Abstract

Background: Nurses are increasingly at risk of experiencing physical or verbal violence during their career. This study aimed at exploring the responses of pre-registration nursing students to a patient aggression in a simulated patient care scenario and at facilitating the development of de-escalation management skills.

Methods: Using a role-play methodology, 28 pre-registration nursing students took part in a simulated aggressive patient scenario. Data were drawn from recorded participant debriefing sessions immediately following simulation immersion.

Results: Students reported a high level of stress and a variety of emotive responses. They identified new insights into strategies that could be used to defuse volatile situations in their future practice and highlighted that the use of a standardised patient enhanced the authenticity of the experience.

Conclusions: Facing verbal aggression is confronting for nursing students. Practicing and reflecting on de-escalation management strategies, in an authentic simulated safe environment, provided students with an opportunity to gain new insights into their role as a nurse while developing effective strategies to draw on in clinical practice.

Key Points

- Simulation provides opportunities for students to practice managing de-escalation/build de-escalation strategies
- Peer empathy can be enhanced through role-play simulation
- Authenticity is enhanced by replacing manikins with actors as simulated patients

Key words: simulation, stress, pre-registration nursing, de-escalation, role-play

Background

Increasing incidents of violence against nurses in the workplace are of global concern (Mitchell et al., 2020). Although exposure to violence is more prevalent in some clinical areas, all nurses are at risk of experiencing some form of violence, either physical (25%) or verbal (between 75-90%), and this can result in physical and psychological trauma (Pich & Roche 2020; Hopkins et al., 2018;). First exposure to violence in the workplace for nurses often occurs during pre-registration clinical practicum (Hopkins et al., 2014). When attempting to diffuse or de-escalate volatile situations, nurses are exposed to potentially dangerous situations. Despite this, few opportunities are provided for pre-registration nurses to develop the skills required to manage the experience or related stress (Mitchell et al., 2020; Crombie et al., 2017). It is therefore important that pre-registration nurses are provided with opportunities to learn de-escalation management strategies and to recognise and manage their own responses during stressful experiences.

LeBlanc et al. (2012) stated that 'stress results from an individual's perception of the demands and resources present in a particular situation' (p. 369). The emphasis is on the individual's perception; therefore, any given situation may prove highly stressful for one person, and less so for another. The 'fight and flight' instinct is one of the ways our bodies manage stress (McGregor et al., 2017). However, there is a point at which the physiological and emotional responses to stress move from advantageously stimulating to negatively impacting performance (McGregor et al. 2017).

Registered nurses working in health care environments are regularly exposed to high stress levels (Hegney et al. 2015). A plethora of experiences can trigger stress for pre-registration student nurses both during clinical practicum and university teaching and learning activities. Clinical practicum brings anticipation of exposure to highly stressful situations, including caring for a deteriorating patient, coping with death and dying, fear of making a mistake, and managing aggressive patients/relatives (Allen, 2018; Hopkins et al., 2018). Simulation is a commonly used teaching and learning strategy for pre-registration nurses that can purposely expose them to controlled stress evoking situations to facilitate recognition of personal triggers and responses. It is also acknowledged that simply participating in simulation

experiences in the university setting can be a source of stress for pre-registration student nurses (Nielson and Harder, 2013). However, qualitative review of student emotional reponses and management strategies has been lacking in the literature.

This paper describes qualitative findings from pre-registration student nurses following exposure to a simulation scenario designed to representing an authentic clinical situation within a community setting. We describe students' emotional response reflections, and perceived management strategies that would be useful if confronted with similar scenarios in the future.

Materials and Methods

Study Aim

To explore pre-registration student nurses' responses to patient aggression in a simulated patient care scenario and to facilitate the development of de-escalation management skills.

Design

This study is part of a broader collaboration developing structured approaches to develop resilience within nursing students.. The scenario focused on a mature-aged male patient, who had been recently discharged from a hospital requiring community nursing care in his home. The patient was verbally aggressive towards the nurses and his wife, creating a complex and stressful situation requiring de-escalation. The simulation used the role-play methodology and was developed and implemented using International Nursing Association for Clinical Simulation and Learning (INACSL) Standards for Best Practice Simulation (INACSL, 2017). We decided to use a 'human' simulated patient (SP) to enhance authenticity and facilitate rapid and deep engagement in the scenario (Nestel and Bearman, 2015; Nikendei et al., 2019). The SP was provided with a scenario brief describing the learning objectives, the patient's social and medical history, escalation triggers, and de-escalation cues. The SP provided an authentic patient voice, utilising his experience as a mental health nurse and trainer in managing and teaching de-escalation to healthcare professionals. The study was approved by the University Human Research Ethics Committee (HREC 18-2424).

The learning objectives included:

- Identify signs of escalating behaviours
- Develop an understanding of de-escalation strategies
- Enhance communication and collaboration between nurses

Setting and Participants

The simulation took place in a clinical simulation laboratory in a large Australian metropolitan university. A convenience sampling method was used to recruit 28 pre-registration nursing students (male 7, female 21) enrolled in the 'Community Health' subject in the final year of a three-year program. The students in the class ranged from high school matriculation to mature aged students.

The students were provided with a Student Simulation Guide that included a brief precis of the simulation, described the significance of the scenario, and outlined the learning objectives and pre-reading. On the day of the simulation, participants were oriented to the space and randomly allocated to either active performer or active observer roles for the immersive component of the simulation. The active performers comprised two nurses (one acting as a student and one acting as a registered nurse) and one partner of the patient. Props were provided to encourage engagement. Each of the two groups had the opportunity to participate in the simulation twice. In each simulation iteration, roles were reallocated so that active performers became active observers, and vice versa. As there were more students than active performer roles, some students were active observers twice. Debriefing happened immediately after each immersion in the role-play using a framework developed by the Sydney Clinical Skills and Simulation Centre (2016).

Data collection and analysis

Qualitative data were collected from audio recordings of debriefing sessions (up to thirty minutes in duration and transcribed verbatim), following Braun and Clarke's (2006) six-step process. Preliminary codes were initially assigned by two of the authors, and emerging patterns and themes were identified. The research team reviewed initial themes to reach a consensus.

Results

Overwhelmingly students described the simulation scenario raising multiple emotions and felt high levels of stress during immersion. They articulated how they felt the de-escalation strategies they had learnt might shape their future practice. Three key themes and related subthemes emerged from the data and are outlined below.

Key Theme 1: Sources of stress

Although simulation itself can be stressful for students, this simulation experience was specifically designed to evoke stress.

Sub theme: Authenticity enhancing intensity

The SP was perceived as highly authentic by students whose simulation curriculum more commonly involved manikins or peer role-play. Students reported that during peer role-play, their fellow students were often more sympathetic in their reactions and consequently came across as less authentic:

> *"When you do the simulation… where the students act… it doesn't feel as realistic because they're trying to consider your position"*

The authenticity of the simulation was reported to have been enhanced by what students saw as the SP's unpredictable responses:

> *"It was a lot more intense… you're not quite sure how he's going to react…* [his] *quick changes in mood and having to think really fast… when we had* [other] *SIM patients we know just go back to this step-by-step procedure, but when you do say something to Scott* [Actor] *he reacts completely unexpectedly. You have no idea what he's going to say".*

Despite students describing the simulation as "*intense*" and "*stressful*", they reported valuing the experience due to the level of authenticity and ease in immersion:

> *"When he was shouting and then being aggressive, that was stressful., but I found it to be quite engaging compared to the normal labs where it might be like, all right guys, we're doing wounds".*

Sub theme: Experiencing the theory practice gap

Although students were aware of the simulation content, when faced with the reality rather than the theory of an aggressive patient, students found themselves struggling to apply de-escalation skills learnt previously :

> *"Everything that you learnt in class just went out the window".*

For most students, the simulation represented the first time they had been the target of intentional disrespect. When facing belittling comments and the use of profanity, some were at a loss for how to react.

