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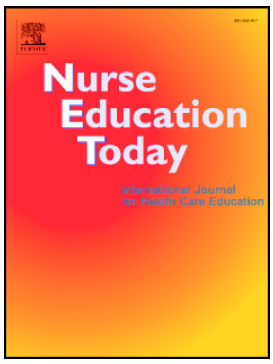

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Title Page:

'WARD FOR THE DAY': A CASE STUDY OF EXTENDED IMMERSIVE WARD-BASED SIMULATION

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HD, EJ and DS conceived the study. Survey responses was managed by HD and DS. Interpretation of findings was conducted by HD, RS, EJ and DS. HD drafted the manuscript. Draft for publication was approved by all listed authors.

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ABSTRACT

Background: Simulation is an important teaching strategy in the preparation of nursing students for professional practice. The focus of simulation has shifted from single patient encounters to multiple case studies provoking immersion in all the activities that are regularly performed on the ward. Extended immersive simulation cannot replicate completely the stresses of working on a 'real' ward, but it does provide a safe environment for students to practice the role of being a registered nurse.

Objective: To evaluate satisfaction associated with student experiences of mentorship by industry partners, self-reflection on performance, and responses to clinical situations following an episode of extended immersive ward-based simulation.

Design: Mixed methods case study.

Setting: School of Nursing and Midwifery metropolitan Western Australian university.

Participants: A cohort of 278 final year students enrolled in a three-year Bachelor of Nursing program.

Method: Eight demonstration rooms were re-configured to resemble a mixed medical/surgical ward. Nursing students and manikins in each room simulated different patient scenarios. Students were organised in three-hour shifts in which to undertake the role of a registered nurse. Industry partners undertook shift coordinator and senior nursing roles. Surveys were distributed to students at the end of the two-day simulation. Student satisfaction was evaluated using the Satisfaction with Simulation Experience scale and content analysis of open-ended questions.

Results: A total of 243 students (87.4%) responded to the survey. None of the scaled items had a mean score of below 4.5. Content analysis of 458 written responses identified three themes: simulation, role of registered nurse and learning.

Conclusion: Extended immersive ward-based simulation offers the opportunity for educators to mirror what happens in clinical practice. Students value the opportunity to safely experience

simulated demands of working on a busy ward and learn how to meet workplace pressures in the delivery of patient care.

Keywords: extended immersive simulation, student satisfaction, nursing education, undergraduate nursing students

INTRODUCTION

Challenges in nursing education and the need for students to graduate work ready increase the need to develop innovative teaching strategies. Simulation is a teaching strategy increasingly being used in undergraduate nursing degree programs (Bogossian et al., 2018; Katz, Peifer, & Armstrong, 2010). The opportunity for experiential learning through simulation provides a safe environment for students to practice the role of being a registered nurse. This paper describes an innovative extended immersive ward-based simulation workshop designed to prepare final year nursing students to be 'ward-wise ready' before entry into the workforce. Similar programs at mimicking a real ward environment have been reported by others using a number of different approaches (Davies, Nathan, & Clarke, 2012; Pearson & McLafferty, 2011). Participants of this program experienced the simulated demands of working on a busy ward and met workplace challenges in the delivery of patient care for two consecutive three-hour shifts supported by industry partners. Success of the simulation workshops was determined by measuring the level of student satisfaction as a pedagogical approach in experiential learning. Information was collected on student experiences associated with mentorship by industry partners, student self-reflection on performance, opportunities for student decision making, and perceived clinical ability when faced with challenging situations.

BACKGROUND

Nursing education aims to integrate theoretical knowledge with practical experience to help students' problem solve real-life situations when on clinical placement. The difficulty of finding

appropriate clinical placements combined with issues of patient safety can reduce the opportunity for students to practice looking after one or more patients. Students out on clinical practice are not called upon as part of their training to make their own clinical decisions and experience the consequences of their actions. This lack of accountability suddenly changes when graduating students are then expected to take on the role of registered nurse without having ever been responsible for a full patient load. It is not surprising that on near completion of their degree nursing students can often feel unprepared for entry into the workforce and struggle to adapt once qualified as a registered nurse (Hezaveh, Rafii, & Seyedfatemi, 2014; Phillips, Kenny, Esterman, & Smith, 2014). Graduates who struggle with moving away from the familiar role of student nurse and adapting to the role of registered nurse are described as suffering from transition shock (Wakefield, 2018). Industry has attempted to overcome transition shock by supporting the development and growth over several decades of formalised graduate programs (Rush, Janke, Duchscher, Phillips, & Kaur, 2019), but not all have been successful in responding to the needs of graduate nurses (Fowler, Twigg, Jacob, & Nattabi, 2018).

The preparedness of newly qualified nursing graduates to integrate into the workforce with limited experience and resilience continues to be debated within the nursing profession (Haddad, Moxham, & Broadbent, 2017; Walker, Costa, Foster, & deBruin, 2017). This is also a concern to the healthcare industry who rightly or wrongly assume, that on completion of a degree graduate nurses will be able to perform clinically and bridge the theory-practice gap when entering the workforce. Findings from one Australian study found the performance of graduate nurses was lacking in areas of critical thinking, problem solving, collaboration and patient assessment (Missen, McKenna, Beauchamp, & Larkins, 2016). Australia is not alone in dealing with this situation with other countries experiencing ‘tension’ between the healthcare industry and higher education institutions on what it means for a graduate nurse to be ward ready (Monaghan, 2015; Spector et al., 2015).

Undergraduate nursing education has changed from a curriculum that was largely based on directed learning to one that encourages a self-directed learning approach. This approach recognises the importance of allowing students to determine what they need to know in the 'real' world of nursing. Simulation is an ideal teaching methodology for incorporating this type of experiential learning (Berragan, 2011). It has the advantage of allowing students to practice clinical skills in a safe learning environment and discover for themselves how to manage crisis-situations before they are experienced in reality. The inclusion of simulation in nursing curriculums have been shown to strengthen student nurses' knowledge and clinical reasoning leading to improved educational outcomes (Young & Jung, 2015). The views of third-year nursing students on self-reported preparedness for professional practice, found 75% of those surveyed indicated simulated experiences during training had been helpful in the transition process (Woods et al., 2015).

Traditionally simulation has focused on single patient encounters that are self-limiting by the nature of the nursing skill being reviewed (Uysal, 2016). This approach is demonstrated by the use of objective structured clinical examination (OSCE) in the assessment of student performance (Kelly et al., 2016), but is different to real-life patient care that does not happen in isolation from other nursing activities and instead occurs over an extended period-of-time. Often events happen in an environment where there are distractions and interventions that require situational awareness and multi-tasking. Immersive experiences expand the technique of simulation by incorporating realistic patient care environments and the emergence of extended immersive simulation away from single patient encounters. Students are instead exposed to multiple patients on a 'virtual ward' as they would experience if working on a real ward (Gamble, 2017; Rodgers, McConnell, de Rooy, Ellem, & Lombard, 2014; Warland, 2011; Wright et al., 2018).

A review of transition and workforce integration experiences of graduate nurses demonstrated the need for increased collaboration between educators and industry to reduce transition shock (Walker et al., 2017). In recognition of the need to meet student and industry

concerns over the lack of preparedness of new nursing graduates to enter the workforce 'ward ready', a program of extended immersive simulation was developed. A two-day extended immersive ward-based simulation workshop for third-year undergraduate nursing students, 'Ward for the Day', was introduced into the final semester of a three-year nursing degree in preparation for a final six-week clinical placement of supervised practice. Using a combination of simulated role-play patients and manikins, realistic patient scenarios contextualized with ward-based activities, were used to immerse students in an authentic clinical environment over an extended period of time. This enabled exposure of students to a variety of simulated workplace pressures using mentorship from industry partners as a means of helping students adjust to professional practice. Although the program offered students the opportunity to practice the role of a registered nurse, it did come with its own set of logistical challenges. To justify its use in undergraduate training programs tangible benefits of student learning must be articulated given the time-consuming nature of creating scenarios, setting up ward areas and expenditure of resources. One way the benefits of simulation as a teaching strategy can be demonstrated is by measuring the level of learning satisfaction experienced by students after participation in the two-day workshop.

OBJECTIVE

The objective of this case study was to evaluate the level of satisfaction among a group of undergraduate nursing students who were participants of a two-day extended immersive ward-based simulation workshop. Data of interest included satisfaction associated with student experiences of mentorship by industry partners, student self-reflection on performance, and student responses to clinical situations.

SETTING

A metropolitan School of Nursing and Midwifery Western Australian university annually providing single and double degree courses for approximately 550 third-year eligible students.

PARTICIPANTS

The study included participants who were final year students enrolled in a Bachelor of Nursing program endorsed by the Australian Nursing and Midwifery Accreditation Council (ANMAC). Spread across the three-year program students attend six clinical placements and receive 840 hours of supervised clinical practice across different health service delivery settings. On reaching their final year of training, students attend a six-week (240 hours) tertiary hospital placement before applying for registration with the Australian Health Practitioner Registration Agency (AHPRA).

METHOD

Intervention

Eight demonstration rooms were re-configured to resemble a mixed medical and surgical ward. Nursing students and two manikins in each room simulated eight different patient scenarios. The immersion scenarios were designed to take place in a simulated 52 bed healthcare facility providing a range of diagnostic and interventional services. A doctor's office, blood bank and pharmacy helped maintain the pretence. Clinical skill facilitators increased the realism of each scenario by recreating interruptions and distractions that would commonly occur on a busy ward. A script was written for a variety of confederate roles such as the portrayal of a distressed family member or the depiction of a member of the surgical team requesting to review a patient. The same script was followed by the clinical skills facilitator to standardise behaviour of confederate roles across each demonstration room, but how each scenario played out depended on student responses.

Students were organised in three-hour shifts (morning, afternoon and evening) attending six shifts over two days of which two consecutive shifts were spent in the role of a registered nurse. This

allowed students the opportunity for improvement by putting into practice what they had learned during the previous shift. Amongst three students allocated the role of the registered nurse in each room, one took on a leadership role as 'team leader'. Of the remaining four shifts, students role-played being a patient. Over two-days the workshop could accommodate 68 students.

Each shift employed four currently practicing nursing experts from existing industry partnerships. One was employed as 'shift coordinator' who supervised the running of ward routines and received regular patient updates by conducting a ward round. The other four nursing experts undertook the role of 'float nurse' who could be called upon to provide advice and assistance with nursing care. They were expected to work across two rooms, but it remained the responsibility of students to ensure nursing care was delivered.

Integral to the simulation workshop was the way ten patient scenarios contributed to a clinical story in the context of a busy ward exposed to a variety of inside distractions and outside demands. As shown by the example given in Table 1, each patient scenario was told over two days between the morning, afternoon and evening shifts that included patient admissions and discharges. For every shift change the passage of time added to the clinical story by presenting a situation requiring a response to progress the scenario onto the next shift. The design of each scenario included achievable objectives of action-orientated behaviours in response to different simulated experiences. Students were expected to process information, problem solve and achieve desired learning outcomes. The junior doctor role was played by a nursing academic.

(Insert Table 1 near here)

Each room was allocated one nursing academic who observed student practice and facilitated debriefing at the end of the shift. They had no role in 'leading' students on what action to take and did not interfere with how students responded. Observations made by the academic focused on four key areas of interest: communication, time management, teamwork and decision-making. At the end of each shift a debriefing session was held by the nursing academic on

observations that were made and maximising the opportunity for learning by using a standardised structure for providing feedback (Jaye, Thomas, & Reedy, 2015). The reaction phase encouraged students to 'blow off steam' and explored the emotional experiences of participants. The analysis phase focused attention on what actions were taken and why this was followed in response to simulated events. The summary phase identified lessons that were learned and how they could be applied if presented again in clinical practice.

Ethics

Approval was granted by the university Human Research Ethics Committee (Project Code 19336).

Instrument

Level of student satisfaction was surveyed using the Satisfaction with Simulation Experience (SSE) scale (Levett-Jones et al., 2011). A five Likert scale (1 = strongly disagree - 5 = strongly agree), scored level of satisfaction according to 18 statements or items based on three categories: debriefing, clinical reasoning and clinical learning. The scale was developed to measure level of satisfaction among second and third-year nursing students and was found to be valid using a 3-factor solution exploratory factor analysis (EFA) with a satisfactory internal consistency (alpha 0.77). A similar finding of adequate construct validity and internal consistency was observed when measuring level of satisfaction among paramedic students (Williams & Dousek, 2012). At the end of the survey the inclusion of open-ended questions allowed students the opportunity to express written comments on what they found valuable and not valuable about extended immersive ward-based simulation.

Data Collection

On completion of the two-day simulation workshop, students were given an information letter and invited to complete the survey anonymously distributed by a third person not

part of the research team. Completion of the survey implied consent and a hard copy dropped in collection boxes.

Data Analyses

Survey responses were numerically coded. Quantitative data was analysed using SPSS software, version 23 (IBM, Chicago, Ill). Demographic information about student participants was presented as frequencies and percentages. Analysis of SSE scores for the three categories or sub-factors used to measure level of student satisfaction was reported using minimum, maximum, mean, median and standard deviation (SD). Distribution of data was checked for normality and comparison of means tested using Mann-Whitney U test. Statistical significance was set at 0.05. The internal consistency of responses for each sub-factor was determined by Cronbach's alpha scale of reliability and an EFA performed to examine the underlying variance in student responses between the 18 measured items.

