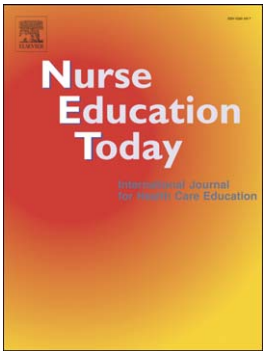

Empowering the registered nurses of tomorrow: Students' perspectives of a simulation experience for recognising and managing a deteriorating patient

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EMPOWERING THE REGISTERED NURSES OF TOMORROW: STUDENTS' PERSPECTIVES OF A SIMULATION EXPERIENCE FOR RECOGNISING AND MANAGING A DETERIORATING PATIENT

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ABSTRACT

Background: Recognising and responding to patients who are deteriorating are key aspects to improving outcomes. Simulations provide students with exposure to deteriorating patient scenarios and the role of nurses in such events. The number of programs seeking to provide best possible simulation experiences is growing exponentially. Robust evaluation of these experiences is crucial to ensure maximum benefit.

Objectives: To assess the impact of a deteriorating patient simulation experience on students' technical and communication skills; and to determine if differing study programs and years of previous nursing experience influenced students' responses and experiences.

Methods: A convenience sample of final year nursing students (N=57) in a medical-surgical course at a large urban university completed a descriptive pre/post simulation survey rating their technical skills and communication abilities in recognising and responding to patient deterioration. Changes in pre/post scores were analysed including influence of study program (3-year, 2- Enrolled Nurse, 2-year Graduate Entry); gender; and years nursing experience (beyond course clinical practicum).

Results: Statistically significant improvements in post-simulation survey scores were demonstrated for combined student group data. Students with greater years nursing experience had statistically higher scores than those with less experience in both pre- and post-surveys. Specific improvements were identified for: *assessing a deteriorating patient*; and in *seeking help from the medical officer or external service*. **Conclusions**: All student groups gained benefit in participating in a deteriorating patient simulation. For this group, greater years of prior nursing experience led to higher pre- and post-survey scores. The learning activity provided students an experience of the importance of recognising and responding to an acute situation in a timely manner which may be recalled in subsequent clinical situations.

INTRODUCTION

Recognising and responding to a patient who is clinically deteriorating is an imperative of patient safety and quality groups worldwide. Employers and health care consumers expect new graduate nurses to function optimally in the often chaotic hospital ward environment, where situations of patient deterioration may occur at any time. Preparing students for independent Registered Nurse (RN) practice should, therefore, include exposure to common patient care scenarios they will encounter in the clinical setting. An important focus for students towards the end of their degree is to understand the important role nurses have in detecting and escalating a situation where a patient is deteriorating. Ideal responses in such situations would be: targeted patient assessment; initiating help from others in a timely manner; effective communication and confident technical skills capabilities. Experiencing simulation scenarios focussed on patient deterioration aims to improve senior students' ability to respond appropriately when confronted with subsequent situations in clinical practice.

BACKGROUND

The hallmarks of early patient deterioration have been clearly identified (Rattray et al. 2011) yet a variety of studies have shown that the early warning signs of clinical deterioration are often not detected by staff in a timely manner (Cuthbertson et al. 2007)

Contributing factors in the failure to identify patients who are deteriorating include: a lack of awareness of the signs of clinical deterioration ; inconsistent vigilance in monitoring patients who are at-risk or who's condition changes; uncertainty about when to seek assistance from senior staff or specialised teams (e.g. Medical Emergency or Rapid Response Teams – MET / RRT); and failures in communication between staff members (DeVita et al. 2010; Endacott et al. 2007). Increased awareness of the early warning signs of patient deterioration and the importance of timely escalation and pre-emptive management should be the focus of regular training sessions for

practicing clinicians and health professional students (Endacott et al. 2010). One strategy to achieve this is active participation in simulations of relevant clinical scenarios.

Research highlights the benefits of using simulation training to recreate important clinical scenarios to detect and respond to patient deterioration (DeBourgh & Prion 2011; Endacott et al. 2010). For undergraduate health care students, simulation provides opportunity to be exposed to such time critical scenarios and gain an appreciation of the unpredictable nature of clinical practice. In the case of patient deterioration, the use of simulation can highlight to students the clinical signs and symptoms of pending deterioration within a contextualised scenario and determine ways in which to deal with these situations.

