RESEARCH REPORT

The mini Clinical Evaluation Exercise (mini-CEX) in a pre-registration osteopathy program: Exploring aspects of its validity

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Abstract   Workplace-based assessment is commonplace, particularly in medicine. These assessments typically involve the assessment of a student conducting a consultation, or part thereof, on a *real* patient in an authentic clinical practice setting. In disciplines such as medicine substantial work has been directed towards the evaluation of the processes and tools used to perform these assessments and understand their educational impact. At present, there is little literature on the tools used for workplace-based assessment in osteopathy yet they form a picture of the student's capability. The current study presents data from a new workplace-based assessment tool for osteopathy, the mini Clinical Examination (mini-CEX) and is used to inform the implementation of the mini-CEX more broadly. Data presented here suggest the mini-CEX in this cohort is feasible, efficient, acceptable to stakeholders, internally consistent, and can differentiate between students at different stages of an osteopathic teaching program. Further research

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into the use of the mini-CEX in osteopathy is required, particularly focusing on educational impact, the reliability of the tool and its generalisability to clinical learning environments in other osteopathy teaching institutions.

Implications for practice

- Osteopathic educators are encouraged to explore the use of workplace-based assessment tools as part of a multi-method approach to assessment of clinical competency.
- The mini-CEX is feasible, efficient and acceptable in a pre-professional osteopathy program.
- Where possible, a range of examiners should be used to assess students thereby ensuring the assessment is fair and reliable, and that the student receives feedback on their performance from multiple people.

Introduction

Assessing osteopaths' clinical competence requires assessment of students' knowledge, skills and attributes during a number of different scenarios, using a variety of assessors who evaluate and comment on students' performance at the actual moment of patient care. Furthermore, there is no 'gold-standard' for the assessment of clinical competence in osteopathy.[1] The current study introduces an assessment tool that can assist in the process of making a decision about a students' clinical competence.

Workplace-based assessments (WBAs) are a popular method for the assessment of clinical skill and competency across a range of health professions. These WBAs are designed to assess a students' clinical skills and competency at the '*does*' level of Miller's clinical skills triangle,[2] that is, assess integration of knowledge during whole tasks in an authentic clinical setting. There are a range of tools available to assess different aspects of the clinical encounter with a patient, or assess the students' global competency on a clinical placement *per se*. In other health disciplines various examples of these include the direct observed procedural skills (DOPS),[3] the Leicester Assessment Package (LAP),[4] the Longitudinal

Evaluation of Performance (LEP),[5,6] the mini-peer assessment tool (Mini-PAT),[7] and the mini clinical examination (mini-CEX).

The focus of the current paper is the clinical encounter tool to assess student's work at the point of patient care. In this study we focus on the mini-CEX because it is one of the most widely studied and used workplace-based assessment tools, and it has been found to be a valuable tool to assess actual clinical performance with real patients in the workplace.[8–15] The mini-CEX is designed to evaluate the student's history taking skills, examination skills, clinical judgement, professionalism, and organisation of the clinical consultation during a nominal patient-student consultation. The student is rated on each of these domains and on their overall clinical competence. A key advantage of the mini-CEX is that the examiner is also asked to provide written and verbal feedback to the student based on the observed performance, and this is of significant educational value to osteopathic faculty and students alike.

Another educational advantage of the mini-CEX is that multiple examiners assess multiple clinical encounters allowing a range of examiners to provide feedback to the student on their performance with different patients and presenting complaints. Research has demonstrated that student's performances with one patient/complaint are not a good predictor of their performance with other patients (case/content specificity), therefore assessment across multiple encounters is appropriate.[16] Further work has also suggested that examiners are a substantial source of variance in mini-CEX scores[17] and this reinforces the need for multiple, and different, examiners to assess a single student.[18] The use of multiple examiners and multiple patient encounters contributes to the reliability of the mini-CEX,[11,13,19,20] particularly with one assessor per encounter and different assessors for each encounter.[19] There are varying reports as to the number of encounters required to obtain a reliable result. Authors have reported between that 6 to 15 encounters are required[8,19–24] and this number appears to be feasible in different training settings.[25]