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Annette Stunden
University of Western Sydney

Elizabeth J. Halcomb
University of Wollongong, ehalcomb@uow.edu.au

Diana Jefferies
University of Western Sydney, d.jefferies@uws.edu.au

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Abstract

Background One form of assessment that tests students' theoretical skills and confidence in their clinical practice is known as the Objective Structured Clinical Assessment (OSCA). Traditionally it was first launched from medical education, and is now being incorporated by other disciplines, such as nursing.

Objectives This review seeks to present the best available evidence into strategies that help reduce first year nursing students' anxiety levels prior to undergoing OSCA and clinical placement. Search Strategy A systematic literature search was performed using Medline and CINAHL. **Selection Criteria** This review considered any English language original research published between 2005 and 2013. **Results** A literature search located 117 articles. Eight articles were identified as meeting the inclusion in criteria. Majority of studies reported simulation session prior to the OSCA increased students confidence and reduced their anxiety levels. This resulted in students' reporting that they valued the OSCA as a worthwhile assessment. However there were four major themes: that students were anxious about attending the OSCA; that adequate preparation was seen as a coping strategy; that simulation was a further cause for anxiety; and that the simulation experience could also be used as an OSCA tool. **Conclusions** Students who have been exposed to simulation scenarios before the OSCA are able to cope much better during the OSCA. Therefore, it is highly recommended to incorporate simulation scenarios into the nursing curricula for first year nursing students' clinical units to help reduce their anxiety levels prior to OSCA.

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Tools to reduce first year nursing students' anxiety levels prior to undergoing objective structured clinical assessment (OSCA) and how this impacts on the student's experience of their first clinical placement

Annette Stunden ^a, Elizabeth Halcomb ^b, Diana Jefferies ^a,

a School of Nursing and Midwifery, University of Western Sydney, Locked Bag 1797, Penrith, NSW, Australia

b School of Nursing & Midwifery, University of Wollongong, Northfields Avenue, Wollongong, NSW2522, Australia

Corresponding author:

E-mail addresses:

A.Stunden@uws.edu.au (A. Stunden),
ehalcombe@uow.edu.au (E. Halcomb),
D.jefferies@uws.edu.au (D. Jefferies).

Abstract

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Conclusions. Students who have been exposed to simulation scenarios before the OSCA are able to cope much better during the OSCA. Therefore, it is highly recommended to incorporate simulation scenarios into the nursing curricula for first year nursing students' clinical units to help reduce their anxiety levels prior to OSCA.

INTRODUCTION

The objective structured clinical assessment (OSCA), also known as the objective structured clinical exam (OSCE), was developed in medical education during the 1970's (Harden, et al, 1975). Today the OSCA is a practical assessment tool used to examine whether students are prepared adequately for the clinical setting (Merriman & Westcott, 2010). It is a process where students demonstrate their competence under a simulated scenario (Watson et al, 2002). Consequently, it demonstrates if students are competent to perform specific nursing skills under examination conditions. Unlike a written exam, which tests theoretical knowledge, the OSCA is a different experience because it tests practical and clinical skills. Recent research by Fidment (2012) has evaluated the attitudes of healthcare professionals who have returned to study towards the OSCA and simulation. Both of these assessment tools are embedded in healthcare curricula across disciplines such as nursing, midwifery and physiotherapy in universities worldwide. Fidment's article remains relevant to a discussion about first year students' attitudes to OSCAs and simulation because it demonstrates the feelings and beliefs of all students when preparing for the OSCA and simulation. We argue that students on their first clinical placement experience the same feelings and beliefs that Fidment identified as occurring before and during the OSCA and simulation. Therefore, both the OSCA and simulation can be seen as important tools in preparing students for their first clinical placement so that it is a positive learning experience.

Current research about OSCAs is focussed on the implementation and evaluation of an OSCA (Brand & Schoonheim-Klein 2009; Furlong, Fox, Lavin & Collins, 2005; Major, 2005). Despite its growing use as an assessment tool, currently there is limited literature available which discusses students' perceptions such as the lived experience of the OSCA.

