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Enhancing OSCE preparedness with video exemplars in undergraduate nursing students. A mixed method study


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Title: Enhancing OSCE preparedness with video exemplars in undergraduate nursing students. A mixed method study

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Word limit - 5334
Abstract:

**Background:** Objective structured clinical examinations (OSCEs) are designed to assess clinical skill performance and competency of students in preparation for ‘real world’ clinical responsibilities. OSCEs are commonly used in health professional education and are typically associated with high levels of student anxiety, which may present a significant barrier to performance. Students, including nursing students, have identified that flexible access to exemplar OSCEs might reduce their anxiety and enable them to better prepare for such examinations.

**Aim:** To implement and evaluate an innovative approach to preparing students for OSCEs in an undergraduate (registration) acute care nursing course.

**Method:** A set of digitized OSCE exemplars were prepared and embedded in the University-based course website as part of usual course learning activities. Use of the exemplars was monitored, pre and post OSCE surveys were conducted, and qualitative data were collected to evaluate the approach. **OSCE grades were also examined.**

**Findings:** The online OSCE exemplars increased self-rated student confidence, knowledge, and capacity to prepare and provided clarity around assessment expectations. OSCE exemplars were accessed frequently and positively received; but did not impact on performance.

**Conclusion:** Video exemplars aid student preparation for OSCEs, providing a flexible, innovative and clear example of the assessment process. Video exemplars improved self-rated student confidence and understanding of performance expectations, leading to increased engagement and reduced anxiety when preparing for the OSCE, but not overall OSCE performance. Such OSCE exemplars could be used to increase staff capacity and improve the quality of the student learning experience.
Keywords: flexible clinical learning tools, OSCA, OSCE, student anxiety, examination preparation, video exemplars.
Introduction

Development of effective clinical skills is crucial for preparing healthcare professionals, including nursing students, for real world experiences, ensuring safe clinical practice (Eldarir & Abd el Hamid, 2013). Assessment of practical skills and clinical competence required in health education curricula often occurs in simulations of real world scenarios, using Objective structured clinical examinations (OSCEs). Accordingly, OSCEs have been integrated into the curriculum for Bachelor of Nursing programs with other relevant forms of assessment, both internationally and within Australia (Alizadeh et al., 2014; Chiou-Rong & Ue-Lin, 2015; Jo & An, 2014; Mitchell, Henderson, Groves, Dalton, & Nulty, 2009; Setyonugroho, Kropmans, Kennedy, Stewart, & van Dalen, 2016).

The reliability and validity of the OSCE as a clinical skill assessment tool is well researched (Al-Osail, Al-Sheikh, Al-Osail, Al-Ghamdi, Al-Hawas, 2015; Setyonugroho, Kennedy, & Kropmans, 2015; Setyonugroho et al., 2016). Interestingly, students’ perceptions of the OSCE, the OSCE process itself, and the impact that it has on their clinical skill learning and clinical practice has received less attention (Johnston, Massey, 2016; Nulty, Mitchell, Jeffrey, Henderson, & Groves, 2011). However the OSCE process is acknowledged to be highly stressful (Brand, Schoonheim-Klein, 2009). High levels of stress may hinder students’ ability to effectively demonstrate their clinical capability (Brosnan, Evans, Brosnan, & Brown, 2006; Muldoon, Biesty, & Smith, 2014), negatively impacting on performance and learning (Byrne & Smyth, 2007).

Exam-related stress may be attributed, in part, to a lack of student understanding of, or unfamiliarity with the examination processes and exam requirements (Muldoon, Biesty, Smith, 2014). Therefore, one way to reduce the stress associated with the OSCE could be to
provide clarity and transparency across exam expectations using familiarization and ‘exposure’ to the OSCE (Brand, Schoonheim-Klein, 2009; Fidment, 2012). Decreasing students’ anxiety and stress, may subsequently improve student performance and their ability to succeed (Alizadeh et al., 2014; Eldarir & Abd el Hamid, 2013; Johnston et al., 2016; Studden, Halcomb, & Jefferies, 2015).

