ORIGINAL RESEARCH

Learning on the periphery: A pilot study of an undergraduate nursing student communities of practice model

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ABSTRACT

Objective: Nursing shortages have led to an increased student nurse education and a greater need for work integrated learning among limited health services. A Communities of Practice student placement model was developed to address this deficit, while facilitating greater peer-to-peer learning, and incidental, yet essential, support and learning between junior and senior students. An exploratory study was undertaken to examine the experiences of key stakeholders, students and clinical staff regarding the Communities of Practice model.

Methods: After implementation interviews were conducted with six (n = 6) students and three (n = 3) nursing staff, two (n = 2) nurse managers, and one (n = 1) clinical educator. Interviews examined the benefits and challenges of the new model, while further guiding its refinement. Interview data were analysed thematically.

Results: The Communities of Practice student placement model, although met with initial hesitancy, was indicated to be a positive learning experience for all participants. Specifically, five key themes emerged, including increased support for junior students, extended learning among senior students, unexpected discoveries for staff and students, workload decision-making and implications for staff, followed by the need for adaptability and further insights to modify the model.

Conclusions: The study demonstrated the capacity to increase student placement numbers, while effectively increasing the level of support, mentorship, and learning among students, and assisting nurses in their roles. Overall, the model has also been suggested to offer the near-peer support desperately needed for junior students, while at the same time, offering more senior students the foundation upon which to develop their leadership skills.

Key Words: Nurses, Students, Learning, Education, Organization and administration, Communities of practice

1. INTRODUCTION

Australia, like many developed nations, is encountering health workforce challenges, particularly among the nursing profession, a national deficit of 85,000 nurses is estimated to occur in 2025 increasing to 123,000 by 2030.[1] In addition, workforce shortages are further exacerbated by the increased demands placed on healthcare services through an ageing population of consumers, many with complex comorbidities.[2] These factors, along with high attrition within the nursing profession, necessitates the urgent implementation of strategies targeted to recruit, support, and transition new nurses into clinical practice, while improving retention of the

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nursing workforce.[3]

To address the growing demand, government policies have been implemented, with a focus on increased training of nurses. Additionally, recent boosts in Federal Government funding with student university fee contribution changes legislated in 2020, have supported a growth in of Bachelor of Nursing enrolments.[4,5] With this investment of undergraduate student nurses, attention is heavily focused on retaining these students and successfully transitioning them into the workforce, which necessitates a re-evaluation of clinical nurse teaching roles to achieve this endeavour.

The Nursing and Midwifery Board of Australia (NMBA), Standards of Practice for Registered Nurses decrees that the Registered Nurse "actively foster a culture of safety and learning that includes engaging with health professionals"; and "uses a lifelong learning approach for continuing professional development of self and others".[6] Therefore, all nurses remain responsible for the professional and clinical development of students. As such, the increase in student nurses undertaking work integrated learning, has effectively amplified the workload among clinicians who are now required to precept and mentor students on most shifts, when previously their primary focus has been to deliver quality patient care.[7] Prior studies have highlighted an increase in fatigue and the risk of burnout amongst those nurses who are providing clinical supervision for larger numbers of students, with a subsequent negative impact upon student learning.[7,8]

The traditional model of clinical supervision is based on having a clinical nurse educator funded to facilitate the instruction of a group nursing students, all from the same year level and working within the same scope of practice, each of whom are partnered, precepted, or were 'buddied' with a different nurse each shift in a particular clinical area.[9–13] A Communities of Practice clinical placement model was developed to challenge this tradition by mixing students of different year levels into the same placement group.[14] Specifically, first year and third year students, where the more senior student nurses participate in the provision of support among junior students. The model has a strong leadership focus that supports third year student development, with the addition of a mentoring model which seeks to provide support to the first-year students undertaking their first clinical experience.[14] The purpose of the endeavour was to create an innovative approach to clinical placement for undergraduate student nurses that addresses the increased demand of placements, while enhancing student engagement, and quality learning opportunities.