This literature review will address concerns such as student anxiety, OSCA preparation (coping skills and preparation for clinical) and simulation. According to Thomas (2005) a student may become anxious when placed in a stressful situation such as an OSCA. Therefore, all students need to be taught to manage

the emotional and psychological effects of their OSCAs in a constructive way in order to develop the confidence they require to become skilled registered nurses (Thomas, 2005). Fidment (2012) explored students' experience of an OSCA which revealed three main themes which are: student's anxiety levels; preparation as seen as a coping strategy; and simulation. Another theme was that simulation could be used as an OSCA, thereby assessing students' clinical knowledge in an environment that closely mimics the clinical setting. The findings demonstrate OSCA and simulation enhances student confidence and enables them to be more competent prior to clinical placement therefore making the clinical setting a more effective learning environment.

AIM

The aim of the study is to investigate the best possible evidence into strategies that reduce first year nursing students' anxiety levels prior to undergoing the OSCA and first clinical placement experience.

METHOD

Design

A systematic review method was used to explore first year nursing students' OSCA and clinical placement experience. The review followed the steps outlined by Shea, et al (2007). These steps were: searching the literature; critical appraisal of selected journal articles; reading and extracting data from journal articles; synthesising data into a summary table; and identifying major themes which form the recommendations.

Search strategy

The review consisted of an initial search of CINAHL and MEDLINE from 2005 (when the OSCA experience was first discussed in the literature) to 2013 and was limited to English language. The keywords used included: First year nursing students; baccalaureate nursing student; OSCA; objective structured clinical assessment; OSCE; Objective Structured Clinical Evaluation or Exam; clinical

assessment skills; practical assessment; clinical simulation and experience/s. Once identified, the reference lists of articles were consulted to see if they contained further relevant articles.

Initially, the literature search identified 117 articles. However, after reviewing the title and abstract against the inclusion criteria, 8 articles were found to meet these criteria.

Table 1 Prisma Statement

Inclusion criteria

All primary research that reported on nursing students' experiences of the OSCA published in English language were included.

Exclusion criteria

Observational studies were not included as they were only reporting current practice and do not assess the subjective experience of the student

FINDINGS

Of the 8 papers included in this review, 5 reported quantitative studies, 2 outlined a qualitative study and 1 further study described a mixed method investigations. All studies reported research undertaken in either the USA (n=3; 37.5%), UK (n=4; 50%), or Australia (n=1; 12.5%). Given the heterogeneity of methods used, the analysis was undertaken using thematic analysis. From this analysis 4 themes emerged, first, anxiety about the OSCA, second, preparation seen as a coping strategy, third, simulation as a further cause for anxiety, and finally, simulation as an OSCA experience. (Table 2)

Anxiety

According to Fidment (2012) anxiety is an issue for undergraduate nurses undertaking an OSCA. However, Fidment cited Rushforth (as cited in Fidment, 2012) to suggest that anxiety could be a positive influence equipping students with appropriate coping mechanisms and teaching them how to manage stressful situations. Cazzell and Rodriguez (2011) found that many students described the experience as provoking intense anxiety. However this was often due to organisational issues such as inconsistencies with instructions, the involvement of staff, and the scenario setup. This led to the student's perception of a loss of control. Another qualitative study focused on students' perceptions of the OSCA. Abdo and Ravert (2006) agreed that the anxiety felt by students was a positive experience because the OSCA scenario prepared them for the clinical experience by adequately testing technical skills such as taking vital signs. Also all students felt to some extent the OSCA adequately tested clinical decision-making skills (Abdo and Ravert, 2006). These are two of the few studies available that examines how students perceive the OSCA experience (Cazzell & Rodriguez, 2011).

Table 2: Summary of Results Table

REFERENCE	SAMPLE	COUNTRY	Data Collection	Study Type	Intervention	KEY RESULTS
Abdo & Ravert (2006)	19 nursing students	U.K	Semi- Structured Interviews	Qualitative Descriptive Study	one hour sessions with patient simulator	Experience recreated real-life situations (52.9%) Tested their clinical decision making (76.5%) Prepared them for real-life clinical setting and increased their confidence (52.9%).
Bremmer, Aduddell & Amason (2008)	149 first year nursing (experimental=71 / control = 78)	U.S.A	Pre/post test questionnaire with twenty items to determine information in the use and value of the intervention strategy	Experimental design using randomised intervention groups	Hands on experience with human patient simulator (HPS) versus skills lab session one week prior to first clinical placement.	Control group exhibited a higher degree of anxiety (46.37%) Experimental group (45.52%).
Ballie & Curizo (2009)	179 first year nursing students (experimental=85 / control = 88) 79 nursing students 43 first year (simulation) 36 first year (clinical).	U.K	The students in the simulation group completed a pre and post questionnaire. The students in the non-simulation group completed a post questionnaire.	Mixed Methods	Simulation programme during clinical placement versus Clinical placement without simulation programme.	Students in the simulation group perceived that simulation increased their ability and confidence in their clinical placement (93%).
Kable, Levett-Jones, Arthur, Reid-Searl (2012)	85 first students 25 First year nursing students	Australia	A student evaluation instrument focussed on 17 Likert-type questions designed to test the extent to which students perceived the simulation activity.	Mixed method approach	Intervention Learning objectives and outcomes of several simulation activities. Student in first evaluated 10 simulation learning experiences.	(N=85) students reported that they did not always feel supported. Higher scores for realism (p=0.001) and fidelity (p<0.001). First year students reported that they had significantly higher preparation for the simulation experience (P>0.0001).
Gore, Hunt, Parker & Raines (2011)	70 first year baccalaureate nursing students 47 (intervention) 23 (control group).	U.S.A	47 student nurses participated in a simulation experience prior to clinical placement	20 self-reporting items that measure anxiety with a 4-point Likert scale	Preclinical simulation experience	The intervention group anxiety levels were significantly lower than the control group (P=.01) before the students attended their clinical