Video instruction, as a form of e-learning, has been shown to effectively engage students in learning outside the traditional boundaries of the classroom (Barratt, 2010; Chan, 2010; Rushforth, 2007). Videos can be used to provide exemplars or models, which promote active learning as well as development of and reflection on student knowledge and understanding of clinical skills (Bartfay, Rombough, Howse, & Leblanc, 2004; Kelly, McGrath, Cannon, 2009). Kelly and colleagues (2009) developed a range of blended learning activities, including 12 clinical videos (Kelly et al., 2009). Students positively received these clinical videos, however Kelly and colleagues (2009) suggest that these videos did not affect overall student outcomes, concluding that they were a valuable adjunct to live clinical demonstrations. Other researchers reported that clinical videos have not only been positively received, but positively impact performance (Lashley, 2005; Weeks & Horan, 2013). One randomized controlled trial comparing an instructional video to traditional face-to-face learning indicated that exposure to the video increased success in the desired clinical skill (Lee, Boyd, Stuart, 2007). Moreover, videos promote flexible and equitable learning opportunities with minimal increase in staff workload (Karoglu, Kiraz, & Özden, 2014; Kelly, Lyng, McGrath, & Cannon, 2009). Thus this research endeavors to further explore this using video exemplars in an undergraduate nursing curriculum.

In this study, we aimed to describe and evaluate the effects of online video OSCE exemplars on nursing students’ perceptions and performance in an acute care
OSCE. We hypothesized that students would be supportive of OSCE video exemplars and that these would influence their confidence, preparation, and understanding of performance expectations, following engagement with this learning resource.

**Methods**

An evaluation of the resources was undertaken using a mixed methods approach.

**Ethics**

Ethical approval was obtained through Griffith University [GU Ref No: NRS/24/14/HREC].

**Sample and Setting**

Students enrolled in ‘Nursing clients with medical-surgical conditions’ (2801NRS) were chosen for this study. This double-point course is designed to help students develop theoretical knowledge and practical skills relevant to the care of individuals who may have a range of medical-surgical health needs. Students taking this course must complete OSCEs as one part of the overall assessment strategy. The course is offered across three geographically distinct campuses of the same University in South-East Queensland, Australia. This study was undertaken in 2014, and there were 730 students enrolled. No additional course credit or incentive to participate was offered for participation in this research and respondents remained anonymous. Recruitment was voluntary with consent implied by the return of the survey. Explicit signed consent was obtained for the students who participated in the qualitative arm of the study.
Intervention

A set of three digitized OSCE exemplars were developed on-site and embedded online in the University-based course website and learning materials. Video resources and associated tutorial support were provided to all students enrolled in the course throughout the semester. Each digitized OSCE exemplar was approximately ten minutes in duration and featuring previously successful students and current staff modelling various types of nurse-patient interactions and clinical skills, commonly assessed during this course’s OSCE. All three OSCE exemplars were moderated by examiners to be of ‘average to high’ standard. Students could view the exemplars in their own time via the course Blackboard site or in tutorials. The viewing of the video exemplars during tutorial time facilitated tutor supported discussion about the OSCE exemplars and the clinical scenarios depicted. Viewing the exemplars via the course Blackboard site in their own time enabled students to be self-directed and promoted a more flexible learning space.

Quantitative analysis

Website tracking data monitored student engagement with the video resources, including the timing, frequency, and duration of access. Mean OSCE performance across the entire cohort was collected and compared to the OSCE performance from the previous year (prior to availability of exemplars).

A paper-based pre and post survey was completed by students, prior to viewing the OSCE exemplars and again five weeks after completion of their OSCE examination. Participants indicated the extent to which they endorsed each statement on a 5-point Likert scale. Survey questions (see Table 2) asked about student level of confidence, knowledge, understanding and awareness of expectations regarding the OSCE, as well as their perceived skill level.
This survey was adapted from the Weeks and Horan study (Weeks & Horan, 2013). Students were also invited to rate the digitized video exemplar in the final Student Experience of Course (SEC) evaluation, which is a university-administered standard evaluation form completed at the end of each course.

De-identification of data ensured privacy was maintained throughout the analysis. Survey data was collated and analysed in Excel and SPSS. Pre and post intervention scores were compared, and a chi-squared and Mann Witney U test analysis performed (see Table 2). A Mann-Whitney U-test was used to compare the OCSE results across the entire cohort, between 2013 and 2014. A Mann-Whitney U-test was chosen as the OSCE results were not-normally distributed.

