Observed Structured Clinical Examination as a means of assessing clinical skills competencies for Advanced Nurse Practitioners (ANPs)

Abstract

Observed structured clinical examinations (OSCEs) are a common method of assessment within higher education to prepare for the advanced nurse practitioner (ANP) role. This article reviews a wide range of literature relating to OSCE assessment in the health care arena, from an ANP, interprofessional and advanced clinical practice perspective. Theories underpinning OSCE and advanced nursing roles are explored, with relevant supporting literature indicating how established OSCEs can become integrated with other methods to improve outcomes for this level of practice. Alternative assessments within the discussion are explored with specific reference to the context of the education delivered, and the suitability for higher education today.

Keywords

Advanced Nurse Practitioner (ANP), Observed structured clinical examinations (OSCE), clinical competence, pedagogy, assessment

Introduction

This article aims to critically evaluate the use of OSCEs to assess the clinical practice of post registration nursing students training for advanced roles. It will demonstrate and analyse a rationale for the appropriateness of this pedagogy in education practice today. Reference will be given to the aptitude of this method when identifying areas for student development, with a focus on ANPs who require advanced assessment skills as part of their role. The multiprofessional framework for advance practice NHS Health Education England, (2017) identified that advanced practitioners need a high quality of training to provide enhanced patient care, (RCN, 2012). Advanced clinical practice constitutes one of four pillars of core capabilities

for ANPs for the delivery of high quality patient care across professions, (NHS England, 2017). This five year plan to provide sustainability and partnership transformations identifies competence in clinical skills which must be assessed, achieved and measured. Nevertheless, Sastre-Fullana et al (2017) indicate there is ambiguity within advanced roles and differing conceptual approaches. They advocate that direct clinical assessment from superiors, peers and structured educational programmes must be used to proficiently assess learning outcomes.

The use of the OSCE approach is integral to clinical skills training and is essentially a method of simulating practice to empower students to improve autonomy and develop complex understanding within a safe, controlled clinical environment (Aronowitz et al 2017). Therefore to evaluate OSCE as a means of assessment for ANPs can raise recommendations for this type of assessment moving forward**.**

Background

OSCEs were primarily introduced to medical education as a means of assessing the skills and ability of surgical students, rather than a test of factual information, (Cuschieri et al, 1979). The use of an OSCE is often perceived as having the resilience to prepare students for practice, with the robust use of this simulated approach is thought to closely link theory to practice (Parkin and Collinson, 2019).

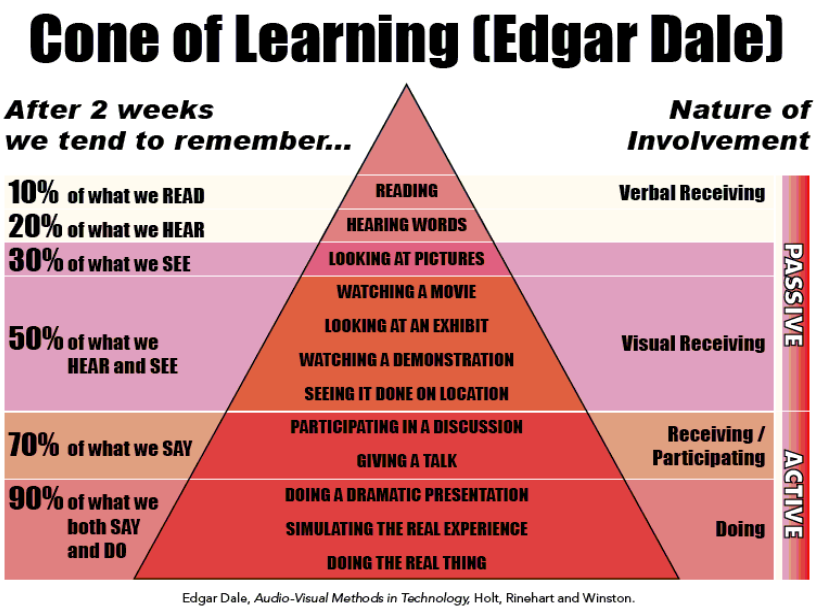
Such methods may have derived from the medical profession however, Liddle (2014) states that OSCEs also provide the perfect opportunity to assess nursing students. Student's cognitive, psychomotor, and affective skills can be evaluated in the simulated setting by using structured tools to evaluate their performance. In some

