



BEST EVIDENCE MEDICAL EDUCATION

BEME SPOTLIGHT NO.10

The effectiveness of self-assessment on the identification of learner needs, learner activity, and impact on clinical practice: a BEME systematic review

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Key Words: evidence based practice, professional practice, self-assessment, self-efficacy, self-evaluation programs, systematic review

Headline conclusions:

- The accuracy of self-assessment can be enhanced by feedback, particularly video and verbal, and by providing explicit assessment criteria and benchmarking guidance
- Practical skills may be better self assessed than knowledge.
- The accuracy of self-assessment may be enhanced by increasing the learner's awareness of the standard to be achieved.
- The least competent are also the least able to self-assess accurately; in other words, there is an over-estimation of competence by poor performers.
- These areas merit future systematic research to further our understanding of self-assessment

Background and context: The self-regulating health professional is increasingly expected to identify their own learning needs through a process of ongoing self-assessment. Self-assessment is integral to many appraisal systems and has been espoused as an important aspect of personal professional behaviour by several regulatory bodies and those developing learning outcomes for clinical students. In order to determine whether specific methods of self-assessment can lead to changes in learning activity or clinical practice, we undertook a systematic review of the health professions' literature. In this review we considered the evidence base on self-assessment since Gordon's comprehensive review in 1991.

Review aim and objectives: The overall aim of the review was to determine whether specific methods of self-assessment lead to change in learning behaviour or clinical practice.

Specific objectives sought evidence for effectiveness of self-assessment interventions to:

- a) improve accuracy of learner perception of their learning needs
- b) promote an appropriate change in learner learning activity
- c) improve clinical practice
- d) improve patient outcomes

Practice learning points:

- 1) Teachers need a greater understanding of what forms of self assessment may be useful in determining learning needs and what impact these have on future learning activities.
- 2) In setting appropriate goals for learning, there is a need to be aware of the limitations of self-assessment.
- 3) Information from a range of sources is needed to provide broader, more holistic assessments of competence in health care practice.

Review methodology: Databases searched included Medline, CINAHL, BNI, Embase, EBM Collection, Psychlit, HMIC, ERIC, BEI, TIMElit and RDRB. Papers addressing self-assessment in all professions in clinical practice were included, covering under- and post-graduate education, with outcomes classified using an extended version of Kirkpatrick's hierarchy. In addition we included outcome measures of accuracy of self-assessment and factors influencing it. 5,798 papers were retrieved, 194 abstracts were identified as potentially relevant and 103 papers coded independently by pairs using an electronic coding sheet adapted from the standard BEME form. This total included 12 papers identified by hand-searches, grey literature, cited references and updating. The identification of a further 12 papers during the writing-up process resulted in a total of 77 papers for final analysis. majority of these two subsets also reported that feedback had positive effects on performance.

References: GORDON, M.J. (1991) A Review of the Validity and Accuracy of Self-assessments in Health Professions Training. *Academic Medicine*, 66, pp. 762-769. GORDON, M.J. (1991) A Review of the Validity and Accuracy of Self-assessments in Health Professions Training. *Academic Medicine*, 66, pp. 762-769

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