answer to this question is that, consciously or unconsciously, we are not truly reflecting on our practice.

Biases and their potential impact on reflection

True reflection requires 'time, effort and a willingness to question our actions, underlying beliefs and values' (Aronson, 2011:201), which may be challenging to our internal consistency. True reflection on practice also requires accurate and insightful self-assessment (Price, 2005) and for those who are overconfident, unaware, or indifferent to their biases, blind spots or fallacies (Pennycook et al. 2017), reflection may pose a threat. Indeed, while some people are willing to engage in deliberative thought (Pennycook et al, 2017), it is more normal for humans to be biased (Cuellar,2017). These biases may result in errors in clinical judgement or errors in reflection (Kapur, 2015). The psychology literature describes a wide variety of cognitive biases, all of which may impact on insightful self-reflection. It is not possible to discuss each in detail here, but as a starting point for discussion, we have selected some common biases and propose their potential impact (*Table 2*).

Discussion

Lewis Carroll's books, *Through the Looking-Glass* (Carroll, 1871) and *Alice's Adventures in Wonderland* (Carroll, 1865) offer a useful analogy that can be applied to the concept of reflective practice. In these books, the character Alice finds fascinating worlds both beyond the looking-glass and down the rabbit hole. These capricious worlds of curiosity and contradiction challenge Alice to question not just her surroundings, but her self. Asking: 'Who in the world am I? Ah, that's the great puzzle!', Alice resolves: 'Tell me that first, and then, if I like being that person, I'll come up: if not, I'll stay down here [in the rabbit hole] till I'm somebody else' (Carroll, 1865).

Maintaining a positive self-image, an internal consistency, is a fundamental human need (Zhang et al, 2018) and far from being irrational, self-serving biases are often perfectly rational

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Table 3. Some sample critical questions

Leading question	Follow up questions
■ Did I have all the necessary information to inform my actions? How can I prove to myself that I did? ■ How would I react/think/feel if I was looking at the same situation with a different nurse involved? Would I react/think/feel the same if that other person was a friend/not a friend? ■ What would someone more experienced do in that situation? Why do I think that? ■ What would someone less experienced do in that situation? Why do I think that? ■ What else was happening in work/in my personal life that might have influenced the situation? ■ Why did I/he/she/they act/react like that? What other possible explanations are there? ■ Am I sure that is what happened? What information supports and refutes my memory of the event? ■ What are other people's perspectives? Can I see the situation from their point of view? ■ Am I being fair and reasonable to myself/others? How do I prove to myself that I am? ■ If I begin by assuming that there are things that I do need to learn from this situation, what would they be? ■ Are/were my thoughts and feelings based on my views of the other person, rather than on the point they are/were making? ■ Am I assuming something is true/false just because I don't have evidence to the contrary? ■ Am I assuming something is true/false just because someone I respect/do not respect said it? ■ Am I assuming/believing something just because many others do too? ■ Am I trying to convince myself/others by appealing to emotions? ■ Were my actions/words reflective of my values/me as a person/me as a nurse? ■ How can I justify my actions/my assessment of self? ■ What if I am/was wrong? What next? ■ Have I considered others voices? If yes, why? If no, why? ■ What was I influenced by? Why did this influence me? Would I be still influenced by it if the same situation happened again? ■ Did this situation build on my previous knowledge and experience? If yes, why? If no, why? ■ If I was to look at the situation again using different standards of practice (NMC, 2018), would I arrive at the same conclusion each time?	For each leading question, ask these follow up questions: ■ Am I thinking clearly? ■ Am I thinking accurately? ■ Am I thinking with precision? ■ Is all the information I am using to base my decision on precise? ■ Is all the information I am using to base my decision on relevant? ■ Have I examined the situation with adequate depth? ■ Have I examined the situation with adequate breadth? ■ Are my thoughts mutually supporting? Do they make sense in combination?

(Hedden, 2019). They get us out of bed in the morning, keep us motivated and make us happy (Karpen, 2018). However, while there may be many psychological benefits to positively biased, but somewhat erroneous self-assessment, there are also many negatives. Although completely unbiased self-knowledge may neither be attainable nor desirable (Karpen, 2018), biases become particularly problematic when they impact on our learning, because, if we cannot rely on experience to teach us about our deficits, how are we ever to gain self-insight (Ehrlinger et al, 2008) or grow as truly reflective practitioners? In answer to this, the psychology literature offers helpful insights that may mitigate or eliminate biases, which will ultimately improve our judgement, self-perception and ability to accurately reflect on our practice. Important areas for consideration on how we might engage in better reflection include encouraging lifelong learning, contextualising reflection, and promoting a focus on what bias awareness and critical reflection actually means.

Encouraging lifelong learning

Continuing education and professional development in the form of both structured and informal learning can help mitigate biased self-assessment, because through learning, we begin to recognise what we do not know (Kruger and Dunning, 1999). Thus, we might encourage better reflection and greater self-insight simply by encouraging lifelong learning (Karpen, 2018) and critical thinking skills.

Contextualising reflection

McKinnon (2016) suggested that reflective practice is more than an inherently internal process and that it 'extends to the environment in which reflection takes place including the learning values at work' (McKinnon, 2016:3). Therefore, how we reflect and use reflective models must be set in the context of the objective and subjective realities of the practice setting. Situating reflection as a 'triple loop' approach (Argyris and Schön, 1978) to learning prevents an uncritical and descriptive cause-and-effect analysis of the situation and instead allows the practitioner to examine the underlying context, their assumptions and conceptual frameworks (Aronson, 2011). This more sophisticated form of reflection has the potential to draw on the metaparadigms in nursing (Fawcett, 1984) of person, environment, health and nursing. Indeed, the absence of such engagement with the external when reflecting could be classified as thinking without thinking, as the essence of reflection is embedded, and aims to further develop competence in, practice.