way this links into the nursing theories which support the novice to expert model of learning, and the transition of the learner to proficient practitioner (Benner, 1984). Therefore, the exploration of this form of assessment with its transition and transferability to the nursing profession is of importance. In order to review the information and critically analyse the OSCE as a form of assessment for clinical skills for ANP's, a literature search was undertaken. Key terms were searched within the library catalogue and databases in order to base this report. The search engines used were CINAHL, ProQuest health research premium, PubMed, and EBSCOhost.

Due to the rather large volumes of studies that were available, the main search terms used were, 'ANP and OSCE' 'Advanced practitioner AND OSCE', 'clinical education and OSCE' 'OSCE and clinical skills', among other more narrower terms. Exclusion criteria was broad to enable Advanced Clinical Practitioners (ACPs) from other professional backgrounds to be included, and non- health sciences or education related literature was excluded. Despite the ANP and OSCE being the focus, much can be learnt from interprofessional learning which can improve the health, safety and patient focus by collaboration, (WHO, 2010, HEE 2017).

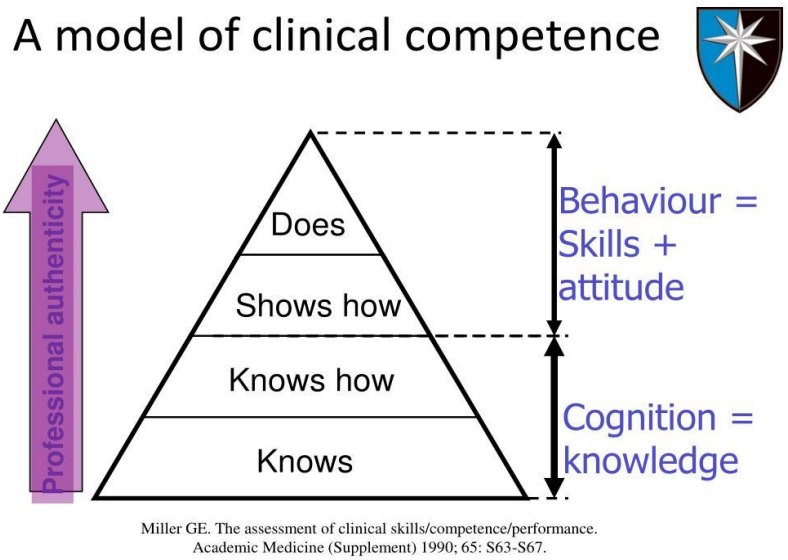
Educational theories

The literature makes reference to Dale's (1969) pyramid of learning, which a learning principle is based on the classification of learning processes. The teacher and learner must move across the processes to achieve learning with each principle being quantified by percentages.



Edgar Dale, *Audio-Visual Methods in Technology*, Holt, Rinehart and Winston.

This model has some correlation to the principle of Maslow's (1943) hierarchy of need, where each level of his pyramid becomes more complex, and can directly relate to the lifelong learning of higher education pathways, (Schulte, 2018). Blooms Taxonomy (1954) with its guiding principles is arguably one of the most influential processes underpinning the fundamentals of education, (Kreitzer and Madaus, 1994). It enables educators to systematically evaluate the learning of students and changes in their behaviour, which can be applied across diverse learning environments. With other established models acknowledged, Masters (2013) questions the credibility of Dale's pyramid. Increasing evidence suggests that there is variability in many of the literatures that cite this model, which questions its influences on learning practices. The pyramid concept was taken further by Miller (1990) to assess the development of clinical competency in medicine.



Miller GE. The assessment of clinical skills/competence/performance. Academic Medicine (Supplement) 1990; 65: S63-S67.

