**How do child protection practitioners make decisions in real life situations? Lessons from the psychology of decision making**

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**Abstract**

Child protection social workers must make difficult decisions in real life circumstances that often involve limited knowledge, uncertainty, time pressures and powerful emotions. These circumstances can pose a significant challenge to reasoning skills, especially when the cost of errors and poor judgment can be unacceptably high. The current study explores the psychological processes that underpin how child protection practitioners form judgments and make decisions in real life situations. The study had an ethnographic design with two sites; a local authority children's intake service and a specialist multi-disciplinary court assessment service. Twenty-four interviews and forty days of observations were completed. The study found that practitioners' reasoning had a dynamic interplay of intuitive and analytic processes with emotionally-informed intuitive processes as the primary driver. Experience played an important role in developing practitioners’ reasoning skills. As practitioners became more experienced, they engaged in progressively more sophisticated pattern recognition and story building processes to analyse and evaluate complex information. In conclusion, it is argued that greater attention should be given to understanding and supporting practitioner thinking to both support expert practice and reduce errors. An outline of a future research agenda is outlined and the implications for practice are discussed.

Keywords: Child protection, decision making, ethnography, intuition, judgement, risk

**Introduction**

‘Child protection work makes heavy demands on reasoning skills. With an issue as important as children's welfare, it is vital to have the best standard of thinking that is humanly possible. Mistakes are costly to the child and family’ (Munro, 2008, p.153).

During a long history of public inquiries and serious case reviews in which children have been killed or seriously hurt, a frequent finding is that social workers made poor judgments (for example, Ofsted, 2008; Rose and Barnes, 2008). This is reinforced by research and practice literature that have consistently identified shortcomings in relation to analytical processes (Munro, 1996, 1999; Reder and Duncan, 2000; Cleaver and Walker, 2004; Turney, Platt, Selwyn and Farmer, 2012; Whittaker, 2011).

The role of professional judgment in the English child protection system has been an important and contested issue. Responses have been largely formulated within a rational bureaucratic framework that attempts to address risk with administrative changes, in which social work practice is regarded as little more than following rules in ways that can lead to defensive practice (Ferguson, 2004; Whittaker and Havard, 2016).

The issue of practitioner judgment gained prominence through the Munro Review, which recommended redressing the balance by reducing the amount of central prescription and increasing the scope for professional judgment (Munro, 2010; Cooper and Whittaker, 2014). Whilst the Munro Review addressed this at a wider systemic and policy level, this article aims to augment this analysis by focusing at the level of individual practitioners engaging in frontline practice.

This article presents the results of an ethnographic study of the reasoning processes that child protection practitioners use to form judgments in real life situations. Developing a clearer understanding of how practitioners engage in these reasoning processes would assist in both enabling practitioners to develop their skills and identifying how organisations can help or hinder these processes.

The article will begin by outlining two theoretical models, the dual process model and the recognition primed decision model, to provide a context for the study. The methods and findings will be presented before discussing the implications for policy, practice and education.

**Psychological research on judgement and decision making**

There is a significant body of research that has examined professional sense-making in child protection from sociologically-informed perspectives (Dingwall, Eekelaar and Murray, 1983; Pithouse, 1984; White, 1997; Scourfield, 2003; Holland, 2010; Leigh, 2013; Kettle, 2015). More recently, there is a growing interest in psychological models of judgment and decision making (Taylor, 2016, 2017; Platt and Turney, 2014; Kirkman and Melrose, 2014; Helm, 2016; Saltiel, 2015; van de Luitgaarden, 2009). This is potentially fruitful because such models challenge a rational bureaucratic approach to decision making, which assumes that people make decisions through a rational, conscious and deliberate process. This is usually formulated as identifying a range of options and calculating the expected benefits and risks of each alternative in order to select the best available. Whilst a rational bureaucratic approach can seem appealing, there is a significant body of psychological research that challenges its core assumptions as unrealistic in real life decision making (Gilovich, Griffin and Kahneman, 2002;Klein,1999; Gigerenzer and Selten, 2002) and the two models outlined here present an alternative perspective.