> *"I don't know how to respond when someone asks you to 'get out' or saying some rude thing... I don't know how to deal with this".*

As a testament to the authenticity of the simulation and SP's skills, during each debrief the students discussed the experience as if it happened in the real world. The students recognised that a community setting resulted in a perceived shift in power from what they had come to expect in a hospital environment.

> *"You have no kind of control of the situation. Like on the ward you know where you are and how things run. But here you have two people, you're in a stranger's house and - you know, fear kind of kicks in".*

Key theme 2: Emotional responses to stress

The inherent stress built into the simulation scenario raised mixed emotions for students.

Sub theme: Feeling disempowered, confronted, vulnerable, helpless and hopeless

The simulation was described by the majority of students, irrespective of role, as "*quite scary", "confronting",* and *"frightening"*.

Students had limited experience to draw upon and at times did not know what to do, which left them feeling disempowered.

> *"You didn't even get any chance to talk.. just introduce yourself and there - it was just like shut up... [I was] feeling hopeless and helpless… as a student nurse you felt really helpless because it was really out of your control".*

When discussing why it had been difficult to put skills into practice, students stated that it was having been put "*under pressure*" and expressed frustration when "*He didn't want to listen*".

There were different stressors for students in different roles. Students in the nurse and observer roles expressed distress regarding the treatment of the wife by the patient.

> *"I was not sure what to do in that situation* [verbal abuse of wife] … *trying to stay professional in that situation and how to handle yourself - just where to stand, how to act, what to do - because they're clearly not talking to you and they're agitated... I wasn't sure what to do there at all"*

Sub theme: Empathy for each other

Some students demonstrated empathy for each other by attempting to deflect or intervene when a classmate was experiencing verbal aggression. As one student who had been in the Student Registered Nurse (SRN) role explained:

> *"I just wanted to help my nurse. Because I don't want other people shouting at just one person… I want to help my nurse. Just to stop him swearing".*

One of the observers also reported noticing team members in the active performer roles using deflection to support teammates who were under pressure:

> *"When the student nurse was speaking up and the patient got really aggressive, she [RN] took it upon herself to shift the tension over to her[self]. That calmed him down a bit. Because there was like a bit of tension arising between the student nurse and the patient".*

However, not all students were confident to intervene when the patient was directing his ire at another student:

> *"It's like how to maintain yourself when you're not directly in the line of fire... you can't really step in".*

Key theme 3: Reflection and practice change

Students reflected on what had occurred, why the patient had reacted the way he did and how they could use what they had learnt to shape their future practice.

Sub theme: New and unexpected insights into the nursing role

The simulation provided a unique opportunity for students to come to terms with some of the darker elements of nursing practice.

> *"I haven't imagined myself being in that situation where the patient is like going off on me".*

Students also reported having their eyes opened to previously uncharted territory.

> *"We never have been to this stressful situation before, so it was like, oh, I wonder what's going to happen now".*

Being in or witnessing what could have escalated into a dangerous situation, provided students with first-hand experience of possible risks to their own safety in the clinical environment and the importance of positioning themselves with easy access to an exit.

> *"Safety…they sat there [pointing]. The exit's there [pointing]. They should stand here [pointing]. What if he starts beating them up?"*

Sub theme: Developing an increased appreciation for communication skills

Retrospectively, the students recognised things they and others had said or done, that further inflamed the already dissatisfied patient. They now had more insight into the type of language that was and wasn't appropriate when trying to defuse a situation.

> *"Can't say sit down and calm down… It's quite dismissive and condescending. It's not making any effort to understand why they're upset. You're just telling them that you don't want to deal with their behaviour or their attitude".*

Other students reflected on how the concept of 'calming down' was significant to their own internal monologue and emotional responses while maintaining the patient at the centre of their care.

> *"[in] the moment I thought, he's the patient. He's the first priority… so I should calm down in myself, and then to talk".*

They discussed listening and asking probing questions as important strategies to find the source of the patient's anger.

