

BEME Spotlight 37

Evidence regarding the utility of multiple mini-interview (MMI) for selection to undergraduate health programmes: a BEME systematic review

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Review website

<http://bemecollaboration.org/Published+Reviews/BEME+Guide+No+37/>

Keywords

Multiple mini interview. Selection to health programmes.

Headline conclusions

MMIs used for selection to undergraduate health programmes appear to have reasonable feasibility, acceptability, validity and reliability. Reliability is optimised by including 7-12 stations, each with one examiner. The evidence is stronger for face validity, with more research needed to explore content validity and predictive validity. In published studies MMIs do not appear biased against applicants on the basis of age, gender or socio-economic status. However, applicants of certain ethnic and social backgrounds did less well in a very small number of published studies. Performance on MMIs does not correlate strongly with other measures of non-cognitive attributes, such as personality inventories and measures of emotional intelligence.

Background and context

Selection of candidates to undergraduate health programmes such as medicine implies selection to that profession. In an effort to increase validity, reliability and fairness, the multiple mini interview was developed to replace panel interviews in 2004 by Eva and colleagues at McMaster University Medical School. The MMI utilizes some of the principles of Objective Structured Clinical Examinations, with candidates rotating through a series of independent stations. The focus of the MMI is the assessment of the desired non-cognitive attributes of applicants. Since 2004, the MMI has become a popular selection tool used by health programmes in many countries.

Review objectives

What is the evidence regarding the utility of multiple mini-interviews for selection to undergraduate health programmes?

Review methodology

Search Strategy: 13 electronic databases were searched through 34 terms and their Boolean combinations (English language, human, 2004 to present). The reference lists of all included papers were screened for

additional relevant publications. The contents since 2004 of 9 key journals were also hand searched. The initial search was performed in April 2013 and updated in April 2014

Inclusion and Exclusion Criteria:

	Inclusion criteria	Exclusion criteria
Population	Applicants to: Undergraduate medicine Undergraduate nursing Undergraduate dentistry Undergraduate pharmacy Undergraduate veterinary Undergraduate midwifery Undergraduate allied health professions	Applicants to: Non-health professions courses Postgraduate courses Postgraduate training programmes
Intervention	Multiple Mini-Interviews	
Outcome	All outcomes	
Study design	Studies which provide primary data	Commentary articles
Publication date	After 2004	Before 2004
Study language	English	Non-English

Data Extraction: Full articles were retrieved for all studies identified following the initial screening and selection process. These were coded by reviewer pairs on an adapted BEME coding sheet. Data extracted included: details of the citation, evaluation methods, institution of study, country of study, profession, study aim, details of the MMI used, authors' key findings and summary notes for review questions. Authors were not contacted for further information regarding interventions. Where information was not available it is indicated as 'not reported'

Data Synthesis: A narrative review was performed.

Implications for practice

A carefully designed MMI is likely to result in a more reliable and valid means of selection to undergraduate health programmes than traditional methods such as panel interviews. Careful design implies characterisation of the non-cognitive attributes sought by the programme and institution with stations mapped to assessing these attributes. Attention needs to be given to the number of stations, the blueprint and examiner training. More research is required on MMIs as they may disadvantage groups of certain ethnic or social backgrounds. There is a compelling argument for multi-institutional studies to investigate areas such as the relationship of MMI content to curriculum domains, graduate outcomes and social missions; relationships of applicants' performance on different MMIs; bias in selecting applicants of minority groups; and the long term outcomes appropriate for studies of predictive validity.

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