**Intuitive and analytic reasoning**

An area where recent psychological research has demonstrated potential is in understanding the traditional distinction between intuitive and analytic reasoning processes. There have been considerable debates about the use of intuitive and analytic reasoning in social work (O’Sullivan, 2011; Cook, 2017; Whittaker and Taylor, 2016). In the 1960s, Olive Stevenson used a psychoanalytic approach to argue for the importance of intuition in social work as a source of insights (Stevenson, 1964). In the 1980s, the debate was formulated as to whether social work was an art or a science (England, 1986). More recently, it has been expressed as a dispute between the proponents and opponents of evidence-based practice (Sheldon, 2001; Webb, 2001). This has continued to be the focus of polarized debates in social work. For example, Sheppard argues that practitioners must ‘go far beyond mere intuition’ and has emphasised the importance of social workers engaging in a high level of analytic thinking (Sheppard, 2006, p.199). By contrast, van de Luitgaarden (2009) argues that the nature of the social work task means that intuitive strategies are likely to be more important.

**Defining intuition**

The concept of practitioners engaging in intuitive thinking can be problematic because the term ‘intuition’ can be mistaken for some mystical or extraordinary power, such as extra sensory perception (ESP). However, the way that it is used in both of the theoretical models outlined in this article is more straightforward. In a joint article, Kahneman and Klein (2009) agreed on the definition offered by Herbert Simon:

The situation has provided a cue: This cue has given the expert access to information stored in memory, and the information provides the answer. Intuition is nothing more and nothing less than recognition (Simon, 1992, p. 155).

Intuitive expertise occurs when an expert draws upon their repertoire of experience to recognise cues in a situation that enable them to spot patterns and build a narrative about that situation.

**The dual process model**

The dual process model presents a framework for understanding intuitive and analytic reasoning that moves beyond a sterile ‘either/or’ debate. Rather than perceiving thinking as a single process, the dual process model views it as consisting of two forms of reasoning; intuitive (System 1) and analytic (System 2) (Stanovich and West, 2000; Kahneman and Frederick, 2002). Intuitive thinking (System 1) operates rapidly and automatically and with little sense of voluntary choice or effort. For example, during a telephone conversation with a loved one, we are often quickly aware of their mood. Analytic thinking (System 2) is controlled, effortful and able to undertake complex mental operations that require considerable effort, such as mathematical calculations (Kahneman, 2011).

In our everyday lives, our intuitive and analytic reasoning processes operate as integrated parts of a whole. In situations where judgment problems arise, our intuitive thinking (System 1) provides intuitive answers that are rapid and associative. The quality of these proposals is monitored by our analytic thinking (System 2), which applies rules and uses deduction to endorse, correct or override them (Kahneman and Frederick, 2002; Kahneman, 2011). For example, on a home visit, we may have an intuitive judgment that a parent is not telling the truth (System 1) about a particular issue. Our analytic reasoning (System 2) will examine what evidence we have for this judgment and may generate alternative explanations for what we saw and heard, evaluating the evidence for these compared to our initial judgment. If the initial intuitive judgement (System 1) is quickly accepted without significant revision, it is likely that we will regard it as intuitive. Whilst intuitive processes characterise the majority of our everyday thinking, our sense of agency, choice and identity is associated with analytic thinking (Gilovich, Griffin and Kahneman, 2002; Kahneman, 2011). The dual process theory offers an interesting account of how we develop expertise. Kahneman and Frederick (2002) argue that as we gain proficiency and skill, the complex cognitive operations that originate in our analytical thinking (System 2) migrate over into our intuitive thinking (System 1) (Kahneman and Frederick, 2002).

*The Recognition Primed Decision model*

The recognition primed decision (RPD) model (Klein, 1999) grew out of earlier studies of the intuitive expertise of master chess players, which found that chess grand masters rapidly identified the best moves which were commonly overlooked by less skilled and experienced players. This approach has focused upon the study of skilful decision making by expert practitioners in real life settings, such as pilots and fire-fighters (Klein, 1999). It traces its intellectual heritage back to Dreyfus and Dreyfus' (1986) five-stage model of skill acquisition, which describes how expertise develops from initial novice to the final stage of expert, where decision making is characterised by high level of intuition. This model has been used in the field of nursing (Benner, 1982) and to a lesser extent in social work (Fook, Ryan and Hawkins, 2000).