Qualitative data from open-ended questioning was entered onto a Microsoft (2010) spreadsheet (Microsoft, Seattle, WA). Responses were independently reviewed and key words colour coded by two members of the research team (HD and EJ). Discrepancies on coding were discussed and agreement reached by consensus. These codes were then placed into categories and ranked according to frequency they occurred. Categories were examined for emergence of common themes.

RESULTS

Over a period of two weeks (Monday to Friday) in July 2018, five two-day extended immersive ward-based simulation workshops were held. Of 278 students who participated in the workshops, 243 students (87.4%) responded to the survey. As shown in Table 2, the majority were

female (n=173, 71.2%) and between 22-29 years old (n=79, 32.5%). The number of single nursing degree students (n=192, 79.0%) outweighed the number of students undertaking a double degree in nursing and midwifery (n=6, 2.5%). Almost half of the students indicated they were currently employed in the healthcare industry (n=110, 45.3%).

(Insert Table 2 near here)

A high level of internal consistency with SEE scores was observed following student participation in the simulation workshop for all 18 items across the three categories or sub-factors (alpha 0.98 for debrief and reflection, 0.97 for clinical reasoning, and 0.96 for clinical learning). Variance of student responses measured by EFA found a single factor greater than 1 with a cumulative variance of 81.9% suggesting all items fitted into a single theoretical construct of student satisfaction. As shown in Table 3 none of the 18 items had a mean SEE score of below 4.5. The level of satisfaction among students was reported to be the highest for items associated with 'debrief and reflection' (total mean score = 4.72, SD 0.77). The second highest category students found they gained the most satisfaction was from items associated with the opportunity for 'clinical learning' that simulation provided (total mean score = 4.67, SD 0.78).

In comparing the responses of students who participated in the workshop whilst employed as a healthcare worker, the mean SEE scores shown in Table 3 did not differ with those not employed in the healthcare industry when comparisons between levels of student satisfaction were made with 'clinical reasoning' or 'clinical learning'. A significance difference in the mean scores was observed under 'debrief and reflection' with levels of workshop satisfaction in providing opportunities to reflect on performance higher among students employed as healthcare workers (mean rank = 104.09) compared with non-healthcare workers (mean rank = 93.76, U = 4335, z = -1.997, p = 0.046). The same was observed when satisfaction levels with the opportunity to ask questions that the workshop provided was higher among students employed as healthcare workers (mean rank = 104.54) compared with non-healthcare workers (mean rank = 93.20, U = 4285, z = -2.163, p = 0.031).

(Insert Table 3 near here)

Content analysis of written comments on what students found valuable and not valuable about the two-day simulation workshop generated 458 responses (see Table 4). These were coded into 13 categories and grouped into three themes. No category or theme emerged that was different between students who were employed or not employed as a healthcare worker.

Theme one 'simulation' related to the experiences of participants to extended immersive ward-based simulation. Categories under this theme included 'value of simulation' expressed in comments such as *"Seeing things from a patient perspective, watching others work"*; 'realism of workshops' expressed in comments such as *"That it was setup like a hospital…on-call doctors, pharmacist, patients and visitors with challenging behaviours";* and 'organisation of workshops' expressed in comments such as *"The very long days, I really struggled"*.

Theme two 'role of registered nurse' related to the preparedness of new graduates for clinical practice. Categories under this theme included 'transition from student to qualified nurse' expressed in comments such as *"Consolidated and helped me realise what I knew"*; 'applying critical thinking into clinical practice' expressed in comments such as *"Learnt how things go wrong and how to manage it"*; 'accepting accountability' expressed in comments such as *"Developed my clinical confidence a lot"*; 'ward-based challenges' expressed in comments such as *"I felt I was exposed to a range of scenarios and was forced to step up and push myself"*; and 'prioritising care' expressed in comments such as *"Importance of picking up on patient cues early before deterioration"*.

Theme three 'learning' related to the acquisition of knowledge. Categories under this theme included 'reflection' expressed in comments such as *"Enabled me to determine my strengths and weaknesses"*; 'supporting learning environment' expressed in comments such as *"It was helpful to have good teaching about the situation when needed"*; 'clinical skills consolidation' expressed in comments such as *"The skills I did not have an opportunity to perform in real life"*; importance of teamwork' expressed in comments such as *"Not being assigned fair amount of patient load and had*

higher load"; and 'safe learning environment' expressed in comments such as *"Being put in a simulated environment was safe to make mistakes and learn from it"*.