"[could try saying] *I'm sorry that you're upset. Could you perhaps explain to me what's going on that's led you to this point? Because I'd like to help you".*

Students continued to reflect on how they might better have handled a verbally aggressive patient. With hindsight, they were more aware of his body language and his perspective.

"They didn't say, would you like to have a seat? Would you feel more comfortable if we were seated? They said, have a seat. They gave him an order …I don't know if they saw what I could see as an observer - I was observing the patient - but from the second we walked in, he had the shits already…He had his feet up. He was cranky. He was already unhappy, and he didn't want to be told what to do in his own home. Which is reasonable".

Understanding and responding to the power dynamic between the nurse and the patient was acknowledged by the majority of students as important in managing escalating situations.

"It seemed like them sitting down and him standing up, sort of - there's that power balance".

Although none of the student teams was able to completely defuse the situation, one group was more successful. Seeing their peers use different communication techniques was useful for other students.

"They tried to listen to the person, even though it was probably very frustrating that they [patient] *weren't listening to the nurse. But the nurse was listening to what the patient was feeling like. They listened. Wanted to know more about why he didn't want to take an injection… once they started listening, he started calming a bit more. You know, he did calm down then for the scenario".*

Several students also realised that they entered the simulation too focused on providing the required care and technical skills to the detriment of their communication skills.

"We just brought up the topic of giving the subcut that he obviously didn't want. That's what we were so focused on, and we didn't really try to build the relationship".

Rather than being despondent, students understood that they still had time to work on their de-escalation and communication skills and that their expertise would develop with time and exposure.

"It should get easier because you might find techniques that might have worked in some person, and you can use those techniques to use it. It's just building up those experiences with different people".

Discussion

This paper reports on qualitative findings from a research study exploring pre-registration student nurses' responses when exposed to a stressful de-escalation simulation scenario. Following simulation immersion, students identified a gap between what they had learnt about de-escalation and effectively applying it. They also described how the authenticity of the scenario had enhanced the intensity yet had provided an opportunity to build de-escalation strategies for use in practice. These findings are supported by a study (Beattie et al. 2018) on healthcare workers' responses to workplace violence which concluded that they should be taught to understand and manage their response to threatening and stressful environments to enhance practice and personal wellbeing.

The students in our study self-reported that being exposed to a verbally aggressive patient had placed them in a position where "*everything goes out the window",* putting the provision of safe care into question. Freezing or going blank when confronted by aggressive patients has also been reported elsewhere (Beattie, et al., 2018). Simulation experiences like this, can provide an opportunity for pre-registration nurses to understand how they react in threatening and stressful situations and develop strategies to avoid the 'frozen' moments that impact personal and patient safety.

Authenticity in simulation is essential to facilitate buy-in and participant immersion (INACSL, 2016). Students in our study identified the impact of the authenticity of the simulation on the level of stress that they experienced. They described how the inherent stress built into the simulation scenario raised multiple emotions for them, and they reflected on what and why the patient reacted in the way he did and how they could learn from the experience to shape their future practice. The level of authenticity was elicited by using an experienced SP rather than a peer or manikin in the role of the patient (Nikendei et al., 2019).

The creation of a scenario employing a mature aged male SP matched with a student in the wife's role added complexities related to intimate partner violence and a perceived power imbalance increasing the stress response by the students. Nurses are often called to advocate on behalf of those experiencing domestic violence (Tarzia et al., 2020), however, receive limited if any training during their pre-registration degree in preparation (Conner et al., 2013).

The power dynamics between the SP and care providers resulting from being a 'visitor' in the patient's home environment combined with explicit aggression was overwhelming for most participants. As a result, they had difficulty managing the aggression towards the wife and their peers, often choosing to retreat. While pre-registration nurses report facing both verbal and physical aggression when on clinical practicum (Hopkins et al., 2018), there is a paucity of research reporting on how they manage aggressive behaviours during community based clinical practicum. One such study (Foster & McGloughen, 2019) on pre-registration nursing and pharmacy student's management strategies when faced with challenging interactions with patients and their families in an unspecified range of clinical practicum environments found that as in our study, some students chose to withdraw, albeit temporarily, from the situation.