Four levels of skills enveloping student behaviours and student performance are evaluated in the model, which some might contend are similar to the cognitive, affective and psychomotor domains cited for nurses to learn, (Hagler and Morris, 2015)

The current literature directly informs that an OSCE is a valid, flexible, and reliable method of competence assessment which have been used universally in both high and low incentives assessments (Daniels and Pugh, 2018). It can be adopted through different formats by examiners to suit local needs, which accounts for its general popularity in higher education and clinical practice (Harden et al, 2015). Contrary to this, Scott (2019) claims that an OSCE is essentially a test of recall which underpins the ethos of the recall-enhanced learning effect, with the criticism that the student could memorise and systematically perform a practical task, yet not understand the theory which underpins it. Biggs, John, and Tang (2011) identified this as a form of superficial or surface learning which ultimately could have adverse effects patients' care. A deep approach to learning is the connection, understanding

and meaningful engagement which develop strategies to enhance and create meaning to the subject studied (Asikainen and Gijbels, 2017). It could be reasoned this is the preferred type of learning required to achieve advanced practice, not merely superficial recall.

Scott (2019) advises that educational programmes should not rely on student recollection as an assessment method at the expense of other forms of learning and development. It could be contested that OSCEs and their importance for ANP roles should be used as an adjunct with the wider learning curriculum, with timely feedback and other coaching mechanisms in place, alongside reflective practice. An example of this could be entering into a partnership approach to learning and assessing, by the use of a learning agreement in practice, which may focus and structure personal outcomes, or alternatively use the 'teach back' strategy to contextualise recall (Bastable, 2019). In addition to this, Jasper et al (2013) note that that reflective practice as a learning method should be integral to all nursing practices and assessment feedback, because it helps practitioners to refer back to the cause and effect mechanism of learning by doing as advocated by Dewey (1938).

Application to practice

It must be acknowledged that evaluating learning is more complex than the mere assessment of information recall to fulfil an OSCE checklist, and more about its application to practice. The relationship with social factors and environmental factors are of great importance within theory and practice. Morrow and Torres (1995) highlight that social theory and educational structures are reproducible but imply a

continuous growth or change. When applied to methods of assessment such as the OSCE, we could surmise that parts of the structure may be adapted to suit an assessors or in fact a profession's needs. It can be reasoned that reflection and other methods of assessment should be employed for ANPs given that they are experienced nurses and need to build on their existing skills, whether behavioural, clinical or social, in order to advance practice. The recommendation of a multifaceted assessment system rather than just evaluating learning via an OSCE means that assessments may be open to modification. It could encourage a clear focus on experiential learning, which is embedded in adult learning, having become favourable in nurse education within contemporary years, (Hughes and Quinn, 2013). It can also link to the practise of scaffolding, which refers to the different formats of learning materials, social and linguistic experiences which can support a student's learning, reasoning, and participation in education activities, (Sawyer, 2006).

With the increasing shift toward the OSCE style of assessment in nursing, educators must acknowledge that significant resources need assigning to this method when planning clinical skills courses. OSCE's are often resource intensive and the cost incurred of such means require communication to providers to inform resource allocation (Brown et al 2015). ANPs are required to have professional registration and tend to be experienced practitioners, therefore costs could impact on the recruitment of those who are self-funding and may also impact on NHS budgets with the plans for recruitment into advanced roles a key part of the NHS Long-term plan (DOH, 2019). DOH (2012a), signalled a shift towards a market style of education procurement involving workforce planning and higher education. Arguably making

students and lecturers stakeholders in the field of nursing education and commissioning, (Gates and Statham, 2013).

The OSCE still maintains its position as a preferential teaching method for skills as part of the advanced practice curriculum. Taylor and Quick's (2020) study of radiology students documented that OSCE participants perceive this form of assessment and learning as a valuable, genuine and immersive experience. Their study was an enquiry approach focusing on cascade training from senior peers to junior peers to evaluate performance. To evaluate this the experience may have been less stressful but one could challenge if it was robust and its learning outcomes transferrable across professions. Fuller et al (2017) are critical about the assessment and evaluation processes of institutions. They recognise there is a duty to ensure quality and validity throughout the assessment process, citing the behaviour of individual examiners, the design of OSCE stations and assessment outcomes as variables that can impact upon the decision to pass or fail a student. They state consideration should be given to the adoption of standardised measurement instruments to assess clinical communication skills in medical or clinical education. They give recommendations for future research to focus upon evaluating the potential impact of adopting such instruments. Harden et al (2015) echo the view that variables in OSCE design require consideration, because the format, activity structure, duration and number of stations, can all affect the assessment and outcome for the students. Different institutions have different feedback systems, rubrics or checklists to assess for OSCE's, which may favour a standardisation instrument and improve OSCE moderation. Adie, Lloyd and Beutel (2013) state that in higher education the process of moderation is commonly governed by agreed