In his early research with fire fighters, Klein interviewed experienced commanders about critical incidents (Klein, 1999). He found that the option-comparison model did not reflect real-life decision making. In urgent situations, there was simply insufficient time to be able to engage in the classic option comparison model. Instead, the fire commanders engaged in intuitive thinking, which consisted of a rapid pattern-recognition process in which they identified the key features of the situation based upon their previous repertoire of experiences (Klein, 1999).

In the recognition primed decision making model, experienced practitioners see patterns when they start to see particular cues that link together and lead them to look for further cues. For example, when fire fighters see that smoke has a particular colour, they are alerted that it is likely to have been started by specific chemicals and when paediatric nurses see a particular combination of symptoms, they know that a baby may be experiencing sepsis (Klein, 1999, 2009). As practitioners accumulate experiences, they build up a repertoire of recognised patterns (Klein, 2004). Klein does not dismiss the use of analytic thinking, he simply argues that it cannot replace intuition at the centre of the decision making process:

Analysis has a proper role as a supporting tool for making intuitive decisions. When time and the necessary information are available, analysis can help uncover cues and patterns. It can sometimes help evaluate a decision. But it cannot replace the intuition that is at the centre of the decision making process (Klein, 2004, p.24).

In both models, it is intuitive processes that are the driving force in professional judgment and analytic processes which primarily act as a means of evaluating these intuitive judgments.

***Applying judgment and decision making research to child protection***

There is a growing literature concerned with applying psychological models to decision making to the field of child protection. In an early study, Munro applied a psychological approach to identify common errors that child protection practitioners made in their reasoning process (Munro, 1996, 1999). Her study analysed 45 publicly available reports of inquiries into child abuse deaths between 1973 and 1994 and concluded that the inquiry reports persistently identified avoidable errors. More recently, Munro has incorporated developments in naturalistic decision making (Munro, 2008) and the Munro Review itself has a strong and positive sense of professional judgment and the importance of not seeking to eliminate it through rational bureaucratic approaches (Munro, 2010).

In a more recent theoretical article, Platt and Turney (2013) state that thresholds for child protection services have been a perennial problem and the technical rational solution has been to try to develop ever more precise definitions. However, this has proved problematic because it assumes that the risks faced by individual children can be quantified and compared on a scale and the technical-rational model of thresholds presupposes a sense of rationality that they argue does not exist in practice. Instead, they argue for the application of theoretical models from the psychological literature on judgment and decision making that capture how practitioners engage in real life decision making. In particular, they focus upon adopting a naturalistic decision making approach in which threshold decisions are viewed as being mediated through local sense-making strategies. They argue that, although these sense-making strategies may appear as shortcuts arising from a high pressure setting, further examination would enable a deeper understanding of decision making (Platt and Turney, 2013).

A small-scale qualitative study commissioned by the Department for Education applied a behavioural science approach to front line child protection services and concluded that a heuristic approach could be fruitful in child protection (Kirkman and Melrose, 2014). This has been developed further by Taylor (2016), who examines the theoretical models in greater depth and explores the legal and ethical issues that might arise in their implementation.

In summary, there has been a growing theoretical interest in applying psychological models from judgment and decision making research to child protection. However, there has been limited empirical research into how these models can help us understanding everyday child protection practice and this study aims to address this.

**Methodology**

Ethnographic research has a long tradition in the study of childcare social work in the UK (Dingwall et al., 1983; Pithouse, 1984; White, 1997; White, Hall and Peckover, 2009; Holland, 1999; Scourfield, 1999; Whittaker, 2011, 2014; Leigh, 2013; Helm, 2016; Saltiel, 2015). Ethnography usually involves participating in people’s daily lives for an extended period of time, using observation and qualitative interviews to understand the topic of inquiry (Hammersley and Atkinson, 2007).

The fieldwork was undertaken in two sites. The first site was a local authority office with four child and family teams in an inner city local authority and the pseudonym ‘City teams’ is used to protect confidentiality. These teams were the ‘front door’ to children’s social care, responding to all referrals ranging from urgent child protection concerns to routine information requests about children from other agencies.