						placement.
Alinier, Hunt, Gordon & Harwood (2006)	67 undergraduate nursing students (29 (experimental group)38 (control group))	U.K	A pre test/post test questionnaire about an OSCE to determine the competence and confidence of the students after a simulation experience. The students perceptions of stress were measured by a 5 point Likert scale.	Quantitative experimental design	3 hour simulation session .	Experimental group had a greater improvement in performance than the control group (P<0.05) Feedback was that simulation training is beneficial in education
Fidment (2012)	10 registered health care professional (9 nurses and 1 allied health professional)	U.K	Semi-Structured Interviews	Qualitative	Semi-structured interviews	Anxiety about the OSCA Preparation seen as a coping strategy Simulation was a further cause for anxiety,
Cazzell & Rodriguez (2011)	20 nursing students	U.S.A.	Focus Group	Qualitative	A ten station patient safety OSCE	Students experienced a loss of control and anxiety due to organisational issues. Students requested immediate feedback Students identified the importance of patient safety for their future clinical placements

Preparation as a coping strategy

Fidment (2012) found student preparation prior to the OSCA was identified as a key component to reducing students' anxiety levels. Scenario-based simulation prior to their OSCA also improved their performance during the OSCA but was also a reported further cause of anxiety. This view was also described by Kable et al (2012) who found that all first year students agreed that simulation contributed to their learning and helped them to achieve the course and session objectives. On the other hand, a study conducted by Alinier et al (2006) discovered that students who lacked confidence did not encounter less anxiety prior to the OSCA through simulation training. However, in this study they reported that they did not always feel supported in the simulated sessions, which could lead to the anxiety reported by Fidment.

Simulation

Simulation can be defined as an opportunity to continue learning with the use of realism which mimics a natural setting in educational sessions because it provides an opportunity for the students to build confidence with physical assessment skills since they experience appropriate and realistic physiological sounds and functions (Bremner, Aduddell & Amason, 2008). This study also found that patient stimulation gives students the opportunity to build confidence since they can start over again if the experiences requires. A study conducted by Abdo and Ravert (2006) found the simulator experience enhanced students' learning and helped improve their decision making skills. One major reason for these findings was that the student saw the value of having greater feedback after their experience with the patient simulator (Abdo & Ravert, 2006). One disadvantage reported by students was the inability to communicate with a real patient, a lack of realism with the dummy and lack of time to work with the simulator. However, all students agreed that what was learned in the simulator sessions could be transferred into the clinical setting. Most importantly, nearly all students perceived the patient simulator experience as being valuable (Abdo & Ravert, 2006) and students identified important issues related to

patient safety that could be transferred to their clinical placement experience (Cazzell & Rodriguez, 2011).

Simulation as an OSCA experience

According to Alinier et al (2006) simulation when conducted under exam conditions such as an OSCA improves the student's OSCA experience. The study concluded that students who had simulation training compared to students who did not have simulation training obtained higher marks. Overall, students who are not competent and confident whether they have had simulation training or not will more than likely experience some level of anxiety when exposed to the OSCA (Alinier, et al, 2006). Another study conducted by Gore et al, (2010) found that following simulation, students consistently reported feeling more confident with their skills and better prepared for the clinical setting. It created an avenue for students to perform both individually and within a team. The students experienced an increase in their confidence in performing patient care and a decrease in anxiety, which together serve to create a meaningful learning experience (Gore et al, 2010).