Empathy is a core concept that has been identified to assist students in effective communication and patient care satisfaction (Stephany, 2014). Though the current study reported was not designed to directly look at the development of student's empathy, following the simulation students expressed that they felt empathy for their peers and the experience of those playing active performer roles in the simulation. Beattie et al. (2018) also noted the importance of peer support when managing the personal impacts of workplace violence. Interestingly, none expressed empathy for the patient. Perhaps this was a response to students' not 'liking' the patient's behaviours and unconsciously transferring that into not feeling empathy for him. Bucchioni et al. (2015) described how empathy is increased for those who are liked over those who are not. Research has shown that healthcare professionals as with the population at large are not immune to implicit/unconscious bias related to characteristics such as gender, age, disability, and race, which can negatively impact care provision (FitzGerald and Hurst, 2017). Feelings of anger and frustration towards the perpetrator following exposure to similar scenarios have been reported elsewhere (Beattie et al., 2018). Learning to manage these feelings and biases towards the aggressive patient requires further development within the scenario and is an opportunity for future simulation research.

It is suggested that educational strategies such as the simulation in this paper are embedded in curricula to facilitate practical opportunities for students to develop de-escalation skills.

The principles of creating structured learning outcome-based training for de-escalation strategies have broader applicability for creating structured learning outcome-driven approaches for other forms of stress in nursing.

Limitations

Results of this study should be viewed considering that stress levels may have been increased not only by the scenario itself but also as a result of being observed. The impact of observation stress could be reduced in future iterations by removing the observers from the room to watch remotely. In addition, the tutors conducted the debriefing interviews which may have influenced student responses. As the tutor allocated participant roles, the results may be different if students had self-selected their roles. However, if so, more timid or less confident students may avoid active participant roles impacting learning opportunities.

Conclusion

Pre-registration nurses are likely to face physical and verbal aggression during their careers, however there are limited opportunities for them to practice the skills required to defuse workplace incidents. Practising de-escalation management strategies in an authentic simulated safe environment and reflecting on additional management strategies during debriefing, provides students with an opportunity to gain new insights into their role as a nurse and develop their own effective strategies to draw on when faced with similar situations in clinical practice.

Acknowledgements

The authors would like to thank the students who generously offered their time to be involved in this study. We would also like to thank Scott Lowe for his time and his portrayal of the patient in this scenario. In addition, we would like to thank Ahmed Al-Ani for his input during the initial phases of this project.

Reference list

Allen, M. (2018). Examining Nursing Students' Stress in an End-of-Life Care Simulation. *Clinical Simulation in Nursing*, *14*, 21–28. https://doi.org/10.1016/j.ecns.2017.10.006

Beattie, J., Innes, K., Griffiths, D. & Morphet J. (2018). Healthcare providers; neurobiological response to workplace violence perpetrated by consumers: Informing directions for staff well-being. *Applied Nursing Research*, *43*, 42-48.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.

Bucchioni, G., Lelard, T., Ahmaidi, S., Godefroy, O., Krystkowiak, P. & Mouras, H. (2015). Do we feel the same empathy for loved and hated peers? *PloS one*, *10* (5), e0125871.

Connor, P. D., Nouer, S. S., Speck, P. M., Mackey, S. N. & Tipton, N. G. (2013). Nursing students and intimate partner violence education: Improving and integrating knowledge into health care curricula. *Journal of Professional Nursing, 29*(4), 233-239.

Crombie, N., Hooker, L. & Reisenhofer, S. (2017). Nurse and midwifery education and intimate partner violence: A scoping review. *Journal of Clinical Nursing, 26*(15-16), 2100-2125.

FitzGerald, C. & Hurst, S. (2017). Implicit bias in healthcare professionals: A systematic review. *BMC Medical Ethics*, *18*(1), 19.

Foster, K. N. & McCloughen, A. J. (2020). Emotionally intelligent strategies students use to manage challenging interactions with patients and families: A qualitative inquiry. *Nurse Education in Practice*, 102743.