1.1 The model being tested

Due to the documented challenges in healthcare such as nursing burnout, workforce shortages and deficits in undergraduate student nurse placements,[12,15,16] a clinical placement strategy was developed. A Delphi study was undertaken to develop a new placement model to address a number of these challenges.[14] Although there was initial reluctance concerning the development of a new placement model, the concept of peer-to-peer learning, where incidental, albeit essential, learning and support occurs between junior and senior students was embraced.[17]

It is this approach which encompasses the learning opportunities among junior and senior nursing students, who are located at the periphery of a Communities of Practice, which further assists students as they acquire beliefs, behaviours, culture, and practices of nurses within the clinical setting.[8] The placement model is contingent upon each student's awareness of, and working within their current scope of practice, while senior students commit to seeking guidance from supervising nurses when appropriate. Within this context, the development of the placement model occurred as described by Terry et al.,[14] (see Figure 1).

Overall, the development of the Communities of Practice placement model, seeks to challenge the status quo concerning clinical placements among nursing students.[14] As such, the model provides potential opportunities for greater learning and leadership development among students, alleviate student placement demands, while also creating value for nursing supervisors and health services.[14] Theoretically, the approach offers a contemporary student placement model that seeks to best respond to the needs of students, education providers, and health services. Nevertheless, the testing of the model and if further augmentation is required needed to be undertaken to validate it efficacy.

1.2 Aim of the study

The aim of this study was to examine the experiences and perspectives of key stakeholders, including students and clinical staff, of the Communities of Practice student placement model. Within this context, the objective of the larger project is to investigate, refine, and test (i.e., use and adopt into practice) a student placement model that best addresses current placement challenges, while impacting student learning and supervisor teaching. For the purposed of this element of the larger study, the focus here is to implement, evaluate, and refine the new student placement model, while understanding and informing future planning to increase clinical placement availability.

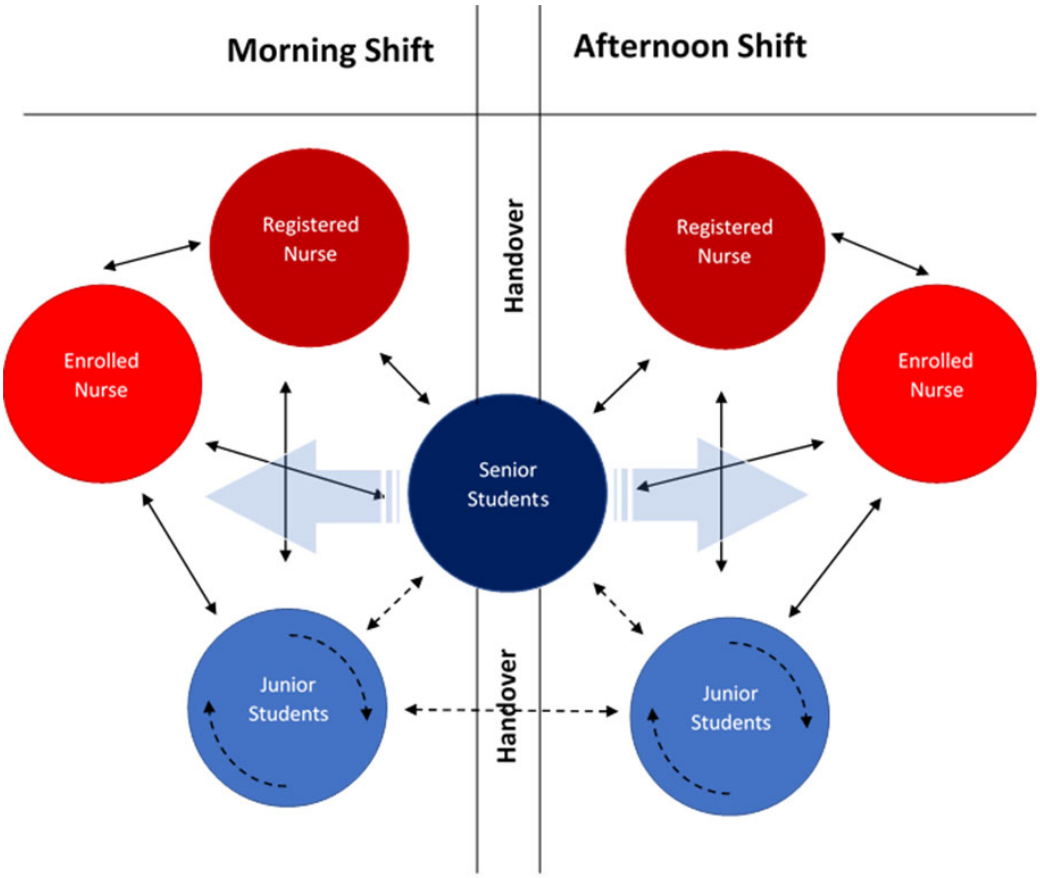

Figure 1. Communities of practice placement model
Broken arrows denote peer learning and support. Solid arrows denote professional learning and support

