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## ORIGINAL PRACTICE DEVELOPMENT AND RESEARCH

### Evaluating the use of narrative pedagogy in person-centred care and human factors in perioperative practice education

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#### Abstract

*Background:* There is an international effort to develop understanding from human factors theory and implement this in healthcare to improve person-centred care and patient safety.

*Aim:* This project aimed to evaluate the use of narrative pedagogy to teach human factors to perioperative personnel in the workplace.

*Methods:* Using the action research model, an interactive learning session based on lessons from serious incidents was developed and delivered to perioperative staff in an NHS Trust within a practice development programme. Data were collected in the form of questionnaires and peer reviews to evaluate the learning session, and thematically analysed.

*Findings:* The use of narrative pedagogy to explore human factors theory empowered participants to speak up, and this influenced the workplace safety culture.

*Conclusion:* Narrative pedagogy reconnects healthcare employees with compassionate approaches to person-centred care, and this provides powerful motivation to improve the safety culture. Further studies should focus on different applications of narrative pedagogy in workplace learning, and creative approaches to teaching human factors.

*Implications for practice:*

- Narrative pedagogy can be a conduit to develop person-centred practice
- Engaging staff through interactive practice development sessions can encourage expansive learning about human factors and their application in practice
- Narrative pedagogy motivates healthcare staff to improve the safety culture in practice

**Keywords:** Practice development, narrative pedagogy, person-centred care, human factors, patient safety, perioperative practice

## Introduction

This article presents a practitioner-based research study to improve understanding of how narrative pedagogy can be used to enhance professional development relating to patient safety in perioperative hospital care. Professional development is essential within this complex environment, to improve staff skills, knowledge and attitudes towards person-centred care and patient safety (Bindon, 2017).

There is an international effort to develop understanding from human factors theory and implement this to improve person-centred care and patient safety (World Health Organization, 2009; Landers, 2015). Person-centred care is focused on the adoption of respectful relationships to promote health, in which the needs of individuals are met and care providers understand the importance of a person's choices and values (McCormack and McCance, 2017; Health Education England, 2021). When this approach is coupled with an emphasis on patient safety, people feel valued, safe and cared for (McCormack and McCance, 2017). Patient safety is defined as the avoidance of harm to people within our duty of care, and includes an emphasis on learning from errors (Hababbeh, 2020). A range of publications identify that healthcare organisations have had a poor record of reporting and learning from incidents that caused harm to patients and staff. These include the seminal reports *An Organisation with a Memory* (Department of Health, 2000) and *To Err is Human* (Institute of Medicine, 2000), as well as the more recent inquiries into trust failures (Francis, 2013; Kirkup, 2015). These emphasised that healthcare organisations must improve learning from patient safety incidents such as wrong-site surgery (Sevdalis et al., 2012; Rowland and Kitto, 2014). Despite this, 'never events' and other incidents of harm continue to occur (Care Quality Commission, 2018; NHS Improvement, 2020).

Perioperative care takes place in extremely busy, complex and potentially hazardous clinical environments, where patients undergo induction and reversal of anaesthesia either side of their surgical procedure. Safety is of the utmost importance, and perioperative staff implement many safety-related processes, including repeat checks of patient identity and consent, and monitoring of surgical swabs, sharps and instruments (Hughes and Mardell, 2009). While patients are under anaesthesia, theatre practitioners maintain homeostasis, protect them from iatrogenic harm and maintain dignity (Sundqvist et al., 2016; Crook, 2016). During an invasive procedure, a mistake can have catastrophic consequences for the patient (Flin, 2013). Patients are at their most vulnerable under anaesthesia, unable to communicate, move or even breathe independently. Highly technical equipment is used that requires consistent cognitive, communication and social skills from practitioners (Flin, 2014). Preventable harm – the so-called never events – can occur during any operation; the risk is one in 16,000 surgical procedures in the NHS (Moppett and Moppett, 2016). Jackson (2016) identified in her research that errors are often caused by systems failures and poor application of human factors knowledge.

In response to this situation, this research study was designed to consider how an interactive learning session focused on human factors could improve professional development for perioperative teams. The project arose from the motivation to develop person-centred practice in the operating theatre and enhance understanding of human factors. It evaluated the use of narrative pedagogy to teach human factors and share learning from serious incidents in order to improve person-centred practice as part of an organisational strategy to foster a culture of safety. Action research was the methodology chosen to evaluate the effectiveness of the learning session.

## Background and literature review

### ***Continuous professional development and practice development***

Continuous professional development (CPD) is mandatory for registered healthcare professionals, who must dedicate a significant proportion of their time to learning (Nursing and Midwifery Council, 2015; Health and Care Professions Council, 2018), in order to ensure practice remains safe and effective (Manley et al., 2018). Recent research conducted into how CPD improves patient safety concluded that when learners and learning aims are aligned towards a shared goal, a positive impact on safety

outcomes can be observed (Illing et al., 2018). While CPD focuses on the knowledge and skills individuals require to deliver safe and effective care, practice development is concerned with the nourishment of workplace cultures for patient safety and person-centred care (Daws et al., 2020; Peet et al., 2021). The links between safety culture and person-centred care have recently been corroborated (Manley et al., 2019).