(Insert Table 4 near here)

DISCUSSION

This case study investigated level of satisfaction among a group of undergraduate final-year nursing students with an innovative extended immersive ward-based simulation workshop designed to enhance the readiness of new graduate nurses to enter the workforce ward ready. In the absence of allowing students to make clinical practice decisions by themselves during supervised clinical practice, 'Ward for the Day' allowed students the opportunity to experience what it would be like to be accountable for their actions that would be expected from them as a new graduate nurse when responsible for a full patient load'. Final-year nursing students were exposed to the simulated pressures of working on a busy medical-surgical ward in the role of a registered nurse supported by industry experts. The learning experiences of students who participated in the two-day workshop was evaluated by measuring levels of satisfaction using a psychometrically tested instrument. In addition, students were able to provide written feedback on what they found valuable and not valuable about the workshops. Levels of satisfaction was high among students suggesting they were engaged and the experience an effective teaching strategy. Success was associated with the inclusion of activities designed to prepare students for ward work and instil self-confidence in dealing with a variety of simulated situations they could possibly encounter once qualified.

Feedback on student performance was an important feature of the simulation workshops. A great deal can be learned by students participating in the experience itself, but for some students if not provided feedback may be left wondering what they have learned. As shown in Table 3, the

highest level of student satisfaction occurred when students were given the opportunity to debrief and reflect on what happened during each shift. The debriefing of students in the form of feedback and a chance for reflection, plays an important part of simulation when used as a teaching strategy (Ryoo & Ha, 2015). Holding a debrief immediately after a simulation exercise has been shown to improve the recollection and integration of events that students have experienced (Hall & Tori, 2017).

The transfer of learning is fundamental to the acquisition of knowledge. Teaching strategies that allow for experiential learning foster the transfer of theoretical knowledge into practice-based learning (Murray, 2018). This form of active learning by experimentation, reflection and experience is advantageous because it allows the teacher to overtly see students working out the problem themselves. For each three-hour shift, observations made by the academic observer were later used to reflect on the actions of students as nurses. If found not to be appropriate for a given situation, suggestions were made on how this could be handled differently should a similar situation occur in clinical practice. As shown in Table 3, the opportunity for clinical learning achieved the second highest level of student satisfaction. Similar findings have been replicated by others when simulation has been used as a teaching strategy to bridge the theory practice gap (Botma, 2014; Wall, Andrus, & Morrison, 2014).

As shown in Table 3 findings from this study found the workshop assisted students to develop and demonstrate clinical reasoning skills. Clinical reasoning involves the process of making sense of the situation by reaching informed decisions on how best to respond meeting the nursing care needs of patients (Simmons, 2010). Evidence suggests that many new nursing graduates lack the clinical reasoning skills required to deliver appropriate patient care (Killam, Luhanga, & Bakker, 2011). The workshop was designed to prepare students for the multitude of clinical decisions they will face once qualified as a registered nurse. Students were presented with patient scenarios that in the real world would have serious consequences for the patient if ‘incorrect’ actions were taken.

Students were not expected to get everything correct but to practice their clinical reasoning skills in response to a variety of different situations. If mistakes occurred the repercussions from their decision-making were played out as if the situation was for real and the opportunity for it to be repeated again until a satisfactory response was achieved. A review of simulation-based education has shown programs that allow for repetition can improve the development of clinical reasoning skills (Macauley, Brudvig, Kadakia, & Bonneville, 2017).

The two-day workshop used role-play as part of the simulation experience. It required students to switch between the role of a registered nurse and that of a patient. Role-play is an experiential learning technique that allows students to act out specific roles and construct understanding by reflection based on different perspectives (Ertmer et al., 2010). This approach of immersive role-play has been implemented by others as one way of transitioning students to understanding the responsibilities of a registered nurse (Davies et al., 2012), and to provide nursing students valuable insights of empathy in what it must be like to be a patient (Beest, Bemmel, & Adriaansen, 2018). As shown in Table 4, the challenge of transitioning to the role of registered nurse emerged as a theme on what students found valuable and not valuable about the workshops.