2. METHOD

The exploratory study sought to evaluate the new student placement model and its impact on student learning and staff workloads. To achieve this, a pilot of the Communities of Practice student placement model was undertaken over an eight-week period at one health service; conducted at two campus sites on two separate occasions. Placements lasted for period of two to four weeks for first- and third-year students. This approach ensured that if modifications were required, these could be achieved at any time throughout the clinical placement period. Such an approach also ensured that if the model needed to be discontinued due to any ethical or logistical concerns this could be achieved with the least amount of disruption to the health service, nursing team, and patients or residents. Although not anticipated, several contingency plans were in place to address any issues that may have arisen from the COVID-19 global pandemic.

In line with the model's development,[14] students were purposively vetted to participate in the placement experience. As such, three (n = 3) senior students were selected due to their qualities of leadership, empathy, and supportive as identified through past placement performance and clinical feedback. In addition, nine (n = 9) junior student were also selected based on their capacity to be respectful and civil with a willing to be guided by peers.[14] As part of the Communities of Practice student placement model's development, post-placement interviews examined the model's benefits and challenges, while further refining the placement model based on feedback.

2.1 Sample

After the placements were completed, all students and relevant staff who had direct interaction with students were sent an invitation to participate in interviews. Among the invitation, twelve (n = 12) participants self-selected to participate in a semi-structured interview. Participants included six (n = 6) of the nine students which encompassed two senior students who were in their third year of nurse training and four junior students who were in their first year of nurse training. Those in their first year of training had not undertaken any prior placements. In addition to the students who participated, three (n = 3) nursing staff, two (n = 2) nurse managers, and one (n = 1) clinical educator also volunteered

their time to be interviewed and provide feedback regarding their experiences and the model.

2.2 Data collection

Specifically, students were interviewed one week after their placements were completed, while nursing staff, clinical educator, and additional staff were interviewed within two to three weeks after the placement ended. Each participant was asked a series of questions concerning their impressions of the Communities of Practice student placement model, their experience, and thoughts concerning the advantages and challenges that the model brought when implemented.

2.3 Data analysis

All interview data were transcribed verbatim into Microsoft Word and checked for accuracy against audio recordings, which included member checking. Each interview participant was coded based on key information such being junior or senior student, nurse, or other staff member, and then assigned a numerical code based on the order in which each individual was interviewed. For example, a junior student would be presented as "Junior student 2", while a nurse would be presented as "Nurse 3."

Once transcribed and coded, qualitative data analysis were undertaken, as informed by Braun and Clarke,[18] where thematic analysis is concerned with assembling singular, small and often meaningless ideas or experiences from individuals. As these single ideas are combined with other similar ideas and experiences from a number of other individuals, a more complete picture of the collective experience is revealed.[19] Once analysed, valid arguments were developed and inferences made using current literature to contextualises the findings and to provide insights into key recommendations and placement model modifications, as required.[19–21]

2.4 Ethical considerations

Ethical approval for the study was granted from the Federation University Australia Ethics Committee (#20-093A) and was conducted in line with the National Statement on Ethical Conduct in Human Research 2007 (Updated 2018).

3. Results

Overall, the Communities of Practice student placement model was indicated to be an extremely positive experience for all parties. Specifically, five key themes emerged within the data, which included increased support achieved for junior students, extended learning for senior students, unexpected discoveries, workload decision-making and implications, followed by adaptability and further modifications of the model. Each are discussed in detail.

3.1 Increased support achieved for junior students

Participants indicated that senior students provided junior student with a different level of support throughout the placement experience, which extended from answering questions and modelling behaviours, to supporting junior students develop greater critical reflection. For example, general questions concerning practices, processes, and navigating the health setting were gleaned from senior students by junior students, while the more technical or clinical questions were sought from nursing staff. In most cases, junior students were asking senior students to answer many key questions and although senior students were initially obliging, they had modelled to junior students to seek answers through research, wider discussion, and reflective practice. It was indicated junior students, had a propensity to "learn a lot quicker" (Nurse 2) compared to standard clinical placement model.