university-led policies and procedures. Moderation is the practice of engagement whereby the members of the teaching team foster a shared understanding of what is required for a level of assessment, similar to delivering care in nursing practice. This ensures the assessment connects to specific outcomes and standards, championing processes which are equitable, reliable, valid and evidence based. Daniels and Pugh (2018) advocate that such quality assurance processes should be continual to ensure the assessment meets it objective. Critically these processes may need to be more robust for ANP assessments because unfortunately the certification and proof of performance for advanced practice is vital to evidence the role. The absence of a place on a professional register to regulate advanced practitioners is thought to be a key factor in an inconsistent approach to the role and educational development strategies, (Peate, 2019)

From a quality assurance perspective, Pugh et al's (2016) small international study of medical educators, found OSCEs to be reliable and valid in helping then to identify poor performers who are not progressing to the expected level of clinical competence early on in the assessment process. Their model of competency based education meant that formative assessments were consistently repeated and students, given feedback, were able to re-focus their learning on a specific area of learning to improve. The moderators were also able to ensure quality and consistency by the repetitive nature of the assessment. The feedback remained individualised and of good quality, another advantage of an OSCE approach.

Although, quality is key, the use of peers should not be dismissed. Collaboration with a capable peer links into Vygotsky's (1896-1934) constructivist theory and the zone

of proximal development, which supports the notion that any teacher can advance the development of a learner when they work together with a more capable peer. This study was based on the learning of children, therefore its validity can only be grounded in the assumption that this theory extends into adult learning too. In contrast to this the learner view, Khan, Payne and Chachin (2017) identify that although peer assessment in higher education has been studied, its role within OSCEs has not been systematically reviewed. They used electronic databases to screen and review thirteen peer based, independently reviewed OSCE assessments, by just two reviewers. Their study identified limitations whereby peers awarded students higher grades in comparison to faculty assessors, and checklist grades from them were unreliable, causing concern. Strengths were identified to suggest that if the students were formally trained to perform peer assessment during the process then this can promote learning for all concerned, including examiners. This potentially could be used within ANP training framework to reinforce learning and use trained ANP's as a future resource group, whilst benefitting the practitioner with regards to professional revalidation, (NMC, 2019). There is also the important notion that ANP's are to be nurse educators within the four pillars of practice. The integration and exposure to higher education as assessors highlights the fact that experienced nurses are often experienced in practice but novices within teaching and education, requiring more exposure to gain experience, (Sorrell and Canegalosi, 2016).

Iblher et al (2015) also advocated and encouraged the use of students as assessors in medical OSCE exams but in formative testing as opposed to summative assessments. Their reasons for this were to prevent legal ramifications or perhaps

disputes with results. It must be noted that their standardised structured testing criteria was in a medical speciality which perhaps may not have generalisability. In support of a stringent testing criteria, Setyonugroho et al (2015) study focused on consistency in evaluating communication for medical undergraduates and noted that regardless of the assessor, consideration should be given to the implementation of a standardised measurement tool such as a checklist or rubric to assess skills. It carries reliability and validity to the assessment process, again referring back to the competency model of education.

Challenges

Disadvantages of OCSEs as a method of assessment may become apparent with students who require supportive learning plans. L'Ecuyer (2019) highlighted the increase in numbers of nursing students with learning difficulties across institutions. She also identified gaps in knowledge which evaluate the compatibility of such students and the clinical environment or educational setting. Therefore, an OSCE may not be suitable for those with specific learning needs such as dyslexia for instance. Gibson and Leinster's (2011) study compared OSCEs, extended matching questions (EMQ) and short answer question (SAQ) to five different cohorts of medical students, to identify differences in the performances between those with and without dyslexia. They reported that any difference between students disappears in later years, with no means test differences in scores apparent. Whilst this may be true, feedback and scores may reflect differences immediately, which could impact the pass or a fail of a student and their immediate career path. Limitations of this study were the small sample size, studying in only one medical school and the focus

solely on dyslexia as a learning need. Other learning needs or a combination of learning needs may have had different outcomes.