Learning in healthcare requires us to embrace change and accept that a continuous cycle of improvement is a principal of ongoing evaluation and development (Cairns and Malloch, 2012). In post as a practice development nurse, the first author (JH) introduced a strategy to support the professional development of staff, which included the clinical skills for anaesthetic, scrub and recovery practice, non-technical skills including communication and team membership (Flin, 2014), and application of human factors knowledge. The philosophy of person-centred care was threaded throughout learning sessions because of its link to safety culture development (Manley et al., 2019) and the challenges of procedure-driven perioperative practice (Arakelian et al., 2017). This was aligned with the organisation's priorities concerning the delivery of safe and effective patient care, and supported by the management team for surgery. The learning session developed within this research was designed to feed into the organisational strategy, to support the application of human factors knowledge in practice and develop person-centred care.

### ***Human factors***

In healthcare, human factors theory is concerned with studying how we perform our roles at work, and includes the environment and equipment, organisational factors and individual characteristics – all of which influence how we behave, interact and engage in the workplace (Ives and Hillier, 2015). An awareness of human factors in conjunction with the development of a patient safety culture is essential to preventing serious incidents but there is a lack of research into the effectiveness of teaching and learning approaches to building this awareness among healthcare workers (Timmons et al., 2015). Poor assessment of safety culture results also inhibits awareness (Flin, 2013), which is exacerbated by the demand for rapid and relatively low-cost assessments. This has led to a reliance on safety climate questionnaires to gain a snapshot of the workforce's perspective (Morello et al., 2013), and therefore a relatively superficial understanding of these complex issues. Additionally, the implementation of actions arising from such questionnaires calls for the support of skilled facilitators (Manley et al., 2019), but funding for this is often not available (De Silva, 2015).

Recent developments in thinking about safety-critical industries has moved away from efforts to reduce the incidence of errors (the so-called 'Safety I' approach), towards an approach that encourages human adaptability to respond and improve resilience (Hollnagel et al., 2015). With this 'Safety II' approach, human contributions that demonstrate adaptation to varying conditions in healthcare systems are celebrated, and the cause-and-effect model of analysing errors is discarded in favour of recognition that, in a growing number of cases, complex factors leading towards error cannot be examined independently in order to attribute blame (Hollnagel et al., 2015).

### ***Narrative pedagogy***

For this research, narrative pedagogy was the learning intervention chosen to teach human factors, because our stories invite openness and encourage others to share their experiences for mutual learning (Sherwood and Barnsteiner, 2017). The use of narrative pedagogy to explore patients' experiences of healthcare and illness is common in academic settings to facilitate understanding and foster person-centred care (Coulter et al., 2007; Santo, 2011). It is essentially a creative process centred on dialogue (Stoltzfus, 2012; Ironside, 2015) that provides an opportunity for learners to dissect, understand and interpret incidents from their own and others' perspectives. This can be considered a way to develop the cognitive skills of analysis and problem solving (Brown et al., 2008), which are considered fundamental for healthcare workers today (Jones and Durbridge, 2016).

Two films produced in the UK use the power of storytelling to educate learners about human factors: *Just a Routine Operation* (Gormley, 2011) and *Gina's Story* (Platts, 2014). Both use narrative to explore how an understanding of human factors can improve patient safety. A powerful endorsement of the use of storytelling in this way comes from Martin Bromiley, who explains that he wanted the staff involved in the death of his wife Elaine to remain in practice, so they could share learning (Gormley, 2011). The stories highlighted in the films were the inspiration behind the use of narrative pedagogy in this study.

In addition to discussion of patients' narratives, the learning sessions in this research offered participants an opportunity to tell their own stories of safety incidents. The process of sharing stories can generate a feeling of safety among participants (Sherwood and Barnsteiner, 2017). Inviting them to contribute stories and engage in discussion created opportunities for co-production of knowledge, as identified in collaborative education approaches (Cooke et al., 2016). In this study's context, knowledge is considered to be the aesthetic, personal and ethical knowledge that nurses and operating department practitioners develop (Carper, 1978; Terry et al., 2017) alongside biological and technical knowledge and compassion (Galvin and Todres, 2011; Wright and Brajtman, 2011). While these authors applied their research in nursing specifically, there is relevance for all health disciplines, which all possess caring approaches to practice and encompass aesthetic, personal and ethical frameworks of knowledge (Sitzman and Muller, 2018).