There had been some initial hesitation among all students about working together, however, this anxiety soon dissipated, and the experience was indicated to have "exceeded expectation" (Junior student 4). Also, it was initially perceived that the lack of authority between junior and senior students would be challenging, however, senior students drew from their knowledge and willingly supported junior students, which was celebrated by staff. In some cases, senior students did not know how to answer key questions raised by junior student, but "took the junior student under their wing and said, 'let's go and find out together'" (Nurse 4).

When compared to the standard clinical model, staff indicated the Communities of Practice student placement model enabled the junior students to be more outgoing, energised, and engaged with the patients or residents than had been observed at any other time. It was indicated that junior students were "less like a deer in the headlights and... were empowered" (Clinical Educator 1). This was particularly evident among junior students from non-English speaking backgrounds, who in the past had been particularly "hesitant, reserved, and who normally do not take initiative in practice" (Clinical Educator 1). Overall, staff indicated the new model was "fantastic and brilliant" (Nurse 2), "really beneficial" (Nurse 3), and "was a positive experience" (Nurse 1).

3.2 Extended learning for senior students

In addition to the increased support for junior students, it was revealed by senior students that their own learning had extended beyond what they had anticipated. The new role within the Communities of Practice student placement model had propelled their learning beyond what they had experienced in any previous placement undertaken. Senior students said the placement had moved beyond the 'basic' experience, with one student stating, "at this [placement], I got to observe

and be a part of things that I do not usually get to do and see on a placement" (Senior student 1). This had included participating in several leadership roles and observing how the senior nurses were managing nursing staff, while also participating in and leading key interactions with medical and allied health professionals.

The extended learning was further demonstrated as the senior student's own leadership skills were expanded by working with junior students. Although senior students did not see themselves as 'leaders', they had opportunities to model leadership, undertake increased levels of debriefing, while developing their inter and intradisciplinary communication skills. These were new experiences that senior students were keen to continue as part of their future practice.

Beyond developing leadership qualities, senior students were given opportunities to more comprehensively understand and experience "what it means to be a Registered Nurse" (Nurse 4). In addition, it had been indicated that the model allowed senior students, for the first time, to have "Registered Nurses talk to us about what they are doing and how they achieve key elements of the occupation" (Clinical Educator 1). It was noted that although leadership and greater responsibilities were placed on the senior students, that these opportunities allowed them to grow and develop in new ways that would prepare them more fully for employment as nurses after graduation.

3.3 Unexpected discoveries

Beyond increased support and extended learning being achieved for both cohorts of students, several unexpected discoveries were highlighted by all participants. These included developing close bonds, emotional support, and modelling future behaviours. For example, it was highlighted that both senior and junior students had developed, within a very short space of time, very close professional bonds with each other. There was a mutual and reciprocal connection between students in terms of learning from each other. In one case, a staff member had noted that a brief, insignificant question regarding where to find an item at the nurse's station was the catalyst for comprehensive clinical dialogue between a junior and senior student where reciprocal leadership and learning were being observed. Student discussions were initially concerning theory, practice, and clinical aspects of nursing, however, these soon moved toward what junior students should expect in terms of future university study and subsequent placements. It was suggested these incidental 'tearoom' discussions were beneficial for both junior and senior students and was something that "I have not seen since hospital-based nurse training" (Clinical Educator 1), which had ceased more than three decades earlier.

In addition to future expectations, emotional and personal topics concerning managing sleep, coping with tiredness, and personal management of one's own health were often the centre of other discussions between junior and senior students. Although these same discussions may have occurred between students and nurses, it was suggested by both students and staff, that students felt 'safe' with other students to discuss these personal issues, given their own relative proximity to these same challenges. It was suggested that the junior-senior student relationship was a safe space where they felt they would not be judged. It was these non-judgmental safe spaces that junior students indicated were very insightful to them on how to model, not only their own future behaviours in practice, but when they became senior students and nurses, who would support junior students in the future. Specifically, one student indicated that their experiences through the Communities of Practice student placement model "showed me how important it is to nurture new students coming through" (Junior student 1). Ultimately, it was suggested that these shared learning opportunities were more likely to occur as senior and junior students had greater time with each other in the new placement model, which allowed greater incidental conversation to occur.

