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Research Brief

Anaesthetic Nurses' Perceptions of Learning During Interprofessional Simulation Education

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KEYWORDS

interprofessional;
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Abstract

Background: The purpose of the study was to explore anaesthetic nurses' perceptions of learning during interprofessional simulation education (IPSE). IPSE has a focus on the reduction of error in the operating room (OR) through improved team performance.

Method: This qualitative study used purposive sampling to collect data from anaesthetic nurses (n = 9) during individual and group interviews.

Results: Data analysis revealed three central themes; "learning and skill development," "interprofessional team communication," and "focusing on the team." IPSE provided safety in learning within a high performance team environment, improving participant confidence; however, participants experienced some frustration because of an imbalance in nurse and medical participant numbers. New learning was not fully transferred to clinical practice because of embedded routines and processes within the OR environment.

Conclusion: It is recommended that IPSE be provided to all OR health disciplines, and that the activity is conducted in a way that mirrors the normal balance of health disciplines within the OR environment.

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Background

The delivery of safe, quality health care is essential in protecting patients from harm (Australian Commission on Safety and Quality in Health Care, 2017); however, there remains a high incidence of adverse events across Australian health care systems with 4.1% to 6.7% of hospital admissions resulting in harm to patients (Australian Institute of Health and Welfare, 2016; Duckett, Cuddihy & Newnham, 2016). Owing to its technologically dense and complex environment, the operating room (OR) is the site of many

adverse events (Department of Health, 2014). It is known that poor team performance and miscommunication is a contributory factor in 61% of sentinel events worldwide (Weller, Cumin & Boyd, 2013). Interprofessional simulation education (IPSE) is a training modality used to improve teamwork through a focus on communication, role clarification, and resource utilisation (Costello et al., 2017; Kumar et al., 2017). Of the current research studies on the topic, many recommend further qualitative exploration (Mehta, Boynton, Boss, Morris, & Tatla, 2013; Paige et al., 2014; Weller et al., 2015). This Australian study used qualitative methodologies to explore anaesthetic nurses' perceptions of learning during IPSE.

Key Points

- Interprofessional simulation education (IPSE) builds awareness of effective teamwork behaviours.
- Positive and negative aspects of learning are experienced by nurses during IPSE.
- New learnings from IPSE are not fully transferred to the operating room environment because of embedded routines.

Sample

The study was conducted at a large multicampus hospital in metropolitan Melbourne, which offers regular IPSE to OR staff. Anaesthetic nurses are rostered to attend IPSE with staff across health care disciplines. Each session comprises a maximum of 12 candidates including two to four anaesthetic nurses. Simulation scenarios involve perioperative patient crisis situations such as postpartum haemorrhage and airway obstruction. The participants attend a full simulation experience involving preliminary brief, high-fidelity simulation and debrief. Purposive sampling was used with all anaesthetic nurses who had undertaken at least one IPSE between March and November 2016. Nine anaesthetic nurses participated in the study.

Method

The study follows a qualitative design, and data were collected using semi-structured, face-to-face and group interviews after a prepared interview guide. Using a descriptive phenomenological approach, researchers engaged reflectively with data while emphasising individual or universal features of the phenomenon (Giorgi, 2008; Matua & Van Der Wal, 2015). This process generated a rich description of the “lived experience” of study participants. The study was granted ethics approval from the Low Risk Ethics Panel at the research site and audiotaped data were transcribed by the principal researcher using the seven-step Colaizzi (1978) method. Anaesthetic nurses' perceptions of learning within the interprofessional team were analysed and reported.

Results

Using Colaizzi's (1978) method for data analysis, significant statements were extracted and assigned a formulated meaning. Formulated meanings were then grouped into three central themes, namely, “learning and skill development,” “interprofessional team communication,” and “transfer of new learnings to practice.”

Learning and Skill Development

Within the theme “learning and skill development,” participants described their satisfaction with the safe learning environment but also their difficulty with feeling exposed and vulnerable during IPSE. Participants gained important knowledge and skills in managing crisis events within a safe learning environment as described in the following excerpts.

“[IPSE is] good because you think ‘ah yeah I can do this’. I can learn from this and I can do this the next time if something happens, I’ll remember that [it] will be part of my ingrained muscle memory.” (N7)

“I was like ‘well, it does not matter if I [muck it] up too badly. It doesn’t matter what role I take on, it’s a safe zone! You feel safer definitely.” (N6)

While IPSE was described as a positive learning experience, participants reported that performance in an unfamiliar environment within which they may face criticism made them feel vulnerable.

“[In the OR] I know where things are and I know where I can get stuff hurriedly in an emergency but [simulation] is different, it’s set up like a theatre but it’s still different.” (N6)

“[I was concerned] about going back to work and having people judge my ability or inability in an emergency situation due to my lack of experience or inability to cope.” (N3)

Adding to participants' vulnerability was the imbalance in the number of anaesthetic nurses and medical staff (two and eight, respectively). Participants reported this as unrepresentative of the workplace wherein many nurses respond to crisis situations alongside few medical staff. During IPSE, nursing tasks were performed by medical staff, as noted in the following; this caused annoyance to participants and restricted their usual critical thinking behaviours.

“There are many [doctors] in the simulation ... so you’re trying to figure out what you can do for the doctors to help them with the patient. [In the normal

workplace] when you're more one to one, you think critically as a nurse." (N4)

"The registrars take over some of your role, they can be quite a nuisance in that sense, they can do stuff you want to do, and they do it wrong ... in your view" (N3)

Overall, although a number of barriers occurred during learning, participants perceived IPSE to enhance their clinical knowledge and skill alongside their ability to recognise and respond to perioperative crisis situations.