### **Person-centred care**

Person-centred care has long been associated with nursing and allied health professional practice, and describes an approach to care delivery that is underpinned by respect for the individual. The components of person-centred care include empathy, compassion and dignity, and it is increasingly considered as a philosophical approach to the design and delivery of care systems (McCormack and McCance, 2017). Within education to support CPD, practice development nurses have been creating cultures of practice that are respectful of a person's choices, values and experiences (Manley, 2017), and using this approach to nurture healthy staff-patient relationships (McCormack and McCance, 2017). In perioperative practice, person-centred approaches enable patients to describe their wishes, and support individual choices (Arakelian et al., 2017).

### **Methodology**

This research sought to understand the effect on safety culture of using narrative pedagogy to teach human factors. Therefore the data collected focused on the learning of the participants, their evaluation of the learning sessions and self-reported influence on practice. Action research was selected as the methodology to develop evaluate the teaching session.

Action research can be considered both a method and a methodology, as it presents a process and the justification for the process (Cordeiro et al., 2017). It was selected because it is aligned with the constructivist paradigm, being concerned with action, evaluation and improvement (Robson and McCartan, 2015), which allows the researcher to produce knowledge. The core components of action research are:

1. Participation
2. Self-reflection (planning, acting, observing, reflecting)
3. Generation of knowledge
4. Change of practice

(Cordeiro et al., 2017).

The branch of action research most closely aligned with this project is critical realism, described as encompassing a practical understanding of issues within a researcher's workplace (Robson and McCartan, 2015), and a level of interpretation required to construct new understandings (Williams et al., 2017).

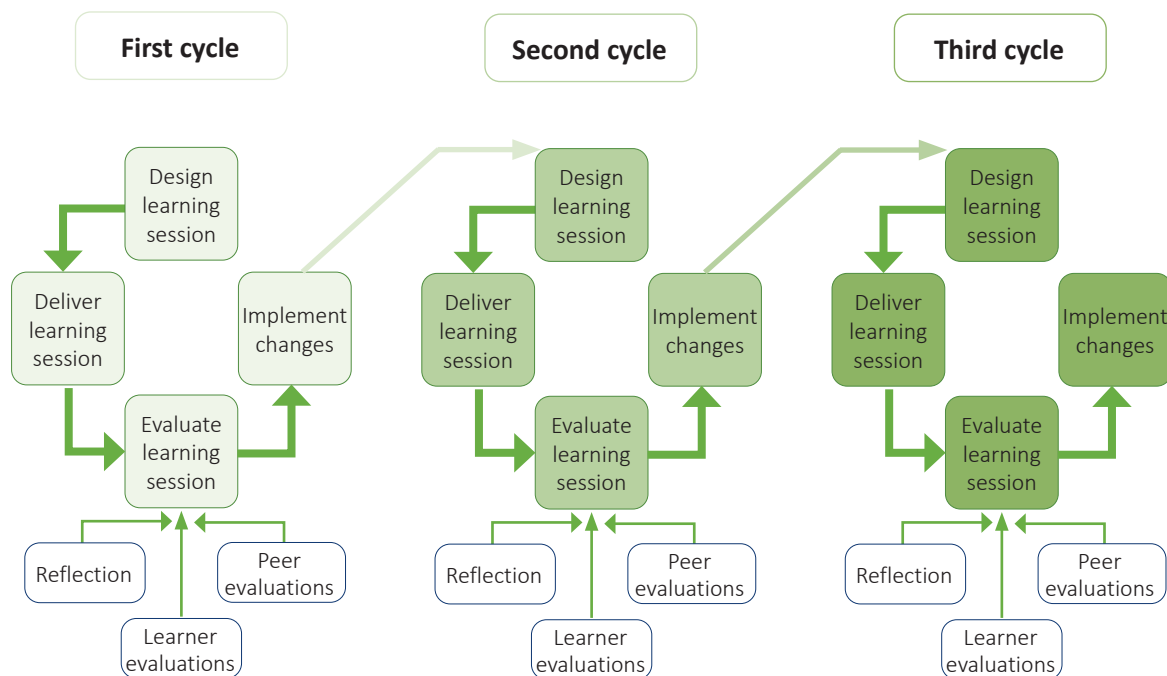
Practitioner-based research is recognised as a means to understand a complex workplace (Fox et al., 2007). It acknowledges the first author's professional knowledge as a clinical educator, and the uncertainty and conflicting values of practice (Schön, 1991). This project aimed to contribute to an understanding of the relationships between operating theatre practice, how the required knowledge can be taught, and how learners can engage in the learning process (Fox et al., 2007).

## Methods

### Design

The research project followed an action research spiral – plan, do, study, act (Bradbury, 2015) – to develop and refine learning about human factors using narrative pedagogy. Action research aims to develop knowledge and transform it into improvement through continuous reflection (Cordeiro et al., 2017). This study involved a learning session, followed by evaluation and repeats of the session with improvements implemented (Figure 1).

**Figure 1: The use of action research to develop and transform knowledge**



### Ethical considerations

This study was granted ethical approval by the employing organisation and also by the university, since it formed part of the first author's postgraduate MSc. The employer identified the research project as a service evaluation and also gave permission for data collection. Participants were informed that their participation was voluntary. All data collected were stored in an encrypted file on a password-protected computer system. No personally identifiable data were recorded.