3.4 Workload decision-making and implications

Beyond the opportunity provided for student, the fourth theme centred on time. In this sense, the current workload was driving supervisor-supervisee learning and teaching decision-making. All students indicated that nursing staff were busy and did not want to bother them with what they felt as trivial issues or questions. The competing workload of the nurse was recognised as a challenge in the student's own learning, and students were appreciative that the Communities of Practice student placement model ensured they were not adding to the burden of the nurses unnecessarily, but they were able to support each other in various ways. In this sense, having other students, particularly senior students present, allowed for questions to be answered, the practicing of care to occur, and to understand the rational for certain types of care, which junior students may learn in subsequent years.

Beyond the impact on student learning, nursing staff indicated that the Communities of Practice student placement model also had other beneficial workload implications. It was stated that the workload of the new model was not different than the standard model for at least the first two to three days. These first few days were used to guide students or highlight key aspect of care, but once trust was developed and safety demonstrated, nurses were happy for student to work together within their scope of practice unsupervised for

key aspect of care. For example, a junior and senior student could undertake several tasks such as bed making, observations of vital signs (blood pressures, pulse rate, respiration rate, and temperature), hygiene care, and other specific care required for patients or clients. However, if issues occurred or care was outside of the students' scope of practice, both junior and senior students would seek explicit guidance from the supervising staff member.

In these circumstances, the new approach enabled the supervising nurse to utilise time previously dedicated to providing 'essential' education to students, to now be focused on the more complex elements of care. Several nurses stated once students were accustomed to the health service and expectations, the new model "took the pressure off… we did not have to answer so many questions… and it saved us the expenditure of energy" (Nurse 1). In this sense, the Communities of Practice student placement model gave time back to the nurses to provide care to patients and residents an allowed more time to teach students about more complex care.

Another nurse indicated the Communities of Practice student placement model allowed students to work on key aspects of care within their scope of practice and that "more often, I would go to do something, and I'd think, great, it is already done" (Nurse 2). In this sense, staff had "more confidence in the model and in students" (Nurse 3), which made their workload easier. However, it was noted that although direct supervision did not always need to occur, it was vital that the supervisors still had to have their "eyes and ears [open]" (Nurse 1), to ensure information and decision-making was correct and care being provided was safe.

3.5 Adaptability and further modifications of the model

An essential finding of the new placement model is now the model may need to be further modified. It was confirmed although the model had been successful, it was dependent on the personalities of the students. It was suggested the process of vetting students was an essential element of placement planning. Further, it was stated that it was vital that junior and senior students should informally meet or connect with each other prior to placement occurring to alleviate any concerns or anxieties among students and build relationships of trust prior to their first day of clinical placement. How this could be operationalised was not discussed or proffered in any detail by students, but staff suggested that this could be achieved through an informal pre-placement 'meet and greet' or informal gathering, such as a barbeque. All participants felt that students needed to make a connection with each other and exchange contact details prior to placement, and that this was a vital step currently missing in the Communities of Practice student placement model but would improve the student placement experience.

The other major concern or suggestion regarding the new model was the initial screening of students. This suggestion was particularly focused on senior students being screened for their suitability within the new placement model, to be 'matched' to a placement within their broad clinical area of interest and to improve their investment into the placement. Also, it was felt senior students being placed in an area of their interest for a longer period would lead a greater willingness to invest their time and energy into the placement and be more supportive of junior students.

Lastly, the placement model, although based on a rigid framework, must have a level of plasticity that could be adapted to meet the needs of individual students, while being elastic enough to meet the nuanced requirements of each individual health service or clinical area within a service. For example, within the participating health service, it was suggested that the model itself needed to include the multidisciplinary team as key players in student learning, which encompasses medical and allied health care professionals. Although this group are not responsible for direct supervision of nursing students, as it is outside their professional roles, it was indicated this group of health professionals play an essential role in student's clinical education experience. Throughout any given shift students can and do interact with medical and allied health professionals during planned and unplanned times, and it is these touchstone moments among the multidisciplinary team where additional learning occurs. Within this context, the model was modified to meet this additional insight after the new placement model was implemented, as outlined in Figure 2.