The second site was a specialist multi-disciplinary team situated within a National Health Service (NHS) trust that undertook specialist family assessments commissioned by courts and the pseudonym ‘Sycamore service’ is used. It included members from social work, child and adolescent psychiatry, child psychotherapy and clinical psychology backgrounds. These sites were chosen because they examine the situated complexity of decision-making in everyday practice (Stake, 2003) and represent an extreme or contrasting sampling strategy (Yin, 2013). Ethical approval was obtained through the local National Health Service ethics committee and the university ethics committee. The identities of all participants has been protected through the use of pseudonyms and identifying details have been removed. Please see table 1 for details of data collection methods and sampling.

Table 1: Details of data collection

|  |  |  |  |
| --- | --- | --- | --- |
| **Research method** | **‘City teams’** | **‘Sycamore service’** | **Total** |
| Participant observation | 18 days | 22 days | **40 days** |
| Interviews | 17 interviews | 7 interviews | **24 interviews** |

In this study, participant observation took the form of spending time at each site to observe the everyday life of the teams. This consisted of sitting in the team rooms, attending meetings and unobtrusively listening to conversations between team members about their work with families. Scratch notes were taken in the field wherever possible and fuller field notes were completed at lunchtime and at the end of the day (Madden, 2010; Emerson, Fretz and Shaw, 2011). Ethical approval was obtained for observing supervision in both settings, but this proved difficult for practical reasons. Individual supervision happened comparatively rarely and participants in both sites identified that the focus in supervision was primarily on caseload management rather than reflecting upon individual cases.

Twenty-four interviews were completed and fully transcribed. Observational and interview data were analysed using a six-stage model of thematic analysis (Braun and Clarke, 2006) using NVivo qualitative data analysis software.

The rationale for using participant observation is that it enables the observer to study aspects of behaviour in a natural setting that may be difficult to access using other methods. A potential weakness is that people behave differently when being observed, but extended periods of observation can help to reduce participants’ sensitivity to being observed, particularly in situations where participants are focused upon important practical goals (Bryman, 2015).

After the majority of the participant observations had been completed, semi-structured qualitative interviews were undertaken, which were informed by analysis of the observation material. In particular, this analysis suggested that levels of practitioner experience were particularly significant and it would be helpful to explore whether practitioners' sense-making processes changed as they gained more experience. When the interview transcripts were analysed, it became apparent that practitioners moved through different phases as they became more experienced. It is important to emphasize that these phases were identified inductively through analysis of the observational and interview data rather than predetermined before data collection. Indeed, it was not apparent before data collection that the level of experience that practitioners had would be a clear influence upon how they engaged in sense-making, but this emerged as the data collection and analysis progressed.

**Findings** **and discussion**

The first main finding was that practitioners in both sites understood complex information through sense-making processes that were characterised by quick, intuitive judgments (System 1) followed by analytic evaluation (System 2) that were compatible with the dual process model (Evans and Frankish, 2009). This dynamic interplay between intuitive and analytic thinking processes could be undertaken by a practitioner individually but was most visible during case discussions between practitioners. This is illustrated in the following example of a case discussion after practitioners had met a mother and a father for an assessment:

Practitioner 1: ‘*Dad looked furious with Mum for how she answered that question! Do we have any history of him being aggressive to her? Is he trying to hide something?*

Practitioner 2: ‘*I didn’t get that feeling, I thought Dad looked frustrated with your question rather than angry with Mum’.*

Team leader 1: *‘There are a number of issues we need to think about. How does the couple manage conflict? Is there a pattern of him being controlling? Does it fit with what we think is going on with the family?'* (Sycamore service, day nine).

The first practitioner offered an intuitive judgment (System 1), then followed up with an analytic question (System 2) that sought further information to support or challenge her own intuitive judgement. The second practitioner offered an alternative intuitive judgment. This is followed by the team leader responding with an analytic question (System 2) that seeks to test both intuitive judgments and to integrate this into the overall account they are developing of the family. Whilst this process of testing hypotheses occasionally involved direct challenge, it was usually an implicit and non-confrontational process in which practitioners shared their intuitive judgments. In this process, the most likely of these hypotheses were taken up and developed whilst others were ignored.