Ethical consideration was given to the recruitment phase to ensure consent was obtained without coercion. A close relationship between the participants and the researcher can be seen as creating a potential for bias that influences findings (Robson and McCartan, 2015). In order to reduce this possibility, data were triangulated through peer evaluation of the teaching, collaboration for the thematic analysis and honest acknowledgement of the risk of bias. The first author's role as a theatre practitioner gave a unique insight and access into the world of perioperative practice – input that is recognised as essential within action research (Reason and Bradbury, 2006; McNiff, 2013; Bradbury, 2015; McDonnell and McNiff, 2016).

### **Recruitment**

Posters advertising the research project were displayed in our theatre departments for eight weeks before the first interactive learning session. Announcements were made at team meetings and morning safety huddles to ensure perioperative staff were informed about the opportunity. This combination of face-to-face contact, electronic and poster advertising allowed for communication with operating theatre staff who would be attending the learning session and may be interested in participating in the research. Recruitment for the study began prior to the first learning session; participant information and consent forms were made available in coffee rooms, and via email to staff who had been identified in advance to attend the session. To ensure no coercion occurred, staff were encouraged to take the forms and information away for consideration.

At each learning session, it was explained to the participants the plan for the session and the aims of the research. Participants could attend the learning session with no obligation to participate in the subsequent evaluation elements of the study.

Two weeks after delivery of each session, staff who had attended the session and indicated on their consent form that they wished to participate in the study were emailed a link to an online questionnaire. The time between each session and the questionnaire was consistently kept at two weeks, to ensure staff had the opportunity to reflect on their learning in their practice areas. This timing took into consideration the aim of the questionnaire, which was primarily to understand whether the narrative pedagogy used in the learning session influenced perioperative practice. The questionnaire responses were used to inform changes to the subsequent learning session, which was attended by different members of staff, and later analysed to understand how learning took place.

### **Participants and setting**

All participants who attended a learning session and gave their consent were included. There were no exclusion criteria. Participation was voluntary and no incentives were offered. The participants were employed in operating theatres, and were a multiprofessional group comprising nurses, operating department practitioners and healthcare support workers.

Thirty-seven participants who gave consent completed online evaluations, and three face-to-face interviews were conducted at the end of the study. These took place in private offices within the hospital.

### **The learning session**

The session involved interactive elements and was developed to meet the following learning outcomes:

1. To understand the meaning and importance of human factors
2. To use narratives to understand the relevance of human factors to perioperative practice, through the sharing of stories of safety incidents that have occurred at the trust
3. To develop strategies to incorporate this learning into practice

These outcomes were designed to address the learning needs of our department, as steered by national guidance, including the NHS England reports *Standardise, educate, harmonise: commissioning the conditions for safer surgery* (2014) and *Next steps on the NHS Five Year Forward View* (2017), in addition to the participants' self-identified learning needs.

The learning session was designed around narrative pedagogy, with opportunities for stories from our departments to be shared and for participants to discuss stories and share their own. The storytelling, and subsequent discussion about which elements of human factors can be used to understand what happened and why, can be viewed as aligned with the conceptualisation and reflection stages of Kolb's learning cycle (2015). These stages are concerned with how knowledge is grasped and comprehended, and then evaluated to elicit its implications for practice. Examples of the stories told included incidents of wrong-site block injection, wrong route of medication administration, retention of surgical items

within body cavities, and incorrect prosthesis implantation. These are all termed ‘never events’– so called because they should never occur if the correct safety mechanisms are embedded in practice (Moppett and Moppett, 2016). Participants shared their stories of making errors when under pressure from short-staffing and of challenging poor practice, as well as their experiences of being involved in serious incident investigations.

A feeling of safety in the learning sessions was needed to encourage and support participants to engage in the process of sharing stories (Garran and Rasmussen, 2014). Creating safety in classrooms is a well-researched concept in education and acknowledges that learners take a personal risk that they might be wrong when contributing. Teachers therefore have to support learners to take the risk and create an environment that feels safe (Zinsser and Zinsser, 2016; Mahon et al., 2018). When an individual is involved in a mistake or near-miss, a behavioural decision point occurs that is often described in terms of psychological safety; this is the moment in which an individual practitioner decides whether the personal risk of raising a concern outweighs the perceived benefit of reporting it (Jones and Durbridge, 2016). The risk may include consequences in terms of their employment or their place within the social structure of the department. The decision can be affected by perceptions about how other safety incidents have been reported and learned from (Morgan et al., 2015). Training teams together has been shown to improve their psychological safety – they report feeling more confident to raise concerns (Johnstone and Kanitsaki, 2007). For these reasons, the first story told was that of the first author’s own mistake in practice. This led by example and created an environment of trust in which participants could share incidents of their own.

