

Volume 3 Issue 2 May 2009

INTERNATIONAL JOURNAL OF CLINICAL SKILLS



A Peer Reviewed International Journal for the Advancement of Clinical Skills
- 'docendo ac discendo' - 'by teaching and learning'



In this issue:

Involving patients as educators: adding value to clinical experience

Emergency department ultrasound

Examination of the cardiovascular system

Medical student theatre etiquette course

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Published by SkillsClinic Ltd.

Acknowledgements

I would like to take this opportunity to show appreciation to all those involved with the production of the International Journal of Clinical Skills. Many thanks to all members of the Editorial and Executive Boards. Our sincere gratitude for the continued support of Professor the Lord McColl of Dulwich CBE, Professor Dame Carol Black DBE and Professor Harold Ellis CBE.

The International Journal of Clinical Skills looks forward to contributing positively towards the training of all members of the healthcare profession.

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Foreword

Chairman of the Academy of Medical Royal Colleges



The searching reappraisal of almost every element of health care that we have seen in recent years has brought challenges and stimuli to all who have a part in this enterprise. Ultimately, the quality and safety of patient care depend upon the professionalism of people of many disciplines who have a responsibility to deliver that care, and therefore upon the quality of their education and their training and the ability to exercise their clinical skills and competences at the highest possible level in practice.

The mission of the International Journal of Clinical Skills is to support and promote that professionalism and I wish it growing success.

be & grack

Professor Dame Carol Black DBE FRCP FMedSci United Kingdom

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Nursing students' perceptions of learning vital signs in a clinical skills laboratory

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Keywords:

Clinical skills
Nursing students
Confidence
Practice
Enjoyable experience

Abstract

Background: the use of the clinical skills laboratories (CSL) has become increasingly popular within nurse education internationally and the role of simulation within clinical skills teaching has grown more sophisticated and complex. As students are afforded an opportunity to perfect their ability to perform clinical skills within the clinical skills laboratory, there are reports that patients can be the beneficiaries of improved care. This study focuses on Bachelor of Nursing Science (BSc) student's perceptions of using an intermediate-fidelity simulator in the University's Clinical Skills Laboratory to learn the skill of blood pressure measurement.

Aim: to explore nursing student's perceptions of learning vital signs in a clinical skills laboratory.

Method: using a quantitative approach, a sample (n=50) from the population of first year nursing students completed a questionnaire following two clinical skills teaching sessions, and then prior to their first clinical placement.

Findings: research results were positive. Over 80% strongly agreed that CSL facilitated a setting where learning and teaching could occur. Confidence, practice and learning from mistakes were some of the concepts highlighted in the study.

Conclusion: these findings are in line with international research and demonstrate that the clinical skill laboratories provide a realistic environment for practice.

Introduction

Evidence from the literature suggests that the use of simulation in nurse education is increasing in popularity both internationally and nationally within Irish universities [1, 2, 3, 4]. This study focuses on Irish nursing students' perceptions of learning the skill of blood pressure measurement in a clinical skills laboratory (CSL) using an intermediate-fidelity patient simulator (Laerdal® Nursing Anne®) [5].

Simulation technologies

Computer based simulations have been in use for decades in other professions but have proliferated in medicine and nursing in more recent decades [6]. A patient simulator [7] is a full body-size mannequin with realistic and interactive physiological human like features. However, suggestions are made that simulation technologies differ according to the level of fidelity, the degree to which the aspects of the technology match the 'real world' [6]. A patient simulator can be described as high-fidelity, intermediate-fidelity or low-fidelity [6, 8, 7]. An intermediate fidelity patient simulator can be modified by an operator to pre-programme trends or to modify a patient's physiological parameters [7]. In this study using an intermediate fidelity patient simulator (Laerdal® Nursing Anne®) [5] blood pressure parameters were modified as the teaching session progressed and the perceptions of nursing students with regard to learning using this simulation technique, in the clinical skills laboratories, were sought.

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Perceptions of learning in the CSL

Many studies have reported positively on student's perceptions of the use of simulation to enhance teaching and learning in clinical skills laboratories [9, 10, 11, 12]. Following evaluation of student learning in the clinical skills laboratory, students reported increased self confidence and self-esteem and suggest that this enhances the students' nursing skills [11]. Similarly a recent study [12] in the UK found that students (n=267) perceived that simulation increased both their confidence and ability in relation to clinical skills. Moule [13] also found that simulation was positively received by students.

It is interesting to note on evaluation of both students and faculty staff perceptions of the use of a high-fidelity patient simulator that only 50% of students agreed that the skills learned would transfer to the clinical area, while all of the faculty staff agreed [9]. Further studies [1, 10] found that the clinical skills laboratory was perceived as a learning environment that supported the linking of theory and practice. This suggests that patients may ultimately benefit from the time nursing students spend in the clinical skills laboratory as students are able to practice and prefect their skills in a safe environment without practicing on patients [11].

The Nursing and Midwifery Council (NMC) in the United Kingdom [14] recently completed a pilot study involving the participation of 17 higher education institutions in testing principles for auditing simulated practice learning environments in the pre-registration nursing programme. Evaluation of the pilot study concluded that a safe and effective means of supporting learning can be provided in a simulated practice setting. In response, the NMC approved the use of up to 300 hours of clinical training within a simulated practice learning environment as part meeting the EU Directive requirement for the completion of 2300 clinical hours [14].