Nursing research to date has predominantly focussed on students' overall confidence following a simulation encounter. For instance, Reilly and Spratt (2007) found that students who participated in simulation considered it promoted active learning, developed clinical competence and increased confidence prior to undertaking clinical practice. Other studies however have shown limited or no links between learning through simulation activities and increased confidence or improvement in knowledge. Brannan and colleagues (2008) examined perceived confidence in students who had either a simulation experience or a traditional lecture, and found no significant differences between the two groups. Zulkosky (2012) found no significant differences between groups in knowledge test scores after a traditional lecture and case study teaching strategy, compared with debriefing after watching pre-recorded high-fidelity simulation scenarios. Exploration of more defined benefits of simulation for students would add to the body of knowledge.

Purpose of the study

The use of simulation scenarios provides an opportunity to facilitate the development of specific technical, clinical and decision making skill capabilities required to respond in demanding clinical situations such as patient deterioration. This results in a mechanism with which to continue to develop the student's awareness and discrimination of patient situations, their responsiveness and

overall clinical performance in a protected learning environment as preparation for practice. Facilitating awareness of technical skills capabilities under a pressure situation and highlighting the imperative for early escalation of a deteriorating situation are focussed and practical elements to improve clinical performance. These elements of practice were highlighted as key attributes and were central to a simulation activity. This paper presents findings from a pre-post inquiry of senior nursing students who experienced a simulation that focussed on a deteriorating patient.

Conceptual Framework

The simulation activity and research was guided by Tanner's Model of Clinical Judgment (2006), which was integral to the nursing curriculum and integrated simulation learning experiences. This model is based on four aspects: **noticing, interpreting, responding** and **reflecting**, which guides students' clinical reasoning and decision making skills from both theoretical and practice perspectives.

The first aspect of the model, **noticing**, we believe to be of prime importance for increasing students' awareness of the patient's condition and in this instance, the potential for acute deterioration. Depending on program entry pathway, previous nursing experience and clinical practicum rotations, students have variable experiences to draw from and hence variable expectations of patients' trajectories to relate to in any given clinical situation. Tanner emphasises the importance of these elements i.e. what the nurse brings to the situation, to subsequent aspects of the model and how decision making proceeds. Seeking further information and **interpreting** the significance of new data in the context of the simulated patient scenario is likely to move students to the next element of **responding** (Lasater 2007). These first three aspects of Tanner's model provide a structure for progression through decision making processes irrespective of students' background or experience (Lasater 2007; Tanner 2006). This current research investigated the benefits perceived by senior nursing students, from three entry pathways, within a challenging simulation framed around clinical judgement and decision making processes.

Study aims

The study had two main aims: to determine the impact of a deteriorating patient simulation in increasing senior undergraduate nursing students' ability to recognise and respond appropriately; and to examine the impact of program of study on students' responses and performance during the simulation.

METHOD

Design

A descriptive pre/post test design was used in this research.

Setting and Participants

The study was conducted at a large urban Australian university. There are multiple entry pathways into a Bachelor of Nursing degree in Australia (Blackman, Hall & Darmawan 2007). In addition to the 3-year program for recent school leavers, there are accelerated 2-year programs for Enrolled Nurses (EN) and Graduate Entry (GE) students. Most ENs have completed one year of technical college study with concurrent practical experience (Blackman, Hall & Darmawan 2007) and enter the degree with varying years of prior nursing experience. GE students in this study possessed a Bachelor degree in another discipline and were pursuing a career change to nursing.

All final year Bachelor of Nursing students enrolled in the Medical-Surgical nursing sub-major course (N=275) participated in the simulation (see Table 1) in one of their weekly three hour clinical laboratory sessions. Students assumed an active role in the simulation or observed, and then changed about for phase two of the scenario (set four hours later in the same patient scenario). As this was the first immersive simulation encounter for the majority of students, one academic provided guidance during the activity when necessary and remained within the laboratory. A second academic provided patient responses through the manikin via wireless microphone and manned the telephone to provide relevant responses.

Background patient case information was provided to students in the preceding week, as well as simulation learning objectives. The patient scenario built on course content and provided opportunity to bring theoretical aspects together with clinical practice skills. Table 1 outlines information about the patient scenario, simulation learning objectives and roles. In essence, the simulation aimed to highlight to students how unmonitored intravenous fluid administration could impact on an elderly post-operative patient who had existing cardiovascular compromise.