The learning sessions also included interactive opportunities, such as roleplay, to illustrate tools to support junior staff to raise concerns. The PACE mnemonic (probe, alert, challenge, emergency) reminds staff to raise concerns if feeling unsure or unconfident: it encourages them to ask probing questions, then raise an alert or challenge colleagues, before escalating or declaring an emergency if necessary (Howarth, 2016). Within small groups, participants were presented with a complex challenge and asked to use PACE to escalate the situation.

To assure the quality of teaching, each session was independently evaluated by peers in practice development roles. Their feedback was used within the action research spiral to inform changes made to subsequent sessions, through contributions to the understanding of how learning took place.

### ***Data collection***

Data were collected in three forms to give the researchers different perspectives on the effect of narrative pedagogy on teaching human factors. Data from the participants’ responses to the online questionnaire after the learning session were collected. The questions sought answers relating to reflection on:

- The impact of the human factors teaching
- The use of stories to teach human factors
- Whether this was perceived to have an impact on the safety culture

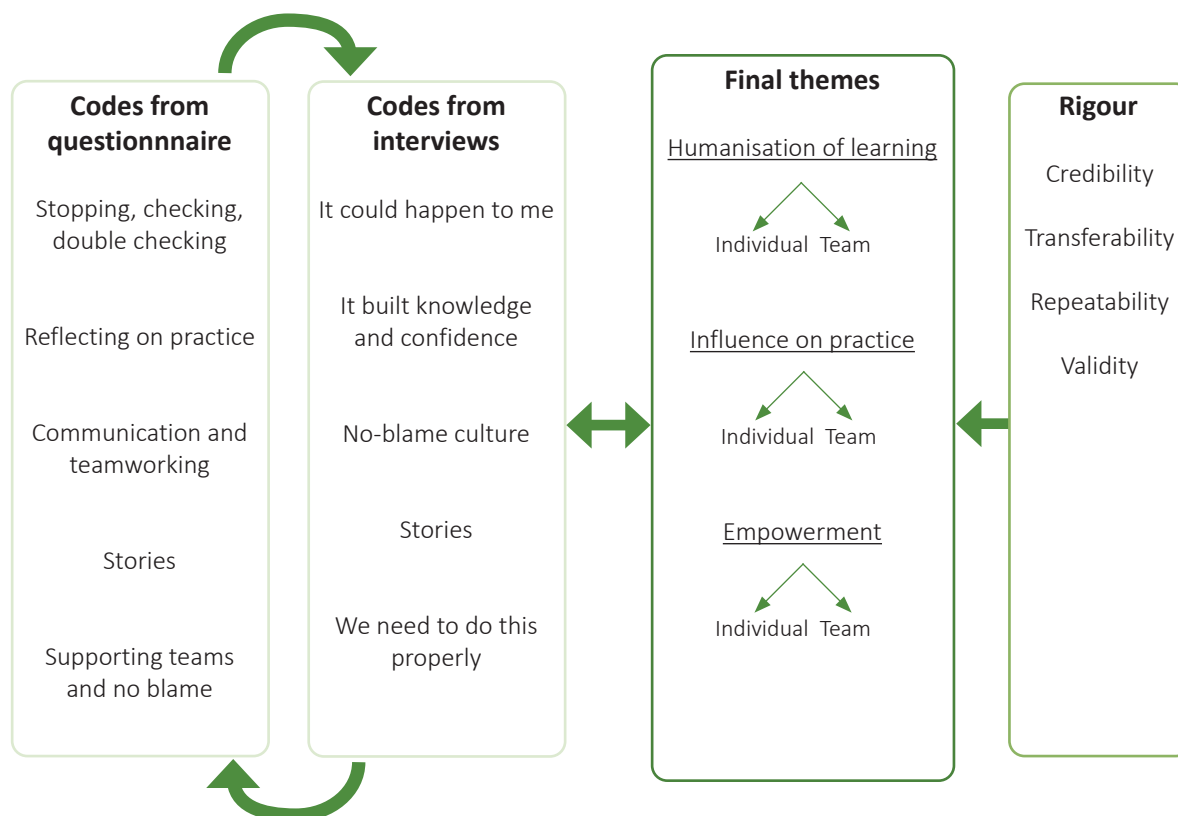
Data were also collected from semi-structured interviews with participants, one from each learning session. These took place four weeks after the final session. The peer evaluation data were collected to assess the quality of teaching and learning, and to prompt critical discussions with peers on ways to improve it. The different forms of data were selected in order to understand how learning occurred, from the perspectives of the participants and practice educators. Data from the participants’ evaluations were used alongside the peer evaluations within the spiral to inform subsequent learning sessions. Data from the interviews were then combined with the electronic evaluations for analysis.

### ***Data analysis***

The process of coding the data and thematic analysis followed the steps defined by Braun and Clark (2006). The initial coding considered the questionnaire data and the interview data independently. The

data were 'grouped' into collections of statements and responses that had similar meanings, until all the data had been grouped. This was repeated until data saturation was reached (Miles et al., 2014). To improve rigour, this process was repeated by a colleague independently, and the two groupings were discussed, with minor reconciliations made between the two coding structures, until a shared group of codes was obtained.