For simulation to be effective it depends on the learner's ability to suspend disbelief. Suspension of disbelief is the ability of participants to accept a situation that in reality is not factually correct (Muckler, 2017). The concept is similar to that experienced when watching a movie or reading a novel. As shown in Table 4, efforts to mimic a realistic ward environment came under the theme of simulation and influenced whether students found the experience valuable or not valuable. Authentic and theatrical props were used during the workshop to encourage acceptance of simulated activities. This allowed students to become immersed and thereby engaged as if the situation was happening for real. Minimisation of interruptions to the immersive aspect of simulated activities played out in the workshops was considered important to mirror the real world for maximising the learning experiences of participants. Higher immersion of participants was shown to

occur in one study when simulated situations resembled the environment and portrayal of the scenario was not disrupted by unrealistic or 'out of place' interventions (Engstrom et al., 2016).

An important feature of the workshop was the involvement of industry partners. The inclusion of currently practicing nurses recognised the important role experienced nurses play in the professional development of students when out on clinical practice (Baldwin, Mills, Birks, & Budden, 2014). Although students were expected to be accountable for their actions and undertake the care required for each patient scenario, the role that the experienced nurse played as either the shift coordinator or float nurse was to provide support. First-hand knowledge on what happens in reality by our industry partners helped give authenticity to simulated situations played out during the workshops. At the same time, it gave them an understanding of the important role they can play in supporting students on how to respond to workplace pressures. A variety of collaborative programs between industry and education providers have been shown to bring a range of benefits for both parties involved (Beal, 2012).

Findings from this study showed just under half of students (45%) worked in the healthcare industry. Nursing students employed in the healthcare industry are able to practice clinical skills within their scope of practice, but support themselves financially with paid employment whilst completing their degree (Crevacore, Duffield, & Twigg, 2019). Evidence across different disciplines suggest combining study with work can have a negative effect on academic performance when working hours are excessive (Neyt, Omey, Verhaest, & Baert, 2017). The negative effects on working whilst studying can be reduced if work commitments are not excessive and experience gained is relevant to employment opportunities on completion of their studies. A study exploring the experiences of first-year nursing students showed students who undertook paid work whilst studying experienced a range of benefits that were not purely financial (Christiansen et al., 2019). Students commentated that skills they acquired when working such as time management, ability to work in a team, and enhancement of interpersonal communication were transferrable and relevant

to their nursing studies. This might explain why in Table 3 students with work experience as a healthcare worker reported greater satisfaction in reflecting on their performance and in asking questions during debriefing than their peers who had no real-life experiences in the clinical setting to draw upon.

Evidence of the benefits of ward-based immersive simulation suggest the experience can enhance clinical practicums exposing the student to learning opportunities not always achievable when out on supervised practice which may extend to professional preparedness once qualified as a registered nurse (Gamble, 2017). Although this case study demonstrated satisfaction with the simulation workshops was strongly supported by students, the positive influence of similar ward-based simulation workshops may have on clinical performance as a student and after graduation requires further investigation based on longitudinal studies. Success of programs such as the one described ultimately rely on whether a difference is observed in the assimilation of new graduate nurses into the workforce, mastery in the role and responsibilities of a registered nurse, and monitoring levels of retention of those who remain in the healthcare industry.

Strengths and Limitations

The case study's finding in support of continuing the simulation workshops was strengthened using a validated assessment tool to measure student satisfaction. Student experiences were also allowed to be expressed freely and common themes identified by content analysis. Despite the survey being collected anonymously the possibility exists for a tendency towards positive responses concerning the workshop, given that students were completing a survey about their learning experiences distributed by educators who had a vested interest in its success. The degree to which strong views against the workshops were not expressed is a limitation that cannot be completely excluded. By only measuring self-reported levels of satisfaction, a limitation was placed on determining the program's success in terms of improving student performance and employability as a registered nurse. The study did not consider what impact the simulation

workshops had on improving the preparedness of graduating students in adjusting to professional practice from the perspectives' of the graduate or employer.

CONCLUSION

Simulation is increasingly being used in nursing as a teaching strategy in bridging the gap between theory and practice. Extended immersive ward-based simulation can suspend disbelief to engage bachelor nursing degree students in what it must be like to assume the role and responsibilities of a registered nurse. Despite the assimilation of nursing knowledge final year students can feel unprepared for ward work if support is not given during the transition to a working environment. The level of satisfaction observed from holding 'Ward for the Day' suggest students value experiences from this type of experiential learning that they have not encountered before during clinical placements as a student nurse. Until now students had not been called upon to make their own decisions due to the requirement for supervised practice and as a result experience the consequences of their action or inaction. For students about to undertake their final clinical placement, the ward-based simulation workshop was designed to prepare students to be 'ward-wise ready' played out by the simulation of a variety of clinical stories. It is yet to be determined from work undertaken so far that exposure to extended immersive simulation can translate into a reduction in transition shock and students who are better prepared to enter the workforce as a registered nurse.