Students from all three entry pathways converge in the final year of the BN, therefore all courses and classes comprise students from varied backgrounds. For the research, a convenience sample of students from three clinical laboratory classes (n=75) were asked to contribute to the data collection. Hence the sample comprised students undertaking the 3-year, 2-year EN or 2-year GE program. Choice of classes for the study sample was based on researcher availability and student schedules however all students in the course experienced the simulation learning activity and debriefing.

Ethical considerations

The university's human research ethics committee granted approval for the research. Participation in the study was voluntary and did not influence students' course grades. Following written consent, participants completed survey questions before the simulation and after the debriefing. Confidentiality was assured by using codes instead of participant names from data collection through to data entry and analysis. Three of the researchers were involved with teaching in the course, and in order to address potential bias, collection of data was conducted by one of the academics who was not teaching the respective clinical laboratory classes.

Data collection and analysis

Development of the pre – post survey

The pre and post surveys were specifically designed for the study, as no appropriate surveys were located in the literature. Two of the authors developed the surveys, based on combined expertise

with evaluating educational programs using surveys, previous experiences in delivering simulation, and with consideration of the simulation evaluation literature published (or in press) at the time (Jeffries 2007; Kardong-Edgren, Adamson & Fitzgerald 2010). Questions were drawn from previously developed in-house surveys, then refined and pilot tested with other nursing students to ensure face validity. Expert faculty researchers provided advice throughout the survey development phase.

The survey was specifically developed to examine student's ability to recognise a deteriorating patient; to perform a range of clinical tasks relevant to the scenario context; and their ability to communicate patient issues they were concerned about and seek assistance from more experienced nursing and medical staff (including MET or RRT). Participants were asked to self-rate their skill ability (six questions) on Likert scales (1-4) with anchoring statements of 'Not so good' to 'Very good'; and to rate their confidence in seeking assistance (four questions) from 'Not confident' to 'Very confident'. Total possible score range for the survey was between 10–40. Demographic data were also collected.

After completing the pre-survey, students participated in the simulation scenario (Table 1). Following the simulation debriefing, participants were asked to repeat the survey, a common method used in simulation research which provides immediate perspectives about the impact of the learning experience (Liaw et al. 2012; Nathan, Davies & Clarke 2012).

Data were entered into the SPSS (V17) software program. Analysis comprised descriptive statistics, frequencies, t-tests and ANOVA. In the latter case, post-hoc analysis was undertaken to explore differences between student groups. As the group sizes were unequal, the Tukey-Kramer variation (harmonic mean) of Tukey's HSD test was applied (Toothaker 1993). Significance was set at $p<.05$. Survey responses were pooled to provide an overall pre- and post- simulation score.

RESULTS

A total of 62 (83%) from 75 students responded to the surveys. Demographic information regarding program of study, gender, and years of nursing experience (beyond clinical experience within the program) is reported in Table 2. Fifty percent of students (n=31) were enrolled in the 3-year program; 55% (n=34) had less than two years nursing experience and the majority were female (n=53; 86%). This sample was representative of the overall Bachelor of Nursing student cohort at the time. After data cleansing, 57 (76%) of complete cases were subjected to statistical analysis.

Overall pre- Vs post-simulation scores

Students reported feeling more positive about their abilities subsequent to the deteriorating patient simulation experience. The overall pre-simulation mean score of 23.7 (SD 3.4) increased significantly to the post-simulation mean score of 27.4 (SD 4.2; $p<.01$) (Table 3). When data from the three student groups were analysed separately, statistically significant increases in post simulation scores were observed for all three groups with a greater increase for the GE students, from 21.6 (SD 2.8) to 26.7 (SD 2.2; $p<.01$). A higher pre-simulation mean score was also noted amongst students who were ENs (25.9 SD 3.6) compared with the 3-year (23.2 SD 3.8) and 2-year GE (21.6 SD 2.8) student groups.

ANOVA was conducted to see if there were any statistically significant differences in pre- and post-simulation scores across the different programs of study. Statistically significant differences were seen in the pre-simulation scores ($F=6.90$; $p<0.01$) but not in the post-simulation scores ($F=1.27$; $p=.29$) or the difference scores ($F=0.96$; $p=0.39$). In light of unequal group sizes, post hoc analysis was undertaken which revealed that the 2-year EN group reported significantly higher overall scores in the pre-simulation survey than students in the 3-year (Tukey's HSD=-3.05; $p=.02$) or 2-year GE programs (Tukey's HSD=-4.80; $p\leq.01$). There were no statistically significant differences between pre-simulation scores of the 3-year and 2-year GE groups (Tukey's HSD=1.75; $p=.33$).

