Medical education

Only the best: medical student selection in Australia

Wanted: aptitude for medical studies and desirable personal characteristics

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doi: 10.5694/mja10.11388

There has been a dramatic change in Australian medical school selection procedures, with the matriculation score of a school leaver now only one of a range of criteria. There has been a desire to assess broader suitability, to increase the number of candidates from areas of workforce need and to reduce discrimination in selection processes.

What is current Australian practice?

Selection strategies consider educational achievement, aptitude for future study and desirable personal characteristics. High-level academic ability is necessary to complete a medical course, but academic scores may not reflect non-cognitive skills and values, and may place limits on student diversity. To ensure that they admit a broad spectrum of students, medical schools have lowered cut-off scores for matriculation and grade point average, and use aptitude and personality tests to rank students (Box 1).

Most Australian medical schools now use interviews to assess non-academic skills and attributes. To overcome the biases of panel interviews, the Multiple Mini-Interview (MMI) was developed; candidates are interviewed across a number of different stations, each structured around a different theme.

The manner in which the final ranking of applicants is developed can provide a clear message to stakeholders of the relative importance of academic ability, aptitude, professional attitudes and social accountability. The approach to ranking varies significantly between medical schools.

What does best evidence tell us?

There is great interest in demonstrating the robustness and equity of selection processes. Recent publications have reported on the utility, reliability and validity of the test formats used for assessing non-academic criteria. Research in student selection is replete with methodological difficulties (Box 2). Moreover, there are challenges in defining and categorising acceptable outcome measures, especially for non-academic performance.

When methodological factors are taken into consideration, published studies support the use of selection processes that include non-academic criteria. Research shows that MMIs are reliable, and there is early evidence of their ability to predict future performance. One of the limitations of research into selection methods is that individual tools have been investigated but not the overall selection process.

Where are the new frontiers?

Recent research has focused on broadening the repertoire of tools and processes used for selection. Personality testing and assessment centres are being trialled. Selection centres have been extensively used in postgraduate settings in the United Kingdom.

Opportunities for a career in medicine are now opening up for applicants who previously would not have been selected or even considered applying for a place at medical school. There is a pressing need, however, for evidence derived from long-term programmatic research to ensure that only those applicants most likely to succeed are selected for medical training.

1 Selection methods being used or trialled in Australian medical schools

Method and examples	Limitations
Academic achievement	
• Matriculation scores; grade point average	• Does not identify non-cognitive abilities; biased against low SES
Aptitude tests	
• UMAT; GAMSAT	• Lack of validity studies; may be susceptible to coaching
Interviews	
• Panel interview; Multiple Mini-Interview	• Lack of longitudinal validity studies; interviewer training needed; must be structured
Personality tests	
• Personal Qualities Assessment instrument	• Potential for "faking good"
Documentation	
• Personal references; statements; portfolios	• Poor validity; low inter-rater reliability; potential for "faking good"; biased against low SES

SES = socioeconomic status. UMAT = Undergraduate Medicine and Health Sciences Admission Test. GAMSAT = Graduate Australian Medical Schools Admissions Test. ◆

2 Problems with correlation studies of selection criteria

- Non-academic selection criteria correlate poorly with academic outcomes
- Correlation measures need a range of scores for both the predictor and the outcome, but selection processes choose only high scoring applicants
- Not using assessment elements (eg, anchors to scales, and assessor training) results in measurement error and poor correlation with outcomes ◆

This is an abridged version of an article published on mja.com.au

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Competing interests: No relevant disclosures.
Provenance: Commissioned; externally peer reviewed. ❑