At the beginning of each assessment, the case discussions featured predominantly intuitive thinking (System 1), where the priority appeared to be generating possible hypotheses. Towards the end of the process, analytic thinking (System 2) was most dominant, where the most likely hypotheses were developed and evaluated to provide a cogent explanation of the information available.

These findings are supported by a previous study, which found that social work decision making was primarily intuitive but with some fluidity between intuitive and analytic modes of cognition (Taylor, 2007; Hackett and Taylor, 2017). Moreover, Taylor (2007) found that practitioners never used analytical processes as the sole method of decision making in any of the cases. Instead, analytical processes were always combined with intuitive processes, which would support the contention that practitioner thinking is driven by intuitive thinking combined with analytic evaluation (Taylor, 2007; Hackett and Taylor, 2014).

The second main finding of the study was that the intuitive judgments that practitioners generated were informed by their previous repertoire of experience and the process took the form of pattern recognition and story building, which was compatible with the recognition primed decision model (Klein, 1999, 2009). When engaging in pattern recognition, practitioners made sense of information by spotting patterns and making connections. For example, during the early fieldwork in the City teams, a manager discussed a referral that had just been received:

The first referral was from a school that were concerned about a 9-year-old boy. She said, “*It says that he’s got poor school attendance, he’s got an ‘unkempt appearance’ whatever that means, and he seems ‘preoccupied’ with his mother, who’s a single parent. I see that and immediately think, has mum got mental health problems? If so, he’s worried about her, doesn’t want to be away from her so he’s not attending school properly and she’s not able to look after him day to day so he’s ‘unkempt’. It could be something else but it’s worth looking out for*” (Observation notes, day two, City teams).

The manager identified the key cues that she linked to form a hypothesis based upon her previous experience. These processes are consistent with the recognition primed decision making (RPD) model, which identifies how experienced practitioners see patterns when they start to see cues that link together and this leads them to look for further cues based on the accumulated experience (Klein, 1999, 2009).

Another example is an experienced practitioner describing a home visit:

*I went to do the home visit for a 7-year-old girl because we had concerns that her violent Dad was living in the house. She was colouring in on the living room floor and Mum was sitting on the sofa. So I got down on the floor with her and I saw a man’s trainer shoved behind the sofa. Later, when I asked Mum about this, she said he didn't live there and the shoes were her brother’s. But I made sure I was looking at her daughter when I asked the question and she looked surprised, she was too young to hide it. When I was talking to the girl on her own, I knew not to ask her directly because she would back Mum up. Instead, I asked her about her daily routine and it soon came out that her Dad was there when she woke up* (Andrew, highly experienced practitioner, City team).

These examples of cue spotting and pattern recognition were more common with highly experienced practitioners. The level of experience of the practitioner appeared to play a significant role in the development of pattern recognition and story building skills. This was first observed in fieldwork observations, when differences were seen between inexperienced and experienced practitioners when making sense of referral information. This was later supported in the qualitative interviews when participants identified that their reasoning and sense-making processes changed as they gained experience. Three categories of experience were identified; less experienced practitioners (less than 12-18 months experience), experienced practitioners (18 months to 5-6 years experience) and highly experienced practitioners (more than 5-6 years experience).

As practitioners gained experience, their sense-making skills changed in three main ways. Firstly, they developed ways of managing the volume of information to avoid cognitive overload and commonly focused on a smaller number of key sources of information. One experienced practitioner described her first experience of writing a report for a child protection conference:

*‘But it was difficult to … there were so many interplaying factors that affected how available mum and dad were to give the sort of parenting that they needed to. It was difficult for me to form an overall analysis… I felt quite bogged down with all the information that I had by the time it got to doing the Conference report. I think I could make sense, I think, of most things in isolation…*’ (Amy, experienced practitioner, City teams).

While the practitioner could make sense of individual pieces of information in isolation, the volume of information involved was overwhelming when taken together and it was difficult for her to evaluate which pieces of information were the most important. This was supported by fieldwork observations, in which novice practitioners were more likely to become confused and uncertain when faced with large amounts of referral information and require support from a manager or more experienced practitioner to make sense of it all.