Years of previous nursing experience were shown to have an impact on both pre- and post-simulation scores. Significant differences were found between groups in both pre ($F=12.05$; $p\leq.01$)

and post scores (F=4.05; p=.02). In post hoc tests of pre- simulation scores, students who had 5+ years' experience had statistically significant higher scores than students with <2 years (Tukey's HSD=-6.54; p≤.01) or 2-5 years' experience (Tukey's HSD =-4.33; p=.02). For the post-simulation scores, there were again differences between groups who had <2 or 5+ years' experience (Tukey's HSD=-5.482; p=.02). Results indicated those who had a greater amount of nursing experience rated themselves higher both pre and post simulation.

Skills ability

Six questions grouped in the 'skills ability' category related to students' self-rated ability to assess a deteriorating patient and communicate findings with others. Example questions included: *1) Rate your ability to assess and recognise a patient who is deteriorating; and 2) Rate your ability to communicate the patient's status to other health care professionals.*

In addition, students were asked to rate their technical ability and efficiency and interactions with the patient and team members. An example question was*: In the practice setting, you may be asked to set up IV fluid therapy, prime a syringe pump or undertake a comprehensive set of vital signs. In relation to above, how do you rate yourself with regard to: Technical ability* (and other aspects as noted in Table 4). The only substantial difference evident in the skill ability grouping between pre and post scores was *assessing and recognising a patient who was deteriorating* (Table 4).

Confidence in approaching others

Four questions in the 'confidence in approaching others' category focussed on students' confidence in approaching others for help. Options were: another Registered Nurse (RN); the Team Leader (TL); a Medical Officer (MO); or an external service e.g. Medical Emergency or Rapid Response Teams (MET/ RRT). Following the simulation experience, results indicated increased student confidence in approaching others for help particularly a Medical Officer or an external service.

DISCUSSION

Providing students with simulated exposure to reasonably realistic & often chaotic situations where a patient may rapidly and unexpectedly deteriorate confers benefit (Cooper et al. 2011; Purling & King 2012). Compared with experiencing similar situations in the clinical setting for the first time, the simulation encounter offered students a controlled situation with time for focussed discussion and debriefing. In this simulation experience, patient characteristics (co-morbidities) were able to be highlighted along with other factors likely to contribute to a patient's deteriorating clinical condition.

Noticing, interpreting and responding – for patient safety

After experiencing this simulation, there were improved overall ratings across all student groups in 'skills ability' and 'confidence in approaching others for help'. Of key importance were the substantial improvements in students' *ability to assess and recognise a deteriorating patient* and the *willingness to alert either the MO or MET/RRT services*. These components align with a number of patient safety imperatives and aspects of Tanner's Model of Clinical Judgment in particular: **noticing**, **interpreting** and **responding**.

The ability of nurses, as frontline health care workers, to attune their attention to patient clinical parameters which herald deterioration and to initiate timely patient review are skills and capabilities which mature with experience. For beginning practitioners and students, guided exposure to such situations and increased awareness of the significance of appropriate OR delayed responses on patient outcomes is crucial in both clinical and educational settings and reflects recommendations of patient safety groups (Australian Commission on Safety and Quality in Health Care 2013; World Health Organisation 2013). That students felt more able to assess and recognise a deteriorating patient is an important simulation outcome for those about to enter professional practice and addresses concerns raised by Devita et al. (2010) about the importance of being aware of the signs of clinical deterioration. Further, improvements in students' willingness to alert others for help in such situations aligns with calls for greater certainty about when to seek assistance from senior staff or specialised teams (Endacott et al. 2010).

Simulation learning experiences enable students to safely work through patient scenarios, make decisions and act on their findings within a controlled setting. Opportunities for senior students to make decisions is not always possible during clinical practicum experiences, due to workplace demands, time constraints and concerns about patient safety (Kelly & Ahern 2009). Allowing students to play the role of a registered nurse in the simulation, to form judgements and make decisions amongst the team based on the unfolding patient situation provides life-like experiences which may provide benefit in subsequent clinical scenarios (Cooper et al. 2011; Rochester et al. 2012).