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Table 1: An example of a patient scenario and associated clinical story used during the two-day simulation workshop

Patient Scenario	Clinical Story	Specific Learning Outcomes
Lindsey Grey is a 56-year-old Farmer. After sudden onset of chest pain that did not go away, he asked his wife to call the emergency number and ask for an ambulance. In the hospital's Emergency Department Lindsey was commenced on nitroglycerine and heparin intravenous infusions. On arrival to the ward, Lindsay reports he is now pain free. A preliminary diagnosis of unstable angina has been made.	<u>Day 1</u> Day 1: Since Lindsey's admission, he has been pain free on the ward. Lindsey is anxious unsure if he has had a 'heart attack' or not. During the afternoon shift, Lindsey suddenly develops chest pain. If chest pain continues without adequate relief, the cardiac monitor will show ventricular tachycardia. Lindsey will remain conscious for a brief period before there is absence of blood pressure. Lindsey will revert back into sinus rhythm after three rounds of CPR. The on-call cardiologist visits Lindsey in the evening and arranges him to undergo an urgent percutaneous coronary angiogram. <u>Day 2</u> Lindsey complains of palpitations. It is accompanied by breathlessness and feelings of light headiness. Cardiac monitor shows arterial fibrillation associated with a drop in blood pressure.	<u>Day 1</u> ○ Initiates assessment of acute onset of chest pain ○ Administers prescribed pharmacological measures (including oxygen) ○ Initiates recording of 12-lead ECG following patient complaint of chest pain <u>Day 2</u> ○ Recognition of abnormal cardiac rhythm ○ Initiates recording of 12-lead ECG ○ Makes timely referral to medical officer ○ Administers ventricular rate-controlling pharmacological agents ○ Administers pharmacological and non-pharmacological strategies to prevent thromboembolism

Table 2: Characteristics of survey participants

Variable	n*	%
	243	**(100)**
Age (years):		
18-21	36	14.8
22-29	79	32.5
30-39	42	17.3
40-49	21	8.6
50+	3	1.2
Gender:		
Female	173	71.2
Male	26	10.7
Enrolment:		
Single degree (nursing)	192	79.0
Double degree (nursing & midwifery)	6	2.5
Currently not working in healthcare	88	36.2
Currently working in healthcare:		
Enrolled Nurse	31	12.8
Care support worker	65	26.7
Other	17	7.0

*Frequencies that do not add up to the total n have missing data

Table 3: SEE-scale scores for each item and overall score for each category

	Total Cohort						Healthcare Worker						Non-healthcare Worker						
Debrief and reflection	**N**	**Min**	**Max**	**Mean**	**Median**	**SD**	**n**	**Min**	**Max**	**Mean**	**Median**	**SD**	**n**	**Min**	**Max**	**Mean**	**Median**	**SD**	**p-value**
The facilitator provided constructive criticism during the debriefing.	243	1	5	4.77	5.0	0.77	110	1	5	4.72	5.0	0.78	88	1	5	4.63	5.0	0.89	0.27
The facilitator summarised important issues during the debriefing.	243	1	5	4.77	5.0	0.73	110	1	5	4.80	5.0	0.71	88	1	5	4.68	5.0	0.88	0.15
I had the opportunity to reflect on and discuss my performance during the debriefing.	243	1	5	4.75	5.0	0.75	110	1	5	4.81	5.0	0.74	88	1	5	4.65	5.0	0.89	0.05*
The debriefing provided an opportunity to ask questions.	243	1	5	4.74	5.0	0.75	110	1	5	4.79	5.0	0.73	88	1	5	4.63	5.0	0.90	0.03*
The facilitator provided feedback that helped me to develop my clinical	234	1	5	4.71	5.0	0.80	106	1	5	4.72	5.0	0.83	86	1	5	4.66	5.0	0.90	0.53

reasoning skills.																			
Reflecting on and discussing the simulation enhanced my learning.	234	1	5	4.73	5.0	0.77	106	1	5	4.76	5.0	0.75	86	1	5	4.65	5.0	0.90	0.23
The facilitator's questions helped me to learn.	234	1	5	4.67	5.0	0.80	106	1	5	4.72	5.0	0.79	86	1	5	4.59	5.0	0.90	0.12
I received feedback during the debriefing that helped me to learn.	234	1	5	4.70	5.0	0.77	106	1	5	4.72	5.0	0.75	86	1	5	4.64	5.0	0.89	0.48
The facilitator made me feel comfortable and at ease during the debriefing.	234	1	5	4.71	5.0	0.79	106	1	5	4.75	5.0	0.77	86	1	5	4.64	5.0	0.89	0.22
Overall debrief and reflection score	2142	1	5	4.72	5.0	0.77	970	1	5	4.75	5	0.76	782	1	5	4.64	5.0	0.89	0.27
Clinical reasoning																			
The simulation developed my clinical reasoning skills.	240	1	5	4.63	5.0	0.80	110	1	5	4.66	5.0	0.77	87	1	5	4.60	5.0	0.90	0.76