**Qualitative analysis**

Students from all three campuses were invited via email to participate in the focus groups. Focus group and interview questions are in Table 1. Questions asked in the focus groups were similar to the survey questions. However, they enabled deeper prompting of responses and thus allowed greater insight into student’s perceptions than the survey questions.

*Insert Table 1 here*

Focus groups and the interview were audiotape recorded and professionally transcribed verbatim. In the post-survey, students were given the option of leaving a written comment regarding the OSCE and/or digitized OSCE exemplars. These comments were analysed in conjunction with the qualitative data.
Interview transcripts were analysed using a general inductive approach and thematic analysis, to explore key concepts that emerged from the data (Braun & Clarke, 2006). Reading and re-reading transcripts and highlighting key phrases developed an understanding and sense of meaning in the data. Phrases were then grouped into themes and a table was constructed to match quotes to the emerging themes, and explore links between the themes. To enhance methodological rigour, the research team had several discussions around theme development and the final theme selection. Discussion and group consensus enhances the reliability and credibility of the identified themes; further ensuring rigour and quality (Polit & Beck, 2006). An audit trail was created to document these processes and the reasoning behind theme decisions. Additionally, a secondary computer-assisted analysis was completed using the concept-mapping software Leximancer (University of Queensland, 2014). This transparency helps ensure credible and dependable identification of themes; a parallel perspective approach to help ensure rigour and quality (Holloway & Wheeler, 2010).

Results

Sample and Setting

All 730 students, enrolled in 2801NRS, had access to the digitized online video exemplars. Students enrolled in this course were predominantly female (85%), and came from a variety of socioeconomic backgrounds and ages.

Intervention

Student online video ‘hits’

Data tracking software recorded 8,482 views of the digitized OSCE exemplars over the
semester. On average, students viewed the videos 10.9 times (range: 1-44 views from 730 active students). The majority of views occurred on the first two days of the week (i.e., Monday and Tuesday). Peak viewing was at the beginning of the week in which tutorials first introduced the OSCEs (1,226 views), and again on the first day of the formal examination week, immediately preceding their OSCE (721 views).

Student surveys

Students completed two surveys with a response rate of 191/730 [RR 26%] for the first survey and 176/ 730 [RR 24%] for the second survey. The mean response for all five questions on the pre-survey was 3.31, with a mode of 3, indicating an overall survey response of ‘sound’ (see Table 2. & Figure 1a). The mean response on the post-survey was 2.31, with a mode of 2, indicating an overall survey response of ‘high’ for all five questions (see Table 2 & Figure 1b). In the post-survey, there was a statistically significant and visible shift towards students responding more positively, with answers of ‘high’ and sometimes ‘very high’ (Figure 1b) evident across all five questions.

Chi-squared analysis of the differences in self-reported scores from the pre and post surveys, demonstrated significant changes with generally large effects sizes in each measure. Students rated their level of confidence ($\chi^2$ 4, n=366 = 87.34, p<0.001, $\phi$=0.49), awareness ($\chi^2$ 4, n=366 = 76.87, p<0.001, $\phi$=0.46), knowledge of examination content ($\chi^2$ 4, n=366 = 136.22, p<0.001, $\phi$=0.61), understanding of OSCE processes ($\chi^2$ 4, n=366 = 124.91, p<0.001, $\phi$=0.59) and skill level ($\chi^2$ 4, n=366 = 101.79, p<0.001, $\phi$=0.53) higher in the post-survey, compared to the initial survey.
Student response's in the overall course evaluation

Students were also invited to respond about the digitized video exemplars directly as part of the overall course evaluation (SEC). Eighty-three percent of student respondents rated the videos positively. Overall SEC course evaluation by students increased marginally. Overall SEC course evaluation by students increased marginally from 2013 to 2014, from 3.8/5.0 to 3.9/5.0, the student response rate was 26-60% [242/730] across the three campuses.