Findings from the research indicate senior nursing students were able to make clinical judgements during the simulation encounter which resulted in them seeking assistance for urgent patient review. Although clinical data such as patient skin colour and behavioural characteristics are difficult to obtain from manikins, students were able to gain a perceptual grasp of the situation e.g. fluid balance status, develop a sufficient understanding in order to respond e.g. increased difficulty in breathing and decide on a course of action appropriate for the situation e.g. initiate urgent intervention. This is particularly reflected in the findings of students' increased ability to *assess and recognise a deteriorating patient*, and *willingness to alert others for help* following the simulation. Students' actions and survey results align with the aspects of **noticing, interpreting** and **responding** (respectively) in Tanner's model (2006). The opportunity to rehearse these components of clinical practice may provide students with an additional practical experience they can draw from when caring for patients in similar situations particularly as new graduate nurses.

Differences across student groups

Some differences within the study parameters were noted across student groups. The 2-year GE student group appeared to gain most benefit from the simulation experience with greater differences in pre and post survey scores compared with the 3-year and 2-year EN groups. This may be related to the relatively limited clinical experience of the GE student group. On the other hand, the 2-year EN group, who possess greater previous nursing experience, rated their abilities higher than the

other student groups in both pre and post simulation surveys. This result is not unexpected in that the 2-year EN group may have been exposed to similar patient situations in their practice. However, as with the other groups, the 2-year EN group had similar increases from pre to post simulation scores indicating a positive impact of the learning encounter irrespective of previous nursing experience.

Findings from this research which highlighted differences across the three student groups in pre- and post-survey scores indicate different degrees of benefit through participating in simulation activities. There is little data in the simulation literature about differences across student groups (program of study) and their relevant learning needs or benefits following simulation experiences. Similarly, literature about new graduate nurses during their first year provides little detail of how students from different study streams transition into professional practice. Survey data from one study (Kelly & Ahern 2009) revealed that after one month in the workforce, new graduates struggled with adjusting to workplace cultures in some settings, had varied level of support and were often left to 'work things out' for themselves. The new graduates, two of whom were Enrolled Nurses and three between 40-50 years of age, felt under-prepared for registered nurse practice in the areas of accountability, responsibility, decision making and the reality of the all encompassing role of the registered nurse (Kelly & Ahern 2009). It appears that previous nursing experience (EN practice) or life experiences may not provide additional benefit for graduates in their first year of practice. This highlights the need for simulation experiences, such as managing patient deterioration, to challenge and prepare all senior students for registered nurse practice irrespective of previous experiences and background. This area needs further inquiry to determine specific requirements for differing student groups in relation to simulation and preparation for new graduate practice.

The opportunity to think and respond as a registered nurse in this simulation challenged students to make decisions more independently which reflects practice expectations, particularly related to patient safety issues, on entering the workforce (Parker et al. In press).

Learning to think like a nurse

In designing simulation learning experiences for nursing students, academics must consider that participants often have considerably different levels of clinical, as well as life experiences and theoretical knowledge. In delivering this learning activity to students who had few or no previous simulation experiences faculty assumed a more supportive rather than 'hands off' role through being present in the laboratory or from 'patient' responses via the manikin. From the study findings, one might consider whether students should be separated and challenged according to their level of expertise. We suggest there are added benefits of combining students with varied levels of expertise in the same simulation supported by faculty as 'virtual' team members which enables different perspectives and ways of viewing and responding to such clinical situations to contribute to overall decision making processes (Lasater 2007; Tanner 2006; Wenger 1998). Further, the range of life and professional experiences across student groups combined with the clinical expertise of faculty reflects realities of the workplace and provides diversity and points for discussion about nursing practice in general which in essence represents a community of practice (Lave & Wenger 1991; Wenger 1998).

Study limitations and areas for further research

The study was conducted at a single site with moderate sample size hence generalisability of results to other settings may be limited. Sole reliance on self-report data may contribute to over or under reporting of student abilities and hence bias results. Unequal or small numbers in some sub-groups limited more rigorous statistical analysis. However, results provide important insights for further investigation.

Determining reliability and validity of the developed survey would strengthen the rigor of its use in subsequent research. Longitudinal studies to follow-up students into their new graduate year would

provide insight into how university simulation experiences impact on performance in a similar situation in clinical practice.

