Reviewer's report

Title: Impact of student choice on academic performance: cross-sectional and longitudinal observations of a student cohort

Version: 1 Date: 28 August 2012

Reviewer: Agnes Dodds

Reviewer's report:

This article addresses the important issue of the impact of student choice on academic performance, and is potentially of interest to medical educators and designers of medical curricula. The writing is acceptable and generally clear, although it could be improved in a few places (see Minor revisions below). Comparison of academic results before, during and after the completion of SSCs is a strength of the study.

Major Compulsory Revisions

1. The authors state that they will examine first preference choice of SSC in relation to standard examinations, but these are not presented in the tables or ever discussed. This expectation should be removed, or the analyses included.
2. The chi-square statistic has limited value in large samples. Obviously the way academic achievement was calculated and reported limits the analytic tools available, but the results should be reported with caution.
3. The data are under-analysed even given the limitations placed on analyses by the nature of the data. Especially in Table 2, results should include Adjusted Standardized Residuals (ASRs), as this would allow interpretation of exactly where the differences in grade by self-selected SSC are located.
4. While acknowledging different styles of reporting educational studies, there should be more reporting of the results in the Results section. The tables should be read off to assist the reader in interpretation.
5. The issue of ‘causality’ – it is far beyond the scope of the study as reported to infer causality from significant chi-squares. There is a relationship between self-selected SSCs and academic results, but as acknowledged in the Discussion this appears to be related to students’ overall ability or motivation, rather than the effect of SSCs. A study of this nature would never be able to establish causality.
6. Discussion could be improved by making more of the major finding that high performing students appear to be more likely to self-select SSCs and moving it to earlier in the discussion.

7.

Minor Essential Revisions

p1 para 4, line 2 ‘longitudinal exercises’ – the meaning is not clear, and needs a short explanation
p1 para 4, line 4 there is a tense shift – the sentence should read ‘The undergraduate curriculum is administratively divided into three phases’

p2, Rationale of Study ‘we hypothesized……might affect’ – the use of hypothesized here is inappropriate and should be replace with ‘we expected that…..’ and a direction for the expectation should be added – did the authors expect performance to be better or worse? And why?

p2, Subjects and Methods, No explanation is given for dropping the students returning after the intercalated degree, although the second sentence says ‘For the same reason…..’ graduates were dropped. What was the reason in both cases?

p3 Results, Phase 2 SSC, second sentence. Delete ‘for which reason’

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests