The introduction and evaluation of a consultant led formative OSCE (F-OSCE)

Sam Jeffreys[1], Pramodh Vallabhaneni[2]

Corresponding author: Dr Pramodh Vallabhaneni pramodh.vallabhaneni@wales.nhs.uk
Institution: 1. Swansea University, 2. Morriston Hospital, Swansea
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Abstract

Background & Aims

The use of OSCEs as a tool to examine students has been extensively evaluated and they are now seen as the gold standard in examination tools in the examination of medical and allied health students throughout the world. As part of the Child Health attachment at Swansea University Medical School, a formative OSCE has been introduced as a teaching method. This also aids in exposing students to an OSCE in a non-simulated Paediatric environment for the first time. The aim of this study is to evaluate whether students find the formative OSCE a helpful teaching tool.

Methods

An online questionnaire was send to students following their five week specialty attachment. Responses to the survey were voluntary and anonymous. The survey explored student's attitudes before and after the formative OSCE.

Results

47 students responded out of 69. Overall, students reported a high level of satisfaction with the formative OSCE. 95% found it useful to their learning, with 89 % stating their knowledge improved following the formative OSCE. 100% described the feedback they received immediately following their OSCE as helpful while 65% reported feeling anxious prior to their OSCE.

Conclusion

It can be concluded the formative OSCE was a successful aid to assess students. Majority reported positive experiences and felt that the formative OSCE aided their learning. Students suggested similar assessments would be beneficial in other specialty attachments. Formative OSCE’s, when conducted in ideal environment, can fulfill both regulatory and supervisory requirements.
Keywords: Formative assessment, Learning aids, Assessment tools

Introduction

OSCEs are now used in the assessment of medical and allied health professionals throughout the world (3) and in all specialties (3,4). The use of Objective Structured Clinical Examination’s (OSCE’s) was first described by Harden & Gleeson (1). They described a system where students would rotate around a series of stations on a hospital ward. Their work was based on the work by Barrows and Abrahamson (2) who described the use of ‘simulated patients’ in evaluating the students completing their Neurology clerkship. OSCEs are now used in the assessment of medical and allied health professionals throughout the world (3) and in all specialties (3,4).

As part of the four-year graduate entry medicine (GEM) programme at Swansea University, all students undertake a five-week Child Health block during their third or fourth year. During the final week of the placement, a Formative OSCE (F-OSCE) is organised. Student feedback of the F-OSCE was undertaken to enable evaluation of the F-OSCE as a learning/teaching method with the aim of identifying any potential improvements. In this study we outline the methods used to obtain student feedback, the identified benefits and potential areas where improvements could be made.

Methods

A short survey was designed using a popular online survey tool (5). Participants were asked to score each question on a Likert scale of Strongly Disagree to Strongly Agree (6). Questions were designed to identify the thoughts of participants prior to the F-OSCE. Anxiety, Stress, Preparedness and Confidence were the key themes explored. The main bulk of the questionnaire contained specific questions on the content, preparation, and usefulness of the F-OSCE. A free text box where students could enter any other comments was provided. Once students had completed the Child Health Specialty Attachment, they were emailed the link to the survey complete with explanation of the aims of the survey and how their responses are handled. All responses were anonymous, and participation was voluntary. Ethical approval was not deemed necessary for this study. Historically anonymous questionnaires with no patient data or involvement are exempt from ethical approval by our trust.

Results

In total, the entire cohort of 69 students completed the Child Health Attachment and of these, 47 completed the online survey giving a response rate of 68.1%. Systems that students were asked to examine included respiratory (42.9%), gastrointestinal (39.3%), and cardiovascular (10.7%) systems. One student performed a cranial nerve exam. Of the histories taken, 32% (8) were respiratory based, 56% (14) gastrointestinal while 12% (3) did not specify topic. Common diagnoses during both histories and examinations were those of asthma, constipation or diarrhoea. The majority of students (66% - 59.6% Agree, 6.4% Strongly Agree) reported feeling anxious before the F-OSCE, and 23.4% of students (17.0% Agree, 6.4% Strongly Agree) reported feeling stressed. The majority of students (55.3% - 53.2% Agree, 2.1% Strongly Agree) felt prepared going into the F-OSCE, although only 34.0% felt confident about what they may be asked to do, 17.0% felt unprepared, with most (48.9%) indifferent in their response. In general the responses regarding the F-OSCE were positive. Everyone felt what was asked of them was fair, that the location was suitable and that the feedback they received was helpful. 94.4% (34) found it useful for their learning and 86.1% (31) thought their knowledge had improved. 36 students opined that they would like the
option to have similar formative OSCEs in other specialty attachments.