4. Discussion

A lack of consensus about the preferred model for clinical learning of nursing students in the practice environment pervades the available literature.[22] The preceptorship approach where a student is supervised by a more senior registered nurse within a health facility is arguably the model most frequently adopted across nursing education nationally and globally.[22,23] Both student and clinical staff cohorts identified some initial hesitancy to adopt the new CoP model with concerns at the degree of support for junior student to senior student learning. Despite the reluctance, the experiences of the students in this study would suggest that the nexus between the junior and more senior students obligated by the Communities of Practice student placement model offered a different level of support for junior students that was readily available and accessible for those who might normally be reluctant to seek support from clinical staff. This is consistent

with previous research that suggests more junior staff tended toward a near-peer learning model as a means of overcoming their fears of the hospital environment.[24]

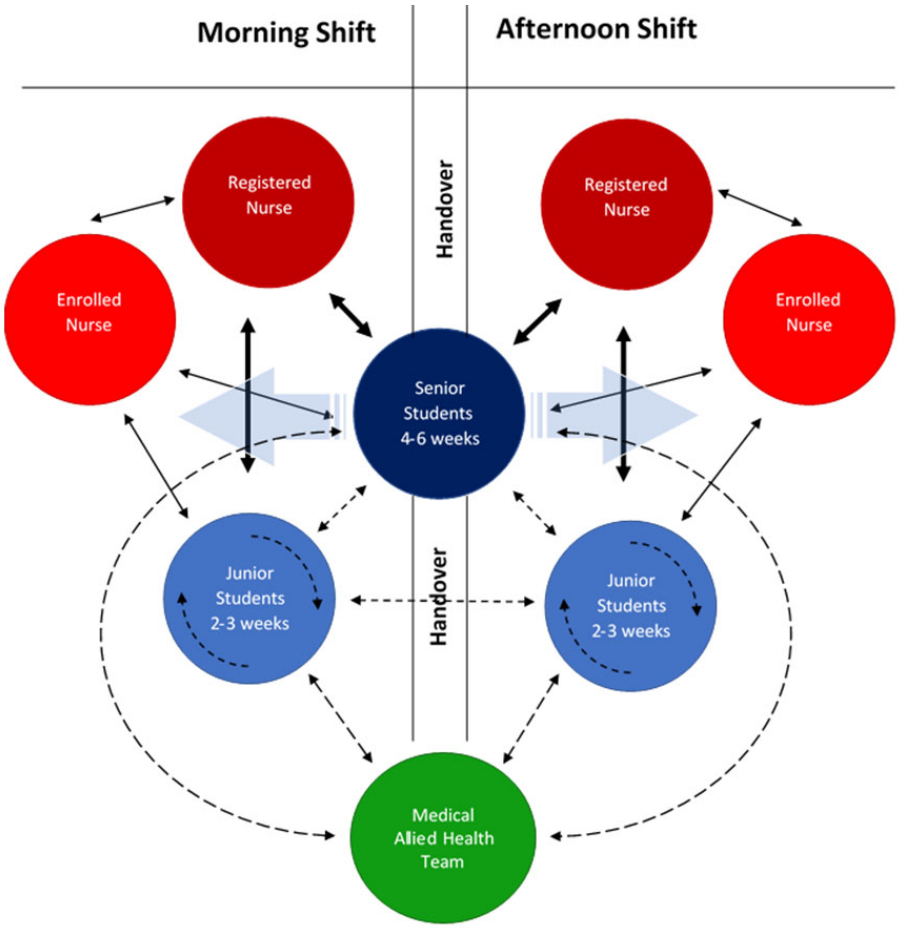

Figure 2. Final placement model that includes the multidisciplinary team
Broken arrows denote peer learning and support. Solid arrows denote professional learning and support

Student hesitation was shared by clinical staff who were initially worried that junior students would not be sufficiently supported in their learning using a model that was reliant upon their more senior student peers. These findings are consistent with studies in the area of peer-peer learning highlighting an initial reluctance that was strongest amongst clinical staff.[25] However, following this initial hesitation the present study highlighted that these same staff reported being surprised by the wealth of information that more senior students possessed, as well as the proactive and collegial way in which senior students were willing to support the learning needs of those more junior peers as required. Following an initial period of clinician hesitation, perhaps precipitated by a sense of role confusion[26,27] and a perceived threat to their identity as a teacher,[25] clinical staff in this study appreciated the new model's perceived capacity to free up time for patient care, while engaging in deep exploration of more complex aspects of student learning.