**Figure 2: Coding and thematic analysis process**



Themes were then generated through critical discussion and reflection on meaning of the codes, as described by Braun and Clark (2006), and shown in Table 1.

**Table 1: Generation of themes from the data codes**

	THEME		
	Humanisation of learning	Influence on practice	Empowerment
<b>Contributing codes</b>	It could happen to me Reflecting on practice Stories	We need to do this properly No-blame culture Stopping, checking and double checking Communication and teamworking	It built confidence and knowledge Supporting teams
<b>Example quote</b>	'I thought it can't happen to me, because I'm a competent practitioner. But then you see, actually, this has happened to competent practitioners who are well respected in this department, and it makes you think that this could happen to any one of us'	'It has taught me to be more careful in practice, to check and double check, and that there are people ready to support you when you have bad days'	'[The learning session] gave me confidence because I understood why we need to carry out surgical counts in silence. It gave me the confidence to say "it has to happen"'



## Findings

### **Theme: humanisation of learning**

This theme emerged as many of the codes were concerned with the way the participants made sense of the content of the teaching through the humanisation of the material, using narrative pedagogy. The stories seemed to encourage reflection on practice, a consideration of what they would do in a similar position and a mental preparation for how they would challenge practice. For example, one participant said in their interview:

*‘So they [the stories] helped because, well, you can learn about human factors all day, but the theory alone doesn’t help that much, so it was very much a grey area in my mind. But talking about the individual things that happened, during those stories that led to those incidents made it much easier to say “ah that’s what you mean by human factors” – it’s the distractions, the interruptions, talking about the individual things that happened during those stories that therefore led to the outcome, the incident – I think that made it much easier for me to see, that’s why we WHO [complete the WHO five steps to safer surgery checklist]’ (Participant 1).*

While many of the participants were familiar with the widely shared story of Elaine Bromiley (Gormley 2011) and with *Gina’s Story* (Platts, 2014), it seemed they connected more deeply with stories from their own organisation, because they had a personal context in which to understand the story. The participants’ proximity to the events in these stories seemed to enhance the emotional response; their empathy with the patients and colleagues involved brought a deeper level of understanding and allowed participants to create action from this stimulus (Christiansen, 2011). This participant reported feeling more affected from the sharing of local stories:

*‘The stories relating to us [had impact for me]. I have been more curious about how and why things may be done differently, and how human factors are either further negated or become a bigger risk factor’ (Participant 5).*

This theme can be understood as the process of connecting with our capacity to care through building empathetic connections with colleagues and the persons in our care (Galvin and Todres, 2014). Such connections enable perioperative practitioners to fashion an approach to the provision of person-centred practice that is focused on colleagues in their teams and the people waiting for surgery, rather than on the operating list to be completed (Galvin, 2010).

### **Theme: influence on practice**

Influence on practice, while self-reported, was a strong theme that emerged from further scrutiny of the data. It appeared that the learning sessions prompted participants to re-engage with safety tools, and this was evident across the questionnaire responses and the interviews, for example:

*‘I [now] pause before any intervention, and doing a double/triple check, especially when conducting the stop before you block’ (Participant 4).*

The participants viewed the learning sessions as a reminder to practise cautiously, in response to the complacency that can set in when staff feel confident and competent in their roles (Girard, 2003). This influence on practice at a team level was also described by the participants in their accounts of how approaches to complex incidents had changed:

*‘I remember sharing an experience with difficult situations in my current role with the group. At the time I felt particularly stressed that I was going to miss some important information or results that would affect the patient’s care. I did not have the opportunity to perform my valuable checks. After we discussed this, I would now deal with a similar situation differently, utilising other staff’ (Participant 3).*

This participant found the experience of sharing their own story, dissecting and understanding it from a human factors perspective to be a powerful motivator for anticipating how they would manage such a situation differently in the future. The forum provided the opportunity to reflect with colleagues and consider how they could seek help when feeling pressure to rush, and reach the understanding that teams are stronger when members support each other to challenge poor practice. The idea that individuals are more likely to speak up if they have experienced active listening exercises in which positive behaviour is role modeled is reflected in the literature (Landers, 2015). This also seems to have been a powerful feature of the learning sessions, in which individuals felt safe to share their own stories among peers and gain others' insights. Participant 3's experience (above) of telling a story, exploring the issues with peers and reporting a change in practice neatly summarises the influence of narrative pedagogy on operating theatre practice.

### **Theme: empowerment**

This theme was evident in the codes about the development of confidence and knowledge in practice. It is about how practitioners galvanise their ability to 'do the right thing', which is often difficult in practice. Staff can struggle to feel confident enough to speak up and raise their concerns (Reid, 2012), and the learning sessions seemed to encourage them to reflect on what they would do if faced with a challenging situation:

*'I think sessions of this kind are invaluable tools to eliminate complacency and re-engage all staff in challenging themselves, and each other, on their own beliefs of best practice. After listening and participating in the group activities... it helped formulate ideas and momentum about what to do, as well as keeping my own behaviours in check with the use of reflective practice'* (Participant 14).

