Reviewer’s report

Title: UKCAT and medical student selection in the UK – what has changed since 2006?

Version: 1 Date: 05 May 2020

Reviewer: David Alan Powis

Reviewer's report:

The article has been improved somewhat by revision, but in my opinion still has flaws. A major concern that I have is that there is no adequate description of the traits and qualities that the components of UKCAT are designed to measure. In particular the SJT is mentioned as if it is a known standard test; there is no mention at all of what it purports to measure. Because of these omissions, and the reported fact that Schools use the test in a variety of ways, a reader can only draw the conclusion that the UKCAT is an administrative convenience for selecting students - to reduce numbers - rather than an informative instrument to enable matching applicant qualities with the profile of qualities required by schools for congruence with their curricular and institutional aims. I believe that the authors must acknowledge this in the article. There are still other matters that I consider need to be addressed, as below.

1. In the Abstract 'a factor approach' (line 29) needs to be explained here to inform the reader.
2. Also in the Abstract (l 31) the last sentence seems disconnected from the rest. Also it gives a possibly unwarranted impression that the SJT has some special value.
3. The final sentence of the Conclusion is too vague. Its intended meaning is unclear

Page/line
3/12 "and challenge"?
3/39 "may" rather than "could"
4/36 what factors were used?
4/37 wording issue (to determine invite for interview and on occasion.....)
4/42 not clear how this works (could be either 1. Factor all the scores and take only the first component score as representing the test, or 2. Use each of the factor scores. There are other imponderables, such as the factoring method and which scores are used - only those for that school, or all supplied by UKCAT?
5/12 'were less clear' i.e., 'not clear'?
5/20 What is the meaning of the sentence 'Trade off.....borderline use'?
6/11-36 What is the status of this section? Would it not be better to give an example of what an actual university has done rather than invent a possible scenario for a hypothetical institution?
7/30 more detail, e.g., how many?
7/47 'has not varied significantly' vs 'small increase"
8/7 more information required (or reference to table/graph)
8/12-14 sentence meaning unclear. Maybe some punctuation would clarify
8/32 used the test very strongly?
8/36 factor weighting strategy and detail unclear
8/40 'used the SJT subtest as a weighting' In what way, and for what purpose?
Discussion - much of the content would be better in the Introduction, providing a basis for the Discussion to discuss the findings in relation to the expectations.

13/48 'that' rather than 'who'
14/14 say why numbers 'ought to be treated with caution'
14/24 'declining conversion rates'?

Graphs - not clear how trend lines are calculated - just the 2018 minus the 2007 means, or a regression taking all into account?

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Unable to assess

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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