Most universities need to accommodate students with disabilities under a ‘reasonable adjustments’ strategy, although Kendall (2018) highlights difficulties with this as it is often unclear to educators as to what adjustments are required. It is clear that specific learning needs and disabilities cannot be over looked in higher education, which could be compared in some respects to language difficulties. Schoonheim et al (2007) study suggested a link between clinical competency assessment and language proficiency in dental students under taking clinical assessments. They perceived communication as a main issue which was improved by extra tuition and supported practice to improve performance. Although this is an older study, the link between learning needs and communication in OSCE’s is clear and performance may be adversely affected for ANP’s with communication difficulties.

Disability in an OSCE could take many forms and nerves can often be considered disabling. Barrett (2010) study focused on ANP students, in the UK, in a qualitative education research study evaluated using a focus groups. They acknowledged students often feel nervous when preparing for and taking part in OSCE’s, therefore alternative approaches to learning and needs were identified. They took part in video-recorded simulated skills with many positives. The method was flexible, less resource and time intensive, it enabled streaming onto university web based platforms, students could re-record and the re-using of videos for multiple cohorts. Limitations were not made explicit however, students who were less able

technologically may have been disadvantaged and the face to face teaching, the live evaluation and direct assessment of skills may have suffered. In support of this Massey et al (2017) noted that video exemplars improved student's confidence, their understanding of their performance and reduce anxiety. Interestingly it failed to improve the actual overall OSCE performance.

OSCE exemplars therefore, could be used to improve staff capacity and the quality of a student's engagement and experience, which is the aim of higher education institutions, not merely the outcome. In the current COVID-19 pandemic, such virtual learning environments may be beneficial to address students' academic, emotional, and social prerequisites as well as helping to establish some of these methods into the blended, distance approach to learning, (Darling-Hammond and Hyler, 2020).

Another alternative to the traditional OSCE for ANPs is the use of Time-Constrained Scenario Based Practical exams (TSPE's). This method is adapted from OSCE's and may be advocated as an alternative to the traditional method of assessment in healthcare, (Hall et al, 2019). Despite this article writing from a veterinary nurse perspective, one could argue that this technique could be transferrable to the assessment and evaluation of ANP students in a higher education setting. TSPE's focus on longer cased-based scenarios which require a greater awareness of planning, time management, decision making which are all key requirements to lay the foundation for evidence based, proficient and safe patient-focused clinical care (Gardner, Gardner and O'Connell, 2014). This method lends itself to decision making and autonomy, which are integral to the advanced practice standards, (Health Education England, 2017).

Conclusion

To conclude, the use of an OSCE in practice is one that has a proven trajectory for reliability and validity. The literature supports there are areas of improvement within this method, namely standardisation, but it still upholds as a robust method of competency based assessment. The role of the ANP has cascaded out to include other ACPs from differing professional backgrounds with a wealth of experience and knowledge in their own right. Building upon the scaffolding theory for this group of professionals, the OSCE format may benefit from modification. Recommendations from this paper are that OSCE's could be accentuated with other assessment approaches to prevent assessment in isolation. Higher educational institutions must continue to focus on the challenge of educating advanced practitioners using an interprofessional approach to learning whilst incorporating the OSCE method. The use of digital technology to enhance current OSCE methods and improve the outcomes for students with disabilities and anxieties is key, and the virtual learning environment is wise to be explored. This review has uncovered how teamwork and processes together can mean assessment and evaluation can take place using OSCEs whilst moving and advancing practice in education and healthcare today.

Key points

The OSCE is a mainstream method for assessing clinical competence within the advanced practice arena.

Its foundations stem from the assessment of medical professionals.

Educational theory upholds OSCE as a robust pedagogy for use within nursing education.

Literature suggests other methods can be used in collaboration with OSCE to enhance the experience and outcomes for ANPs, to improve competence in clinical practice.

Reflective questions

Do you think OSCEs are a robust method of assessing clincal competency?

What alternatives to OSCEs do you think are best suited to assessing competency?

Should there be a standardised approach to assessment across Higher education institutions for advanced practice?

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