This is consistent with previous studies of how novices and experts view information differently. In a study of professional judgment, experienced auditors and student auditors were given extensive information (Ettenson et al., 1987). Whilst the students tried to integrate all of the information and no single cue was dominant, the experienced auditors focused upon one type of information source and other sources had a secondary impact. The experienced auditors demonstrated higher levels of accuracy, consistency and consensus. Similarly, Sutcliffe and Weick (2008) argue that information overload impairs our judgment because we become distracted by all of the irrelevant cues.

As practitioners became experienced, they tended to find extensive information less overwhelming because they had learnt to selectively focus rather than regarded all information as equally important:

*I think sometimes in the past, when I was newly qualified, there were a million questions in that referral that you needed to ask the family, which gives you the picture. Where now I actually ask them every relevant question in that incident, and I know that I’m confident I have mastered every area that I need to find out information from the family... My manager was quite happy, she said, “Every question that comes into my mind, you’ve already asked them*’ (Kadin, highly experienced practitioner, City teams)

The practitioner stated that when he was newly qualified, everything seemed important (‘there were a million questions’). As he became more experienced, he selectively focused on a narrower range of information and was able to see it in the context of the individual family that he was working with.

The second change was that more experienced practitioners had a greater ability to spot missing information, usually because they were engaged in pattern spotting:

*‘I think that obviously the more experienced worker would be able to look at the referral, see the information and maybe identify what the concerns and risks are and maybe gaps in information actually. Information that’s not there… [they] might have to go back to the referrer to get more information as a starting point’* (Nancy, highly experienced practitioner, City teams).

Thirdly, they had a more sophisticated evidential approach that involved triangulating information using multiple sources. This contrasts with inexperienced practitioners, who were less likely to use a sophisticated evidential approach and more likely to make simplistic assumptions. For example, an experienced practitioner described how she had previously made assumptions about the reliability of sources when she started child protection work:

*I would have tended to see the information that was given to me by another professional in a referral or information that was held on the system… I would have given more weight to that than I would necessarily have given to what the family said, if they were saying something different' (Amy, interview one, experienced practitioner, City teams).*

She went on to describe how she no longer assumes this as she had experienced situations where the professional information had been less accurate and reliable than that provided by the family.

As practitioners became more experienced, they were more likely to stress the importance of gathering data from multiple sources to test its reliability. One experienced manager described it in the following terms:

*It’s about a multitude of sources, I don’t just observe on the one occasion…for me it’s about corroborating… so it’s fine you can say one thing or present one thing but I don’t take it on face value, it has to be substantiated either through the school, other agencies that are working with them’* (Richard, highly experienced practitioner, interview twelve, City teams).

Another feature of this more sophisticated approach to evaluating evidence was a stronger emphasis on observation. Another experienced manager described in the following way;

*I think observation is where it all begins… if you start off with an incomplete set of data because your observations aren’t sufficiently sensitive, inevitably, however well you organise and analyse the information, you very easily come to spurious conclusions because the observations were incomplete. So certainly the skill that all the team members need to share is those observational skills (Simon, senior clinician and highly experienced practitioner, interview 23, Sycamore service).*

More experienced practitioners demonstrated a greater emphasis on integrating their own observations as a source of evidence:

*A parent may say, “I’m very interested in my child’s education. I think it’s very, very important,”. Where a less experienced practitioner might say, “Okay. Yes, that’s good,” a more experienced practitioner would be, “Right okay, let me quickly glance around, can I see any school pictures up on the wall or can I see anything on the fridge or whatever? Can I see a text book out? … I think the more experience you get the easier it is to walk into a house and look at pictures on the wall or look at maybe older kids that have graduated and think and draw conclusions from observations, not just what the parents are saying” (Sadie, highly experienced practitioner/manager, interview fourteen, City teams).*

Rather than focusing upon specific risk factors in isolation, highly experienced practitioners described understanding these in the wider context of the individual family. They were more likely to use an approach that goes beyond simply identifying individual risk factors to integrate more nuanced intuitive pattern recognition skills with formal analytic knowledge about how specific risk factors can interact:

*‘In my mind, domestic violence in family A may have a completely different impact on the child than in family B. Or it might be extremely dangerous in family C, depending on, you know, experience tells us when you have the combination of domestic violence, substance misuse and mental health, those are the most dangerous of cases that you can have… evidence is that those three factors have been playing quite a role’* (John, highly experienced practitioner, Sycamore service).