Discussion

In general, the overall trend of feedback was that the students found the F-OSCE to be beneficial to their learning, and would welcome the opportunity to have similar formative OSCE's during their other attachments. This is interesting given that the students reported high levels of anxiety, although anxiety in the build up to and even during an OSCE is not uncommon (7,8). The format and structure of each F-OSCE varied between students and the variety of F-OSCE s undertaken reflects the environment. As the F-OSCE s were undertaken in the Paediatric Assessment Unit (PAU), histories and examinations involving respiratory and gastrointestinal systems predominated. The F-OSCE and final week of each students attachment with the aim of this being after they have had sufficient exposure to working in the paediatric environment to be able to perform what is asked of them a fact that is reinforced by all 47 students reporting that what was asked of them was fair for their level.

The timing of the F-OSCE did generate some specific comments suggesting that perhaps multiple F-OSCE s would be beneficial. It would enable students to develop and build on feedback given. "I would have enjoyed more than one F-OSCE to improve on the previous performance." "...Or maybe even doing another F-OSCE assessment at a different time in the placement so you could gauge how much you had improved." "...Perhaps having two F-OSCE s would be better (although possibly not easily achievable) to allow one to take the comments on board and have a go again might have helped me.

Feedback following assessments is always a key area for students and examiners (9,10). The timing of the feedback is also an important point with students often preferring immediate direct feedback as opposed to delayed feedback by other methods (9). In their comments, the students all agreed that the feedback they were given following their OSCE was beneficial. Formative OSCEs are therefore beneficial and are being advocated as important educational tools. Our experience has been extremely positive and we hope to develop this assessment tool for our students across several specialties.

Take Home Messages

- Formative assessments are useful aids in assessment.
- Formative assessments can be used as tools of learning and giving effective feedback.

Notes On Contributors

SJ- Wrote the first draft and designed questionnaire. Collected data and summarised results.

PV- Conceptualized the F-OSCE, revised final version and gave guidance for overall project.

Acknowledgements
1. Harden RM, Stevenson M, Downie WW, Wilson GM. Assessment of clinical competence using objective structured examination. Br Med J [Internet]. 1975;1(5955):447–51. Available from: http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1672423&tool=pmcentrez&rendertype=abstract https://doi.org/10.1136/bmj.1.5955.447

2. Barrows HS, Abrahamson S. The Programmed Patient: A Technique for Apprasing Student Performance in Clinical Neurology. J Med Educ [Internet]. 1964 Aug;39:802–5. Available from: http://www.ncbi.nlm.nih.gov/pubmed/14180699

3. Carraccio C, Englander R. The objective structured clinical examination: a step in the direction of competency-based evaluation. Arch Pediatr Adolesc Med [Internet]. 2000 Jul;154(7):736–41. Available from: www.surgicaleducation.com https://doi.org/10.1001/archpedi.154.7.736

4. Sloan DA, Donnelly MB, Schwartz RW, Strodel WE. The Objective Structured Clinical Examination. The new gold standard for evaluating postgraduate clinical performance. Ann Surg [Internet]. 1995 Dec;222(6):735–42. Available from: http://www.ncbi.nlm.nih.gov/pubmed/8526580 https://doi.org/10.1097/00000658-199512000-00007

5. SurveyMonkey Inc. SurveyMonkey Inc. [Internet]. Palo Alto, California, USA; 2016. Available from: https://www.surveymonkey.com

6. Likert R. A technique for the measurement of attitudes. Arch Psychol. 1932;22(140):1–55.

7. Brand HS, Schoonheim-Klein M. Is the OSCE more stressful? Examination anxiety and its consequences in different assessment methods in dental education. Eur J Dent Educ. 2009;13(3):147–53. https://doi.org/10.1111/j.1600-0579.2008.00554.x

8. Fidment S. The Objective Structured Clinical Exam (OSCE): A Qualitative Study Exploring the Healthcare Student's Experience. Student Engagem Exp J [Internet]. 2012;1(1):1–11. Available from: http://research.shu.ac.uk/SEEJ/index.php/seej/article/view/37

9. Hodder R V, Rivington RN, Calcutt LE, Hart IR. The effectiveness of immediate feedback during the objective structured clinical examination. Med Educ. 1989;23(2):184–8. https://doi.org/10.1111/j.1365-2923.1989.tb00884.x

10. Young I, Montgomery K, Kearns P, Hayward S, Mellanby E. The benefits of a peer-assisted mock OSCE. Clin Teach. 2014;11(3):214–8. https://doi.org/10.1111/tct.12112
Appendices

Declaration of Interest

The author has declared that there are no conflicts of interest.