The simulation developed my clinical decision-making ability.	240	1	5	4.65	5.0	0.71	110	1	5	4.66	5.0	0.77	87	1	5	4.63	5.0	0.89	0.93
The simulation enabled me to demonstrate my clinical reasoning skills.	239	1	5	4.64	5.0	0.81	110	1	5	4.66	5.0	0.81	87	1	5	4.59	5.0	0.90	0.34
The simulation helped me to recognise patient deterioration early.	239	1	5	4.55	5.0	0.88	110	1	5	4.60	5.0	0.83	87	1	5	4.49	5.0	0.96	0.44
This was a valuable learning experience.	239	1	5	4.69	5.0	0.79	110	1	5	4.74	5.0	0.75	87	1	5	4.59	5.0	0.91	0.09
Overall clinical reasoning score	1197	1	5	4.63	5.0	0.81	550	1	5	4.66	5.0	0.79	435	1	5	4.58	5	0.91	0.76
Clinical learning																			
The simulation caused me to reflect on my clinical ability.	240	1	5	4.73	5.0	0.74	108	1	5	4.75	5.0	0.73	87	1	5	4.67	5.0	0.87	0.68
The simulation tested my clinical	240	1	5	4.74	5.0	0.76	108	1	5	4.72	5.0	0.76	87	1	5	4.64	5.0	0.86	0.46

ability.																			
The simulation helped me to apply what I learned from the case study.	238	1	5	4.58	5.0	0.81	107	1	5	4.59	5.0	0.82	86	1	5	4.50	5.0	0.89	0.35
The simulation helped me to recognise my clinical strengths and weaknesses.	240	1	5	4.64	5.0	0.81	108	1	5	4.67	5.0	0.80	87	1	5	4.58	5.0	0.88	0.33
Overall clinical learning score	958	1	5	4.67	5.0	0.78	431	1	5	4.75	5	0.73	347	1	5	4.60	5.0	0.88	0.68

*Level of significant difference $\leq$0.05

Table 4: Categories, themes and frequencies on what students found valuable and not valuable

		Total Cohort		Healthcare Worker		Non-Healthcare Worker		Working Status Not Declared		
Ranking	**Category**	**Code Count**	**% Code Count**	**Code Count**	**% Code Count**	**Code Count**	**% Code Count**	**Code Count**	**% Code Count**	**Themes**
1	Value of simulation	58	12.7	30	6.6	20	4.4	8	1.7	Simulation
2	Realism of workshops	52	11.4	13	2.8	32	7.0	7	1.5	Simulation
3	Organisation of workshops	48	10.5	19	4.1	13	2.8	16	3.5	Simulation
4	Transition from student to qualified nurse	45	9.8	13	2.8	25	5.5	7	1.5	Role of registered nurse
5	Applying critical thinking into clinical practice	41	9.0	18	3.9	11	2.4	12	2.6	Role of registered nurse
6	Reflection	39	8.5	13	2.8	16	3.5	10	2.2	Learning
7	Supportive learning environment	31	6.8	9	2.0	16	3.5	6	1.3	Learning
8	Accepting accountability	30	6.6	12	2.6	13	2.8	5	1.1	Role of registered nurse
9	Ward-based challenges	26	5.7	13	2.8	6	1.3	7	1.5	Role of registered nurse
10	Clinical skills consolidation	25	5.5	16	3.5	5	1.1	4	0.9	Learning
11	Importance of teamwork	24	5.2	12	2.6	8	1.7	4	0.9	Learning
12	Prioritising care	21	4.6	10	2.2	9	2.0	2	0.4	Role of registered nurse

13	Safe learning environment	18	3.9	7	1.5	8	1.7	3	0.7	Learning

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HD, EJ and DS conceived the study. Survey responses was managed by HD and DS. Interpretation of findings was conducted by HD, RS, EJ and DS. HD drafted the manuscript. Draft for publication was approved by all listed authors.