The importance of having a good mixture of practitioners with different levels of experience was highlighted by one manager:

*Certainly with the more senior people, you’re wanting them to have the pattern recognition stuff, the ability to organise, start to create categorical sequential links, that start to produce meaning.. People who are just starting off in this area don’t necessarily have to have them because, as a team, you only need a few analysts… you need a lot of data gatherers, and you need a few analysts who can synthesise it and see the key patterns (Simon, senior clinician and highly experienced practitioner, interview 23, Sycamore service).*

These phases are summarised in Table 2 below:

Table 2: Key features of each level of experience

|  |  |
| --- | --- |
| **Level of experience** | **Key features** |
| Less experienced (Less than 18 months experience in a local authority child protection role)  (5 participants) | * Vulnerable to feeling cognitively overloaded by information. * Made assumptions about information sources. For example, that professional sources are reliable and accurate * Generally lacked confidence with occasional overconfidence in intuitive judgments. |
| Experienced (Between 18 months and 5-6 years experience)  (9 participants) | * More developed pattern recognition skills * Beginning to focus on key information rather than treating all information as equal. * Starting to spot missing information. * Greater emphasis on triangulating information, particularly with observation. |
| Highly experienced (More than 5-6 years experience)  (10 participants) | * Highly developed pattern recognition skills that go beyond categorisation of cases in terms of specific features to recognising that each family is highly individual. * Consistently focuses on key information rather than giving equal attention to all information. * Consistently able to spot missing information * Highly sophisticated evidential approach with strong emphasis on observation. |

*Limitations*

The findings should be viewed in the light of the study limitations. The study was exploratory and designed to identify potentially fruitful theoretical frameworks rather than formally test their validity. The limited sample size means that these timescales should be treated as approximate and would need to be confirmed by a larger scale study. Although the level of experience generally had a consistent effect on practitioners' sense-making skills, it was not simply the case that experience equalled expertise. In the experienced practitioner category, there was 1 participant out of 9 who did not have the key features of that experience level and in the highly experienced practitioner category, there was 1 out of 10 that did not have the key features. However, all of the less experienced practitioners had the features of that stage. Even novice practitioners who otherwise demonstrated strong cognitive skills and reflective thinking were still unable to demonstrate strong pattern recognition and story building skills.

**A future research agenda**

The study contributes to the research agenda for decision making in child protection in three ways. The first component focuses upon further study of how the dual process model can contribute towards improved decision making, in particular how supervision processes can promote the best use of intuitive (System 1) and analytic (System 2) processes. The second component focuses upon how we can understand the cue recognition and pattern spotting skills used by experienced practitioners in their everyday lives. These are domain specific to particular settings and there is potential for these to be integrated into organisational systems that can support expert decision making.

The third component focuses upon understanding how these cue recognition and pattern spotting skills can be taught to less experienced practitioners. Progress is already being made with an on-going study called the Seeing Through the Eyes of Expert Practitioners (STEEP) project funded by the British Academy and the Leverhulme Trust. This is a randomised controlled trail (RCT) using the ShadowBox® method to provide rapid video feedback to novices from expert practitioners to help them to learn expert decision making strategies (Klein and Borders, 2016).

**Conclusion**

The overall conclusion is that research from the psychology of decision making can make an important contribution to understanding professional judgment in child protection in more realistic and in-depth ways. The study found that experienced practitioners were engaging in skilful sense-making and professional judgment that was more complex than the rather simplistic accounts prescribed by formal models of decision making. Such formal models emphasise the importance of technical-rational comparison of alternatives using analytic reasoning, real life decision making consisted of a dynamic interplay of intuitive, emotionally-informed judgments and analytic evaluations that were compatible with a dual process model. This model understands intuitive and analytical processes as mutually interdependent rather than as competing alternatives, which can contribute towards improving real life decision making processes.

The study also offers insights into the value of the intuitive expertise of experienced practitioners, which enabled them to understand complex and subtle cues that would be missed by novices and to use a more sophisticated approach to evaluating information. This supports the view that improving decision making requires organisations to create conditions for supporting practitioner expertise rather than merely minimising errors.

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