While An Bord Altranais, the Irish Nursing Board, has not it appears to date, considered conducting a similar type of study, it beholds the nursing profession in Ireland to evaluate the contribution that learning in the clinical skills laboratories makes to the education of our young graduates. While a national project has not been conducted, research and evaluation of teaching using simulation within an Irish context is available and is growing. When reviewing the literature on simulation in nurse education a number of studies focus on specific skills and while suggesting that this approach to research does limit the generalisation of the findings, the authors acknowledge that it does provide invaluable insight into the scope of learning through simulation [15].

This study examines nursing students' perceptions of learning the skill of blood pressure measurement in a clinical skills laboratory (CSL) in an Irish university and while some [15] might argue that this focus on a specific skill limits the generalisation of the findings, it can be argued that the skill of blood pressure measurement is one that most nurses will utilise frequently and regularly throughout their nursing career and is a core skill in all disciplines of nursing. It is hoped that this paper will contribute to the growing body of knowledge that supports the use of simulation in undergraduate nursing education.

Methods

Ethical approval to conduct this study was received from the local Health Service Executive ethical board. Using a quantitative approach a sample (n=50) from the population of 125 first year nursing students completed 8 five-part Likert scales ranging from 'strongly disagree' to 'strongly agree' following two clinical skills teaching sessions, and then prior to their first clinical placement. Item generation was developed from the literature and the author's professional experience. The questionnaire was piloted with students excluded from the main study.

The questionnaire was distributed to the students electronically during the teaching session and following the session students were given an information sheet inviting them to participate in the study. The instructions asked that each student should only complete the questionnaire if they had attended the clinical skills teaching session on blood pressure measurement facilitated by the two researchers. Visual inspection of the questionnaire was undertaken to eliminate duplicate completion of the questionnaire. The completion rate was 100%.

The Questionnaire:

- The Clinical Skills Laboratories environment facilitated a relaxed setting in which I could learn.
- I found it helpful that the teacher demonstrated the skill of blood pressure measurement at the start of the clinical skills session.
- Practising on the Nursing Anne mannequin after the demonstration helped me to develop the skill of blood pressure measurement.
- The Nursing Anne® mannequin was realistic.
 The Nursing Anne® mannequin allowed me to practice the skill of blood pressure measurement without practicing on patients.
- It was helpful to be able to learn from my mistakes.
- Learning within the Clinical Skills Laboratories environment increased my confidence in preparation for my first clinical
- Learning within the Clinical Skills Laboratories environment was an enjoyable experience.

Results

Research results were positive. Over 80% of respondents strongly agreed that the CSL facilitated a relaxed setting in which learning could occur and almost 70% of students strongly agreed that it was helpful to be able to learn from their mistakes. Over 97% agreed/strongly agreed that learning within the CSL environment increased their confidence in preparation for their first clinical placement.

Over 80% of respondents agreed/strongly agreed that the Nursing Anne® mannequin was realistic and 83% agreed/ $\,$ strongly agreed that the mannequin allowed them to practice the skill of blood pressure measurement without practising on patients.

Discussion

These findings are in line with those reported by the Nursing and Midwifery Council (2007) [14] where evaluation demonstrated that simulation increased student confidence and provided a realistic environment for practice. Secondly, it highlights the positive simulation experience for students. This is an initial study in order to develop a tool to measure the perceptions of learning and teaching within the clinical skills laboratory. The results may guide curriculum in a rapidly growing ever changing technological era.

As highlighted [12] many evaluations of simulation have focused on intermediate or high fidelity models; in this study an intermediate simulation model was used and the learning environment and clinical equipment available, were similar to students' placements. Similar to other studies, students agreed strongly that the simulators in the clinical skills laboratory increased their confidence. Whilst confidence is important, the ability to practice a skill safely and competently without practicing on patients is vital.

Overall the provision and positive experience of clinical skills laboratories is supported by this study. Whilst the study was Irish based, the results may be relevant to nursing programmes universally, as the need to prepare competent safe nursing students increases.

Conclusion

Hyland [14] contends that there is a need for more focused indepth explorations into how simulation can prepare students for the real world of clinical practice and assist in their integration into practice. The findings of this preliminary study are useful in the context of first year student nurses who have not yet completed a clinical placement, and particularly to staff educators who are relatively novice in facilitating clinical skill sessions in a clinical skills laboratory.

Students were positive about learning within the clinical skills laboratory, particularly the opportunity for supported learning. However, further studies are warranted to meet the needs of student nurses who have completed clinical placements and are moving from an observation phase to a participatory stage of delivering care.

Recommendations

A further study is recommended to explore if simulated learning enhances practice in the clinical setting.

Acknowledgements

The authors wish to express their appreciation to the HSE (west) and the University of Limerick who supported this study, and to the student participants for their enthusiastic participation.

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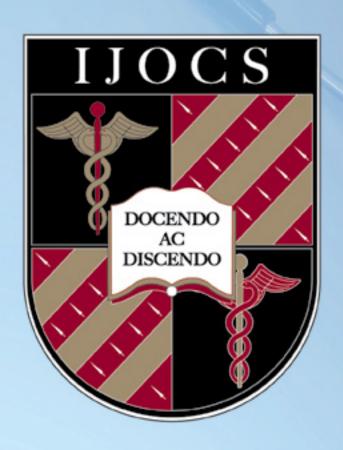
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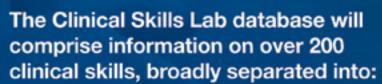




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E-mail: clarkedj@cardiff.ac.uk

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