It appears from the data that participants felt more confident to raise concerns following the sessions because they had felt validated to act in patients' best interests, reconnecting with the principles of person-centred care. This is summarised in the following participant's quote:

*'I try to involve all of our co-workers, so that we are working together for the same patient, we need to have the same focus. We need to be focused in the same way. And I am not able to be strong in this, because, I'm sorry, I still feel young in my practice. I am still junior so I don't know how far I can push myself [when challenging] towards other colleagues... I am a really cautious person, so let's say that this, plus that I am slowly feeling stronger professionally, it [the teaching session] has made me feel more willing to be heard'* (Interviewee 3).

This participant described the journey that occurred following the session and how they felt stronger and more able to make their voice heard – new members of staff generally face a steep learning curve to find their voice and the confidence to do the right thing (Junk et al., 2017; Ke et al., 2017; Odellius et al., 2017). Challenging colleagues in the hegemony of clinical teams is no small feat, as it is widely recognised that the voices of nurses and allied health professionals are often unacknowledged and undervalued in medically dominated environments (Coombs and Ersser, 2004). Learning through stories gave this participant the confidence to do the right thing despite feeling junior compared with colleagues that day. Taking moral responsibility in this way requires the relational ability to build and manage relationships with clinicians and knowledge of how to use one's voice and be heard (Wright and Brajtman, 2011). In summary, this theme suggests participants felt empowered to improve patient safety after the sessions.

### **Discussion**

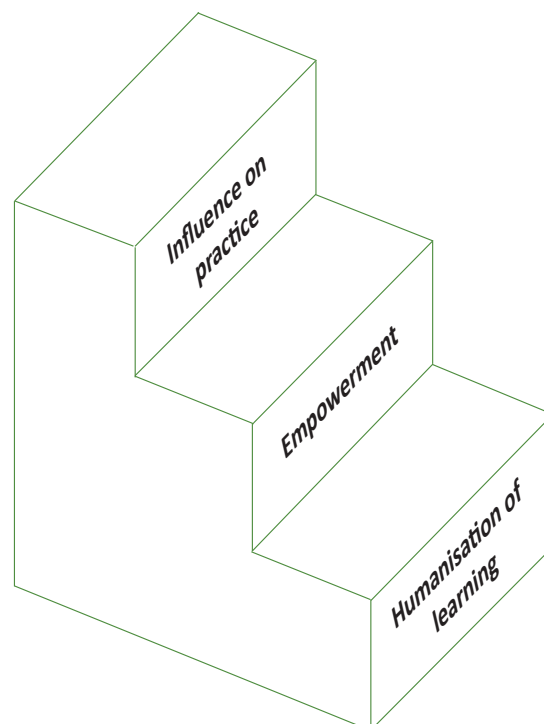
Operating theatre personnel commonly have little opportunity to understand the 'lifeworld' of patients (Husserl and Moran, 2001; Russell, 2006), because there is limited time to connect with them before the induction of anaesthesia. Therefore, creative ways are needed to provide person-centred care for individuals and to offer empathy (Galvin and Todres, 2011). This study contributes to the idea that person-centred care approaches can be developed through narrative pedagogy, concurring

with earlier research (Ironside, 2015). The ‘humanisation of learning’ theme requires consideration of caring and empathy as central components of healthcare work (Sims et al., 2020), because when we focus our practice on the patient on the operating table and the safety of colleagues, we are following person-centred principles. Caring is considered a fundamental aspect of clinical practice and intrinsic to the approach we take to each interaction (Sims et al., 2020). In perioperative practice, this is manifested in the prioritisation of patient safety. The data in this study contribute to the notion that narrative pedagogy can be an effective tool to reconnect staff with person-centred approaches and generate empathy for colleagues who may have been involved in a serious incident.

Person-centred caring perspectives in healthcare are essential to complement and counter the dominant biomedical position, and to help us navigate through the technology and scientific aspects of clinical practice to recognise and respond to the person (Galvin, 2010). Anecdotally, in the operating theatre, staff often fall into the trap of referring to patients by their procedure rather than their name, which is recognised as a common problem if the workplace culture favours an emphasis on presentation and diagnosis (Galvin, 2010). Galvin describes endeavours to focus on the individual as ‘keeping the shining vital person at the centre’ (2010, p 170) as a way to achieve equilibrium between the competing demands of technical skills, effective care and finishing the operating session on time.