Summative academic performance in the OSCE

A Mann-Whitney U-test was used to compare the OCSE results across the entire cohort, between 2013 and 2014. A Mann-Whitney U-test was chosen as the OSCE results were not normally distributed. Results indicate no significant difference in overall OSCE performance between the two years (mean OSCE score in 2013 = 41.5, compared to in 2014 = 42.5, ns, P>0.05).

Student focus groups and interview

Two focus groups and one interview were completed with a total of nine students from all
three University campuses, following the OSCE examination in 2014. Qualitative data were also extracted when students chose to leave a written comment in the post-OSCE final survey.

Four interconnected themes emerged from the qualitative data. These were ‘the ability of the OSCE videos to clarify expectations,’ ‘the perceived value of the digitized exemplars for OSCE preparation,’ and ‘the usefulness of the accessibility of the digitized OSCE exemplars’ and ‘the stress/anxiety-reducing benefit of the OSCE exemplars’.

‘Clarity of expectations’ occurred because students were able to see what would happen in an OSCE and what type of performance was expected of them. This was positively received by students and noted to reduce stress.

‘It [the OSCE exemplar] showed you – in a roundabout way- showed you what to do, so you sort of had an idea of what was expected. So it brought out what – your knowledge of what you needed to do when you’re dealing with a patient doing that sort of stuff. For me, it actually sat my mind at ease, reduced the nerves and such.’

Similarly, students identified that the digitized OSCE exemplars were a ‘useful resource for exam preparation’. Students described watching and re-watching the digitized OSCE exemplars, often creating their own OSCE scripts based on what was seen in the exemplar. Having the OSCE exemplars to assist with preparation was further noted to ‘reduce anxiety’.
‘I watched it the first time at uni, when it was announced that it’s on our website, and again I watched all three of them just before the OSCE just to refresh my memory of what is what and it was good. I think, ‘cause the second time I watched, it was just to reconfirm that I was just sort of there.’

Students appreciated the accessibility of the OSCE exemplars and that they were available to them anywhere and at any time. The highly accessible nature of the resources was considered to assist with preparation and provide comfort to the students.

‘I could watch it after the kids had gone to bed – made it easier to prepare’

‘I liked just the fact that the videos were there. That took a lot of panic away’.

The OSCE exemplars depicted normal students, who were obviously nervous, but who had completed and passed their OSCE. This was seen to reassure current students of the achievability of the OSCE.

‘They were just normal students who had passed, so it did show you that – you can get through, even if you – if your nerves are really overtaken... ’
To conclude, the focus groups and interview indicated that the OSCE videos were positively received and were an asset due to their accessibility, that they depicted real students, and they were useful to clarify expectations, assist with preparation, and reduce anxiety.

Discussion

The current OSCE videos were designed as a blended learning tool, to meet the diverse needs of students, and align with best practice guidelines (Karoglu, Kiraz, Özden, 2014; Mitchell, Henderson, Groves, Dalton, 2015). Second year nursing students valued these online OSCE exemplars, most notably accessing them directly before their OSCE examination. Students suggested that video exemplars helped with preparation, decreased stress and enabled them to have a better understanding of OSCE expectations. At the end of the semester, students rated they had a higher level of confidence, knowledge, skills, and awareness of expectations, and understanding of OSCE exams, compared to their self-reports at the beginning of the semester. The video exemplars were also rated highly in overall SEC course evaluations.

Data indicates OSCEs are a valid and reliable way to assess clinical skill development amongst students (Framp, Downer, & Layh, 2015; Napankangas et al., 2016), despite potential impedance by student stress (Bagheri, Forotgheh, & Fallah, 2012; Mårtensson, Löfmark, Akademin, Avdelningen & Höskolan, 2013). There is a developing body of research exploring the use of video exemplars to assist in teaching, examination and then application to clinical practice. Current research indicates that online video exemplars and resources may assist in the development of clinical skills, both within an examinable scope (Weeks & Horan, 2013), and to real-world application (Forbes, Oprescu, Downer, Phillips,
Improved understanding of assessment expectations and better preparation has been suggested to reduce stress and increase student success in OSCEs (Fidment, 2012; Muldoon et al., 2014; Stunden, Halcomb, Jefferies, 2015). Ordinarily, students cannot view a ‘real’ OSCE. Video-based exemplars provide an opportunity for students to observe a ‘real’ OSCE, and gain insight into the clinical skills and the assessment environment. A video that is accompanied by a critique and rationale for marking, which can be further discussed amongst peers and within tutorials, highlights salient components of the OSCE approach.