Bias awareness and a focus on critical reflection

Reflection, undertaken on its own and on our own, will not fully illuminate the extent or effect of limited self-insight, as essentially, this is a conscious and rational solution to an unconscious and intuitive problem (Bleakley, 2000; Karpen, 2018). Indeed, as noted previously, even highlighting the existence and impact of cognitive bias may result in learner defensiveness and scepticism (Ehrlinger et al, 2008; Schultz and Baker, 2017). Educators are challenged by this dilemma and need to operate within a pedagogical, or teaching and learning, framework that enables them to use a repertoire of skills to facilitate reflective learning. Here, Karpen (2018) offers some useful psychologically safe bias mitigation and debiasing techniques, including keeping

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Box 1. Further learning

Search online for videos on the following topics:
- Unconscious bias
- Memory bias
- Heuristic decision-making
- Why facts don't convince people
- True or false with Dan Schacter
- Misattribution effect
- How good is your memory recall
- Reactance
- Selective attention test

TED/TED ed talks:
- The art of misdirection—Apollo Robbins
- The art of cognitive blindspots—Kyle Eschen

students within the limits of self-enhancement and ensuring that reflection is undertaken both with guidance and concrete assessment criteria. Perhaps the biggest challenge, however, is in encouraging critical reflection, a concept that is not easily understood and not easily taught. The establishment of guiding questions that help directly address, or at least bring to light, our unconscious biases, may be of benefit, especially when paired with follow-up questions based on standards of critical thinking (*Table 3*).

Final thoughts

Being aware of ones' strengths, weaknesses and areas for improvement is essential for both our professional and personal lives, and one way of gaining greater self-insight is through reflective practice. However, while reflective practice has a clear contribution to make, it is also subject to much criticism. A growing body of literature speaks of, for example, overly structured approaches that restrict thinking (Coward, 2011), reflective fatigue and apathy (Timmins and Neill, 2013; McKinnon, 2016) and a lack of tools available to educators to actually enable them to facilitate reflective learning (Donohoe, 2019). Indeed, as evidenced in the literature, when incorporating reflection in their teaching, many educators have implemented exercises that produce anecdotal and descriptive narratives instead of engaging with reflection in a truly critical, radical and meaningful manner (Aronson, 2011; Rolfe, 2014). However, perhaps this suggests that the problem is not necessarily with reflective practice itself, but rather the problem is our practice of reflection. If we do want to really rediscover the radial origins of reflection (Rolfe, 2014), then we need to go beyond the two-dimensional mirror image of surface self-reflection, and enter a cognitive rabbit hole where we are challenged to critically examine who it is that we really are. One way of doing this is through the elucidation of unconscious biases where, between the two positions of the 'comforting lies we tell ourselves', and the 'unpleasant truths we may prefer to ignore', we will find the liminal space of accurate, but balanced, self-assessment. This is a space where we are neither overconfident nor driven to despair, and it is one that offers self-insight and growth potential. It is a safe space where we can begin to balance our biases, rather than berating ourselves for having them (Karpen, 2018), and one where we can foster fresh approaches to learning in, and from, practice.

A good way to learn more about some of the concepts discussed here is to search for online videos. These concepts might seem complex and difficult, but there are many high-quality videos freely available where you can see and hear experts explain them in an understandable way. Start by using some of the search terms listed in *Box 1*.

Conclusion

If we, the authors of this article, were to be biased in our thinking, we might suggest that this is probably one of the most important articles written relating to reflective practice since the seminal work of Schön (IKEA effect, egocentric bias). Our inflated self-assessment would lead us to propose that the eminence of this article is testament to our experience and expertise as nurse educators (self-serving bias, above average effect); that this is an article we always knew we would write (hindsight bias); and that a wealth of evidence supports our conclusions (cherry-picking fallacy). We are sure that you would agree (illusion of transparency), but would conclude that if you do not, it is probably because you are just jealous (social comparison bias). However, regardless of what you may think, or what evidence you may have to the contrary (belief perseverance), as we have invested a lot of time into writing this, we will continue to trust that we have made a novel contribution to nursing knowledge (sunk cost effect)!

If we were to be less biased and more critically reflective, we might conclude that while this article may provoke some thought, it has not been empirically researched in a traditional sense, did not involve a systematic review of the literature, and is written by those without a background in psychology. We might determine that we only highlight concepts and information that support our premise (choice supportive bias, confirmation bias), that we focus solely on some stereotypical traits of reflective practice (representative bias), or that our past experience of reflection has affected our judgement (confabulation bias). We might realise that we have not attempted to discuss underlying motivation for biases, or that, perhaps no relationship exists between bias and reflection whatsoever (illusory correlation). Indeed, it is probable, or at least possible, that unbeknown to us, other more knowledgeable persons have already examined this link (Kruger-Dunning effect), and have already drawn similar conclusions (misattribution effect). Either way, we will reflect on both our biases and our reflection, and hope that you, the reader, do so too. **BJN**

KEY POINTS

- Reflective practice is seen as an important tool for learning in nursing
- A prerequisite of voluntary self-improvement is actually recognising the need for improvement in the first place
- The Kruger-Dunning effect, and other unconscious biases, may limit our self-insight and our ability to reflect
- It may be the case that those most likely to gain from reflecting on their practice are those least likely to be able to do so
- Raising awareness of unconscious bias and overconfidence in self-assessment is important in order to optimise learning from reflective practice

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CPD reflective questions

- Why is the synergy between cognitive biases and reflection on practice important?
- If reflection were to be more sophisticated, then what would it look like?
- Can you identify and reflect on a bias from *Table 2* that resonates with you?
- Is there a difference between reflection on practice and our practice of reflection?

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