Reviewer's report

Title: The academic backbone: Longitudinal continuities in educational achievement from secondary school and medical school to MRCP(UK) and the Specialist Register in UK medical students and doctors

Version: 1 Date: 11 July 2013

Reviewer: Ed Peile

Reviewer's report:

I welcome this study as a ‘landmark study’ in medical education, likely to be very widely cited. It brings together much of the best available data on selection to medical schools in the UK and subsequent performance. The paper is thoughtfully constructed, meticulously derived and written with rare clarity.

A deep conceptual understanding of the academic backbone will assist medical school selectors. I particularly commend path analyses, and I believe all medical educators will benefit from considering how ‘medical capital’ is accumulated.

I regard it as sound, and have confidence in the result. However the complexity of the statistical approaches means that a statistical opinion is recommended.

Major Compulsory Revisions

none

Minor Essential Revisions

1. Discussion 3rd paragraph final sentence accumulated should read accumulation.
2. Discussion 4th paragraph second sentence shows should read show
3. Consistency issue general knowledge capital or general capital?

Discretionary Revisions

1. I would like to see stronger emphasis on explanations that supportive evidence for positive correlation does not necessarily imply that the opposite is true. Thus, the predictive value of A level results does not undermine the premise that some who underperform in secondary school examinations may be, in part, reflecting social deprivation or lack of parental support, and thus poor A levels may not ‘doom’ them. Likewise, the analysis by MRCP results does not preclude the possibility that surgical ability may have other, different predictors.
2. I have concerns about the statement in discussion 5th paragraph “Once an examination is passed then that material cannot be merely forgotten, and the next stage coped with in isolation, but rather earlier performance continues to provide building blocks and scaffolding for what is to follow in the form of medical
capital which often may be of utility many years later.” Material can be merely forgotten by strategic learners. This statement, in my opinion, would read better as “Once an examination is passed then the learning which preceded that examination is not erased and the next stage coped with in isolation. An imprint remains of the learning which contributed to the performance in that earlier examination and this continues to provide building blocks and scaffolding for what is to follow in the form of medical capital which often may be of utility many years later.”

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**

I declare that I have no competing interests