DISCUSSION

The findings of this study above will contribute to future OSCA development. The themes of student anxiety, preparation (coping styles), simulation, and simulation as an OSCA experience demonstrated how the OSCA and simulation prepare students for their clinical placement. However, using the OSCA and simulation was not an easy process for the student.

Studies demonstrated that the OSCA could be a cause of anxiety if it was not well prepared by the organisation (Cazzell & Rodriguez, 2011). These feelings of anxiety were compounded because it played a major role in assessing students' competence and confidence levels prior to practising in the clinical setting (Smith, Muldoon & Biesty, 2012; Pandya & Bhagwat & Kini, 2010; Pender & de Looy, 2004). Therefore, the organisation plays a major role in ensuring that all students will benefit from this form of assessment. Measures that could reduce anxiety include good scenario preparation. If this is achieved students still reported feeling some levels of anxiety prior to the OSCA, but students experiences the overall benefit of the OSCA by being better prepared for the clinical setting (Byrne and Smith, 2008). Thus, as Fidment (2012) and Abdo & Ravert (2006) concluded that the OSCA was a positive learning experience because it prepared students for the clinical setting.

The OSCA had further benefits for the students. Hawker and Walker (2010) state that a preclinical OSCA highlights students' that will need guidance and support while on clinical placement and it pinpoints any students' who have problems carrying out basic nursing skills. Oranye et al (2012) agree that the OSCA ensures that nursing students' are able to deliver safe nursing care. In addition, Baxter and Norman (2011) mention in order to determine a student's strength and weakness prior to clinical an OSCE serves as an additional evaluation. A pilot study conducted by Pender & de Looy (2004) was able to examine 37 student's preclinical skills through OSCA prior to clinical placement. According to Pandya, Bhagwat and Kini (2010) the OSCA is the most robust, valid and reliable assessment tool used to evaluate students clinical skills.

However, the key to ensuring that the OSCA experience prepared the student for the clinical setting was that no assumptions should be made about the student's prior knowledge and that they need to be adequately prepared for their OSCA (Brand & Schoonheim-Klein, 2009; Brooks, 2007; Brosnan et al, 2006). One answer to reducing anxiety could be the use of simulation because students had the opportunity to make mistakes and learn from them in a safe environment. This leads to students becoming more competent with their core clinical skills. Crucially, students' perceptions of the simulated programs could have positive impact on their clinical learning. Facilitators identified that simulation increased students' confidence by familiarising them to the clinical environment and by improving their communication skills. Also the majority of students considered the skills they had learned were relevant and the program increased their ability and confidence in skills performance. Lastly, the simulation program helped students' prepare for their OSCA experience and their clinical placement (Ballie & Curzio, 2009). Further measures could support the effectiveness of simulation. These include the students being orientated and briefed before the simulation activity. They should also have the opportunity to debrief after the simulation activity. This would provide an opportunity for students to express their feelings and assist them to meet learning objectives and understand course content. Thus to be an effective learning tool, simulations programs must be well prepared and designed so that students' have a safe environment that mimics real life situations in the clinical setting while allowing students to have adequate time to develop the core nursing skills that they will practice in the clinical setting.

LIMITATIONS OF THIS REVIEW

As Fidment (2012) pointed out there is a possibility there may be concerns with these findings as this review was based on a specified group of students. Further research looking at other groups of students who may undertake an OSCA is warranted to validate these findings. In summary Smith, Muldoon and Biesty (2012) state the main benefit of the OSCA is that it can be implemented as an assessment tool to assess students' competence level prior to clinical placement.

CONCLUSION

As Fidment (2012) shows, this review establishes that anxiety as a key factor for first year students undertaking an OSCA and a clinical placement. Therefore, it is crucial that organisations ensure that OSCAs and simulation are prepared well and that academics are able recognise and manage students' who display feelings of anxiety. When academics are assessing students undertaking OSCA and clinical placement they need to consider that students may be feeling anxious due to their lack of confidence in their practical skills. But, it should be noted that when students are placed in a stressful situation anxiety can also have positive effects by enabling them to focus and pay attention. The literature demonstrates that students who have been exposed to simulation scenarios prior to the OSCA are able to cope better during the OSCA and when placed in the clinical setting. Therefore, a recommendation would be to implement well organised simulation scenarios into the nursing curricula for first year nursing students' clinical units to help reduce their anxiety levels prior to OSCA.

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