Gates, D. M., Gillespie, G.L. & Succop, P. (2011). Violence against nurses and its impact on stress and productivity. *Nurs Econ*, *29*(2), 59-66.

Hegney, D. G., Rees, C. S., Eley, R., Osseiran-Moisson, R., & Francis, K. (2015). The contribution of individual psychological resilience in determining the professional quality of life of Australian nurses. *Frontiers in Psychology*, *6*, 1613. https://doi.org/10.3389/fpsyg.2015.01613

Hinchberger, P. (2009). Violence against female student nurses in the workplace. *Nursing Forum*, *44*(1), 37–46. https://doi.org/10.1111/j.1744-6198.2009.00125.x

Hopkins, M, Fetherston, C.M. & Morrison, P. (2014). Prevalence and characteristics of aggression and violence experienced by Western Australian nursing students during clinical practice. *Contemporary Nurse*, 5026-5046.

Hopkins, M., Fetherston, C.M. & Morrison, P. (2018). Aggression and violence in healthcare and its impact on nursing students: A narrative review of the literature. *Nurse Education Today*, *62*, 158-163. doi:10.1016/j.nedt.2017.12.01

The International Nursing Association for Clinical Simulation and Learning (INACSL) Standards Committee. (2016). INACSL standards of best practice: simulationSM Simulation Design. *Clinical Simulation in Nursing*, *12*, S5-S12.

LeBlanc, V., Regehr, C., Tavares, W., Scott, A., MacDonald, R. & King, K. (2012). The Impact of stress on paramedic performance during simulated critical events. *Prehospital and Disaster Medicine*, *27*(4), 369-374. https://doi.org/10.1017/S1049023X12001021

McGregor, C., Bonnis, B. Stanfield, B. & Stanfield, M. (2017). Integrating big data analytics, virtual reality, and ARAIG to support resilience assessment and development in tactical training. I*EEE 5th International Conference on Serious Games and Applications for Health (SeGAH)*, Perth, WA, 1-7. doi: 10.1109/SeGAH.2017.7939256.

Mitchell, M., Newall, F., Sokol, J., Heywood, M. & Williams, K. (2020). Simulation-based education to promote confidence in managing clinical aggression at a paediatric hospital. *Advances in Simulation*, *5* (1), 21. https://doi.org/10.1186/s41077-020-00139-9

Nielsen, B. & Harder, N.(2013). Causes of student anxiety during simulation: What the literature says. *Clinical Simulation in Nursing*, *9*(11), e507-e512.

Nestel, D. & Bearman, M. (2015). *Simulated patient methodology: Theory, Evidence and Practice*. Chichester, West Sussex: John Wiley & Sons Inc.

Nikendei, C., Huber, J., Ehrenthal, J., Herzog, W., Schauenburg, H., Schultz, J. & Dinger, U. (2019). Intervention training using peer role-play and standardised patients in psychodynamic psychotherapy trainees. *Counselling and Psychotherapy Research*, *19*(4), 508–522. https://doi.org/10.1002/capr.12232

Pich, J., & Roche, M. (2020). Violence on the job: The experiences of nurses and midwives with violence from patients and their friends and relatives. In Healthcare. *Multidisciplinary Digital Publishing Institute*. *8*(4), 522-534.

Stephany K. (2014). *Cultivating Empathy: Inspiring Health Professionals to Communicate More Effectively*. Sharjah: Bentham Science Publishers

Sydney Clinical Skills and Simulation Centre. (2016). *Open, reflect, close: debriefing script*, Sydney Clinical Skills and Simulation Centre, Sydney.

Tarzia, L., Bohren, M. A., Cameron, J., Garcia-Moreno, C., O'Doherty, L., Fiolet, R., ... & Hegarty, K. (2020). Women's experiences and expectations after disclosure of intimate partner abuse to a healthcare provider: A qualitative meta-synthesis. *BMJ open*, *10*(11), e041339.

444 Tyler, P., Cushway, D., 1992. Stress, coping and mental well-being in hospital nurses. *Stress*
445 *medicine 8*(2), 1-98.
446
447