It was evident that more senior students experienced both personal and professional growth beyond their own expectations. Senior students within the cohort reported development of 'soft skills' in leadership and advanced communication by adopting a mentor role to their more junior peers and through their engagement in the leadership and higher-order discussions with their more senior clinical peers. A review by Nelwati et al.,,[28] suggests that more senior students are eager to engage with a peer-learning model like this as an opportunity for professional development with a particular emphasis on the development of their leadership capacity and their self-confidence in the role of the registered nurse.[29,30]

Peer-learning has been linked to supporting the development of strong relationships amongst junior and more senior peers that operate to provide emotional support and reduce anxiety.[28] The insights from the present study echo this and shed

a brighter light on the nature of these relationships. Junior students identified that they appreciated the ease of communication with their more senior peers as it allowed them to have their query addressed without placing extra or undue strain of the clinical nursing staff who were already time poor. In addition, clinical staff observed student peers engaging in easy, comfortable and genuine conversation about matters peripheral to their clinical experience, and in so doing, fostering a sense of positive socialisation into the nursing profession and building the foundation of teamwork.[31]

The experiences of students and clinical nurses were overwhelmingly positive towards the implementation of the peer-learning model. Despite this, there were opportunities for future development that centred around the selection criteria that is used to screen the suitability of the students. There was commentary about the way in which the personality of the more senior students might influence the success of the model. Stenberg and Carlson,[24] describe participants in their study suggesting that they be allowed to choose a friend to create a peer group. These authors go onto argue, however, that an important element of any clinical model is in providing opportunities for students to practice collaboration through a professional relationship rather than a friendship. Participants in the current study identified interprofessional learning as an important element to be added to the model. This is arguably consistent with the professional, rather than, personal nature of the collaborative relationships described by Stenberg and Carlson,[24] and is a significant focus of other work in this area that emphasises the importance of interdisciplinary models of clinical practice.[32]

To facilitate the successful operationalization of these ideas, we have likened what goes on in a community of practice to the imagery of the atomic structure. Importantly, there is often more than one electron that circles a central core of neutrons and protons which effectively govern the behaviour of the electrons in the outer orbits of the atom itself. While these electrons interact with each other in the outer shells of the overall atom, they are in fact always under the control or direction of the central neutrons and protons. Here the idea that a student or novice nurse (electrons) who becomes a part of the community of practice (the atom itself) circles around the core of more experienced nurses (protons) or mentors such as allied health professionals (neutrons), who govern or influence the actions of the student or novice nurse. This imagery helps us recognise that it is the core elements that ultimately dictate what goes on within their community of practice, and this same influence is exerted among novices themselves, thus dictating the nature and frequency of interaction that occur between each student.

Limitations

Overall, the qualitative nature of the study and limited number of participants and the study being conducted within one healthcare facility suggests that the perceived utility of the CoP model outlined may not be representatives of other practice areas. Despite this, a deep engagement with each of the key-stakeholder groups has provided rich insights into their experiences which can be adopted by others across varied settings. Future research would benefit from the implementation of this model across multiple clinical settings and with a larger population of students. Different psychometric measures including professional self-confidence and preparedness for clinical practice could also be included as elements of the research design to improve our understanding.

5. Conclusion

The purpose of this study has been to explore the experiences of key stakeholders engaged in the implementation of a pilot clinical practice model for the education of nursing students at different levels within their program of study. From the analysis of the experiences of junior and senior undergraduate nursing students as well as the registered nurses providing overall supervision, five central themes emerged: support for junior students, extended learnings for senior students, unexpected discoveries, workload decisions making, and adaptability of the model. These themes both illuminate outcomes achieved through the application of the Communities of Practice student placement model, as well as the ways in which the model might be improved for future delivery. In culmination, we have suggested that this new model be conceptualised using the visual model of the atomic structure, with a particular focus on the interplay of students from different levels of their programs circulating a nucleus of supervision and support staff which ultimately dictates the activity of the whole unit.

Policy implications

The Communities of Practice student placement model was initially founded on increasing the number of students from different year levels that were able to be allocated into a clinical practice setting at any one time, and to reduce the workload of the registered nurses who tirelessly provide clinical placement supervision. This study has identified a capacity to increase student numbers by effectively increasing the level of support and assistance for the registered nurse, through the inclusion of a more senior student nurses who provide support and mentorship to the junior student nurses. Furthermore, the model has the capacity to decrease burnout or supervision fatigue experienced by registered nurses in practice. Lastly, the model has also been perceived as be-

ing able to offer the near-peer support desperately needed for junior students, while at the same time, offering more senior students the foundation upon which to develop their leadership skills.

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CONFLICTS OF INTEREST DISCLOSURE

The authors declare that there is no conflict of interest.

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