Interprofessional Team Communication

Within the theme "interprofessional team communication," participants reported communication strengths and communication frustrations. Participants described a stronger understanding of the importance of effective team communication and team behaviours in responding to crisis situations. One participant described the IPSE team as a "dream team."

"I found that a lot of doctors were very respectful, from the very beginning [of the IPSE] to my surprise actually. In reality, sometimes that doesn't happen. It [the IPSE team] seemed like a 'dream team'." (N4)

In the IPSE preliminary brief, all participants were instructed to speak up and contribute to decision making, an instruction taken up by most participants. Participants realise the need for verbal input and the importance of each team member.

"If you felt nothing was being done, or nothing was being done in a timely manner [you were expected] to speak up. It didn't really matter who you were." (N5)

"You realise 'no, you're just all part of a team' and 'everyone's the same' and 'no one's more important than any other person', everyone's got their role and everyone's role is important." (N7)

Frustration in communication was also reported by participants. Some reported their low self-confidence during IPSE. The first participant notes exclusion from the team, whereas the second notes how a failure to engage with the team or "standing back" meant that they were overlooked.

"When the doctors ... are all together, they forget that you're even there ... in the conversations they were directing them at each other." (N2)

"We're basically standing back saying 'okay, let them do it'." (N3)

Participants reported their delight in the performance of a well-functioning team; however, frustration resulted from their failure to speak up and exclusion from decision making.

Transfer of New Learning to Practice

Many study participants reported that their new learnings were transferred to practice (the OR) after IPSE. Participants note a higher self-confidence and ability to speak up.

"I think I'm not as afraid to speak up, to even a consultant, and discuss my concerns or even question [decisions]." (N2)

"I think for me it [IPSE] was good too because sometimes I think oh, I'm asking all these questions, they [anaesthetic team] must be annoyed with me. It was good to know ... that [questioning] was actually a good thing and I should probably do it more." (N7)

However, many participants reported that team performance behaviours were not readily transferred to the OR. Participants reported the negative impact of the established OR medical hierarchy on participants' efforts to speak up in team discussion. Participants perceived that some medical staff saw no value in input from the multidisciplinary team.

"I think about the fact that I have been nursing for 20 years and in theatre for 20 years, some of these doctors hadn't even started medical school then ... and sometimes they won't look at my feedback or opinion as valuable." (N2)

Participants' efforts to change established team cultures in their workplace were also stymied by the daily routines and procedural processes of a busy OR. The participant notes the demands of getting to the "next patient," a practice that prevents any discussion of team performance throughout an operation list.

"It's not the hugest focus unfortunately. It was definitely more of a focus in [IPSE] ... talk about it, then go back and re-evaluate ... what you did and didn't do ... and think about it. Whereas [in the OR] it's 'next patient!'" (N8)

Overall, participants reported many difficulties in the normal clinical environment that prevented the full transfer of new learnings from IPSE. The interprofessional OR team proved reluctant to change behaviour and engage fully in team communication. The overwhelming time and process pressure in the OR continued to hold sway over all other considerations.

Discussion

Anaesthetic nurses perceived IPSE to be a positive learning experience in terms of knowledge and skill development and understanding of teamwork. This finding supports other studies in which simulation education was found to be a positive experience that allowed practical skill development in a safe environment and growth of confidence and

competence (Bashaw, 2016; Berndt et al., 2015; McCaughey & Traynor, 2010; Raurell-Torreda et al., 2015).

Participants however also experienced a sense of disconnection from normal practice because of an imbalance in participant numbers. Participants described role frustration as medical staff assumed nursing responsibilities. Due to their higher number in IPSE, medical personnel were seen to adopt exclusionary behaviour often talking among themselves. This phenomenon was observed in a study by Alexanian, Kit, Rak and Reeves (2015) who describe intensive care unit medical personnel functioning as a team within themselves to the exclusion of others resulting in medical domination of patient care discussion and reinforcement of a medical hierarchy. Hierarchical structures within OR environments are known to perpetuate separation of professional identities and prohibit successful teamwork (Weldon, Korkiakangas, Bezemer, & Kneebone, 2013).

Despite the negative impact of the small nurse presence, participants reported IPSE to be a learning environment that nurtured teamwork and encouraged them to collaborate and speak up in patient care deliberations. This collaboration involved the sharing of responsibility and accountability for the “patient’s” well-being. This finding supports recent studies in which nurses were found to value opportunities for interaction with the interprofessional team (Kumar et al., 2017; Okuyama, Wagner, & Bijnen, 2014). These interactions helped to promote the recognition of, and mutual respect for, the “different but equal” contribution of each health discipline (Kumar et al., 2017; Okuyama et al., 2014).

A key finding of this study is that participants’ new learning from the IPSE was not always transferable to practice in the OR. Certainly, participants’ higher skill in responding to crisis events were transferred to the OR, but the inclusive team behaviours in IPSE were not sustained in the normal OR environment. Participants described the continuation of “business as usual,” during which team performance gave way to embedded routines and procedural processes of the OR. This is a new finding as there is no published research on the transfer of learning to OR practice after IPSE. This study found that although IPSE provides a platform for learning effective team behaviours, transfer to practice is not assured. This study recognises that there are significant limitations to the study such as the small sample and narrow scope and acknowledges there may be other impacts and influencing factors not explored in this study. At all stages of the research, concrete efforts were taken to ensure the trustworthiness of the research.

Conclusion

The study revealed three central themes of IPSE. Participants described both positive and negative aspects of

learning and skill development, communication within the team, and transfer of new learning to practice. IPSE was described as positively promoting effective team behaviours and improving anaesthetic nurses’ confidence to use these behaviours. However, new understandings and ways of behaving were not fully transferred to practice because of embedded routines and procedural processes within the OR environment. Recommendations from the study include more frequent IPSE situated within a real clinical environment and with representation from OR health disciplines.

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