Following the learning sessions, participants reported that the stories had a positive impact and encouraged reflection on ‘*just how easily mistakes can happen*’ (Participant 18) and the ‘*impact on patient outcomes*’ (Participant 17). This suggests that the use of narrative pedagogy enabled participants to reflect on colleagues’ experiences and understand their own role in preventing mistakes. Essentially, it was a humanising experience that helped them to review their safety culture collaboratively with colleagues (Figure 3). Participants’ understanding of how and why errors occur was updated with an approach that is proactive to avoid errors occurring, and recognises staff’s ability to adapt and demonstrate resilience (Hollnagel et al., 2015).

**Figure 3: Learning through narrative pedagogy in the workplace: three-step process**



The interactive learning sessions returned the focus to the patient on the operating table, and what the consequences of harm would be for the participants and their colleagues. The sessions enabled them to learn about the organisational process that would be triggered if they were involved in a mistake, and to understand the way investigations work. There is a conflict between the outcomes staff are measured against – namely theatre productivity, turnaround time and surgical waiting list times – and the caring values likely to have attracted them to the profession (Clarke et al., 2009).

Analysis of the data in conjunction with the literature reveals that many elements are required to empower an individual. First, there has to be a motivation to act and this study's data provides this by elucidating the impact of serious incidents on patients and theatre practitioners. Second, staff have to feel that they have a voice within the team when they raise concerns (Jones and Durbridge, 2016), and third, they have to understand how to proceed if their concerns are initially dismissed (Gazarian et al., 2016). The learning session offered the PACE mnemonic as an aide-mémoire to participants to increase their assertiveness in proportion to a changing situation.

The phenomenon of learning through the analysis of different stories can be understood as the generation of knowledge, a process in which learners apply their previous knowledge and experience to a story, appreciate different viewpoints and generate their own meanings (Rycroft-Malone et al., 2016). To further understand the learning experience for the participants, the data were triangulated with the first author's own reflections following the sessions and the evaluations from peer nurse educators; this process validates findings through verification and comparison (Bradbury, 2015). A review of the first author's reflections shows the supportive nature of the participants, who often exclaimed that they understood how easily mistakes could occur and voiced the empathy they felt with colleagues. The creation of knowledge occurred across the boundaries of role, which suggests the participants felt galvanised in the classroom to contribute ideas. The generation of knowledge was a collaborative process, in which participants told their stories and reflected together.

Creating a culture of safety for practice development using workbased learning is challenging, because it requires learners to trust the teacher and fellow learners in order to feel comfortable (Garran and Rasmussen, 2014). A feeling of safety is essential in the classroom for learners, because discussing experiences can reveal vulnerability, gaps in knowledge or a low level of confidence (Garran and Rasmussen, 2014; Zinsser and Zinsser, 2016). To create a feeling of safety, learners should be guided to critically analyse their stories through supportive facilitation (Brown and McCormack, 2016). To begin the facilitation, the first author shared a personal story of an error made in practice, which gained the learner's trust through a demonstration of vulnerability. This was an example of modeling the courage required to do the right thing. Furthermore, narrative pedagogy in healthcare is recognised as emotionally challenging for learners because stories can trigger emotional responses (Ironside, 2014). As the teacher and researcher, the first author had to be prepared to manage staff who were distressed by the content within the sessions and provide referral to support services.

The way stories empower learners can be further analysed through aspects of Engeström's (2001) theory of expansive learning, in order to learn through the collective creation of a solution (Bridges and Fuller, 2015). This theory recognises that learning occurs on the peripheries of practice, through reflection and reflective conversations with peers, which expand the understanding and grow the individual practitioner (Fuller et al., 2005). Moreover, expansive learning empowers learners because it values and builds on the experiential knowledge that is already known (Engeström, 2001). It can be seen as respectful to the types of experiential knowledge that can be difficult to quantify and measure in environments that favour quantifiable data (Engeström and Sannino, 2010).

## Conclusion

The narrative arising from the data suggests participants underwent a humanising experience that led them to feel empowered in their perioperative practice. This is supported by recent research into practice development methodology, which demonstrates an intrinsic link between person-centred practice and safety culture development (Manley et al., 2019). The empowerment influences practice by producing greater confidence to apply safety tools and to challenge unsafe practice. This can be described as a stepping sequence (Figure 3, above).

The data suggest that teaching human factors through narrative pedagogy evokes a person-centred approach to perioperative practice, which supports the development of a safety culture through empowering individual practitioners. The synthesis of narrative pedagogy and practice development to facilitate learning about patient safety created an opportunity for participants to learn about human factors using a person-centred approach.

This research contributes to increasing the value of workplace learning in the context of CPD and practice development by illuminating the ways in which learners connect with knowledge as relevant to their roles (Eraut, 2004). It also explores a novel application of narrative pedagogy to teach human factors and supports previous research suggesting that academically tested pedagogies can be incorporated into workplace learning strategies (Billett, 2016).

Further research could include a longitudinal study considering the participants' feedback alongside the reporting of safety incidents, to measure the impact of the learning session on reporting of iatrogenic harm. It could also be beneficial to study the longer-term potential for perioperative teams of human factors taught through narrative pedagogy, if delivered as part of a rolling teaching programme to support patient care.

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