The video exemplars used in this study were seen to act as a platform from which students could tailor their learning and preparation for their own specific OSCE experience, supplementing traditional lecture and tutorial based learning sessions. However, video exemplars were able to be accessed from home and outside of ‘traditional teaching hours’ allowing students to further tailor their learning experience and preparation approach. Many students reported watching the video initially within the tutorial, but then also at home. Some students used the exemplars to create their own scripted scenarios, which they then rehearsed, either alone or with peers. Students often referred back to the video exemplars, comparing their notes, scripts and/or performance to that demonstrated in the video. Repeated viewing of the video exemplars, outside of university, indicates students found these to be a useful tool to supplement traditional learning approaches. The OSCE exemplars also offered a more homogenous and tangible message for the entire student group across all campuses and the full cohort, compared to tutorials and lectures. They provided a consistent and transparent message to all students. The video exemplars allowed students to individualize their study time and prepare at their own level, rather than preparation and learning solely taking place in a formal tutorial setting (Stunden et al., 2015).
This tailored individualistic approach is particularly valuable in the increasingly resource and funding limited teaching environment (Goorah & Bahadur, 2012).

Instructional online videos have been noted to support student engagement in learning, reduce the stress associated with learning clinical skills, as well as increasing competency (Forbes et al., 2016). Whilst the students did report that the videos were useful for OSCE preparation, reduced anxiety and provided guidance on the clinical skills, no measureable changes were detected in OSCE performance. A direct link between teaching resources and academic performance is, however, poorly understood and notoriously difficult to measure. Literature suggests it is often difficult to demonstrate due to small sample sizes with multiple confounders (Rasmussen, Belisario, Wark, Molina, 2014). Previous research has suggested that online instructional videos complement student acquisition of clinical skills, however they may have little effect on summative performance marks (Johnston, Massa, & Burne, 2013; Kelly et al., 2009). Alternatively, some research has indicated electronic resources can have a positive influence on student performance (Cooke et al., 2012; Lashley, 2005; Lee et al., 2007; Weeks & Horan, 2013). Thus, whilst no significant change in OSCE performance was seen between consecutive course offerings in this study, multiple factors may have influenced this and future research is recommended.

**Limitations**

Data remained de-identifiable, with video exemplar access and student performance pooled and compared as one cohort, so that individual OSCE exemplar use and individual student performance on the OSCE could not be investigated. Thus a real effect on academic performance many have been masked. Future research could explore academic performance outcomes between frequent users of the video exemplars and non-users, to more accurately explore relationships between exemplar use and academic outcomes.
Additionally, due to the requirement for de-identified student results, we were unable to map responses against demographic factors i.e., student age, which have been shown in other digital media studies to strongly influence student appreciation of and engagement with such resources (Cooke et al., 2012). However, given the overall high frequency of accessing the OSCE resources and within-tutorial support surrounding these OSCE exemplars, and the high levels of anxiety reported by students, lack of engagement with the resources is less likely to be a concern.

The surveys were worded to explore broad knowledge, understanding, awareness, skill level and confidence regarding OSCE assessments. The questions did not specifically ask about the influence of the online resources or OSCE exemplars on these factors. Perhaps upon completion of the OSCE assessment, students felt more confident, knowledgeable and skilled, irrespective of whether they watched the OSCE exemplar or not. However, OSCEs are rated to be one of the most stressful types of examinations, (Brand and Schoonheim-Klein, 2009, Allen, Heard, Savidge, Bittengle, Cantrell, Huffmaster, 1998; Zyromski, Staren, Merrick, 2003 ). This suggests that the mere experience of having completed one or more OSCEs does not make students feel any less anxious, more knowledgeable, skilled or confident regarding OSCEs in general.