CONCLUSION

Irrespective of prior nursing experience or study program, findings from this research indicate benefit from the simulation experience for senior nursing students in their ability to assess and recognise patients in an acute situation and to seek help quickly. This outcome also indicated achievement of the simulation learning objectives which in essence aimed to empower the registered nurses of tomorrow.

Opportunity to participate in an immersive deteriorating patient simulation has provided these senior nursing students with an appreciation of the importance of recognising a similar situation (noticing and interpreting) and responding appropriately. The simulation experience provided students with a context of the acute nature of the clinical situation, insight into what needs to happen and the importance of responding without delay when patients deteriorate. Study findings indicate these students, irrespective of degree entry pathway, may be better prepared for subsequent similar scenarios in the clinical setting than if they had not experienced the simulation. As registered nurses about to enter the workforce, this deteriorating patient simulation experience has provided opportunity for all student groups to reflect on key aspects of patient safety, their capabilities and future individual learning needs.

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Table 1. Elements of the deteriorating patient simulation scenario

Learning objectives	At the end of this simulation, participants will have learnt to: Assess, recognise and respond to changes in a patient's condition Practice taking a lead role and managing an emergency situation Recognize when to seek assistance from fellow staff and other resources Demonstrate effective communication with the patient, within the multidisciplinary team and the ability to provide concise, critical information
Patient information	A 61 year old, post-operative female patient with a history of cardiovascular compromise During phase 2 (four hours later) the patient experiences sudden and acute alterations to fluid balance which precipitates pulmonary oedema
Format	The simulation experience comprised of: • review of the patient case • receiving an orientation to the simulator and environment • selecting an active or observer role • working through the simulation with guidance from the academic if required • stepping out of role • participating in a facilitated debriefing session +/- audio-visual footage.
Roles	Registered Nurses x 3 Team Leader Relative/s Observer/s Academic as the patient's voice/ doctor on the phone/ receive call for an external service
Simulation run time Debriefing time	Approximately 10-12 minutes Approximately 20 minutes

Table 2. Study participants' demographics (n=62)

Variable	Levels	Number (%)
Study program/ group	3 year program	31 (50)
	Accelerated EN	17 (27)
	Accelerated Grad	11 (18)
	Not stated	3 (5)
Gender	Male	7 (11)
	Female	53 (86)
	Not stated	2 (3)
Years nursing experience (assistant in nursing, enrolled nurse or registered nurse in another country)	<2	34 (55)
	2-5	15 (24)
	>5	7 (11)
	Not specified	6 (10)

Table 3. Pre and post simulation survey scores – overall (n=57) and per study stream.

Possible score range 10-40.

	Pre-Simulation Mean (SD)	Post- Simulation Mean (SD)	t*	p
Overall (n=57)	23.7 (+/- 3.5)	27.4 (+/- 4.2)	-7.470	p≤0.01
3-year (n=29)	23.2 (+/- 3.8)	27.2 (+/- 4.1)	-5.699	p≤0.01
2-year EN (n=15)	25.9 (+/- 3.6)	29.0 (+/- 5.1)	-3.755	p≤0.01
2-year GE (n=11)	21.6 (+/- 2.8)	26.7 (+/- 2.2)	-4.631	p≤0.01

*Paired samples t-test

Table 4. Survey item mean scores – pre and post simulation (n=57)

Item	Pre Mean (SD)	Post Mean (SD)
Skill ability		
Assessing	**2.42 (+/- 0.66)**	**2.67 (+/- 0.60)**
Communication	2.56 (+/- 0.56)	2.58 (+/- 0.69)
Technical ability	2.47 (+/- 0.67)	2.47 (+/- 0.65)
Efficiency	2.34 (+/- 0.57)	2.36 (+/- 0.66)
Interaction (patient)	2.97 (+/- 0.60)	2.85 (+/- 0.75)
Interaction (team)	2.72 (+/- 0.55)	2.70 (+/- 0.69)
Skill Total	15.31 (+/- 2.4)	15.61 (+/- 2.97)
Confidence in approaching others		
-Registered Nurse	3.26 (+/- 0.54)	3.16 (+/- 0.52)
-Team Leader	3.04 (+/- 0.61)	3.04 (+/- 0.55)
-Medical Officer	**2.62 (+/- 0.64)**	**2.78 (+/- 0.59)**
-Medical Emergency Team	**2.35 (+/- 0.73)**	**2.73 (+/- 0.63)**
Confidence Total	11.23 (+/- 1.99)	11.74 (+/- 1.73)