This study, like many involving voluntary student feedback, had a relatively low overall response rate, most notably in the qualitative arm. There may be a bias towards inclusion of particularly motivated and high-achieving respondents, which may not be representative of all the enrolled students. Nonetheless, the responses were seen to provide useful insight into the quantitative data, and triangulation of the focus groups, interviews and written comments suggests that these data are representative of the population of students as a
Finally, it must be noted that this study was undertaken at three geographically separated campuses of a single university. Using a single course in a uniform curriculum may have limited generalizability and transferability to other contexts.

**Conclusion**

Online OSCE exemplars were very positively received by the cohort of 730-second year nursing students. OSCE exemplars apparently helped students prepare for their OSCEs and demonstrate performance expectations. The accessibility of the OSCE exemplar was appreciated, and these factors combined helped reduce stress. Students identified that their skills and knowledge improved. Video exemplars were equitable and flexible resources, providing a blended learning approach to meet student needs, assist with teaching, and reduce student anxiety. Online video exemplars may be an effective way to assist students learn clinical skills and attain clinical skill competency benchmarks, thus setting them up to develop crucial skills for real-world practice.
References


Stunden, A., Halcomb, E., & Jefferies, D. (2015). 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
doi:http://dx.doi.org/10.1016/j.nedt.2015.04.014


Figure 1a. Responses to the questionnaire prior to the OSCE (n=191)

Figure 1b. Responses to the same questionnaire after the OSCE (n=175)
Table 1. Questions used during the focus groups and interview

<table>
<thead>
<tr>
<th>Initial questions</th>
<th>Follow-up question/promp 1</th>
<th>Follow-up question/promp 2</th>
<th>Follow-up question/promp 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Could you please describe how and if you watched the DVD?</td>
<td>If so, how many times did you watch it?</td>
<td>Why did you re-watch the DVD?</td>
<td>Where did you watch it? (GU; home; other place)</td>
</tr>
<tr>
<td>Thinking back – do you think having the DVD to watch changed your preparation for the OSCE?</td>
<td>If so, how? Please explain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you think the DVD affected your understand of what you needed to do in your OSCE?</td>
<td>If so, how? Please explain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were there certain aspects of the DVD that particularly helped or hindered your preparation for the OSCE?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What were the best and worst aspects of the DVD?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Could the OSCE DVD be improved?</td>
<td>What suggestions for improvements would you recommend?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is quite usual for students to be anxious before examinations and an OSCE is no different. We are interested in how you think the DVD may have altered your anxiety levels around your OCSE.</td>
<td>How you think the DVD may have altered (increased or decreased) your anxiety levels before your OCSE?</td>
<td>How you think the DVD may have altered (increased or decreased) your anxiety levels after your OCSE?</td>
<td>Have you done OSCEs before and if so, how many?</td>
</tr>
<tr>
<td>Do you have any further comments to make?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2. Responses to the survey enquiry before and after the OSCE

<table>
<thead>
<tr>
<th>Before OSCE</th>
<th>Q1: My level of confidence to successfully complete my 2801 OSCA is:</th>
<th>Q2: My awareness of the expectations of 2801 OSCA examiners is:</th>
<th>Q3: My knowledge of the content examined in the 2801 OSCA is:</th>
<th>Q4: My understanding of the OSCA examination process from the course material presented so far is:</th>
<th>Q5: My level of skill developed through the use of peer-review and feedback to others in 2801 is:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PRE</td>
<td>POST</td>
<td>PRE</td>
<td>POST</td>
<td>PRE</td>
</tr>
<tr>
<td>Mean</td>
<td>3.29</td>
<td>2.43*</td>
<td>3.27</td>
<td>2.28*</td>
<td>3.33</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.83</td>
<td>0.84</td>
<td>1.03</td>
<td>0.91</td>
<td>0.82</td>
</tr>
</tbody>
</table>

Note: '1' = very high, '2' = high, '3' = sound, '4' = poor, and '5'=very poor.

*Results were significantly different in the post-survey, compared to the pre-survey, for all questions. Chi-squared analysis results are listed above.
Research Highlights

- Clinical Skills developed in a simulated environment are important for preparing undergraduate nurses students for real world experiences.
- OSCEs are stressful and create significant anxiety that may impact on learning.
- Video exemplars of OSCE may help to prepare students and reduce anxiety and promote learning.