



Medical and Health Professional Education
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Impact of an intercalated BSc on medical student performance and careers

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Review citation

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Review website

<http://bemecollaboration.org/Published+Reviews/BEME+Guide+No+28/>

Keywords

Intercalated BSc, medical education, systematic review, qualitative, undergraduate performance, careers

Headline conclusions

- There is conflicting evidence of the impact of Intercalated BScs on UG performance
- Intercalated BScs increase the likelihood of students pursuing academic careers, and decrease the likelihood that they will follow a general practice career.
- Intercalated BScs help students to develop reflexivity and a better understanding of critical appraisal and research.
- The decision to undertake an iBSc is contentious; students feel ill-informed about the benefits

Background and context

Intercalated BScs (iBScs) are an optional part of undergraduate (UG) medicine courses in, for example, the UK, Australia, and the West Indies, and consist of advanced study into a particular field of medicine, often combined with research. They aim to improve students' skills and allow exploration of specific areas of interest. They are expensive for institutions and students and delay workforce entry. There is conflicting evidence about their impact.

Implications for Practice

- Medical schools offering optional iBScs need clear and equitable selection policies that don't disadvantage able students from poorer backgrounds.
- Course designers should have clear aims for iBScs that are mindful of societal benefits, i.e. producing better doctors.
- There should be a diversity of iBScs with a rebalancing towards more clinically related subjects.
- All iBScs should have clear generic objectives which go beyond a narrow disciplinary focus.
- National research funding bodies should (again) consider supporting iBScs as they impact on career choices of aspiring medical academics.

Review objectives

To undertake a systematic review of the impact for students undertaking a BSc, focusing on

- students' decisions about undertaking an iBSc;
- students' performance in undergraduate or final exams;
- impact on students' professional skills and values;
- students' experiences of doing an iBSc;
- effect on students' career choices;
- the financial and personal impact of doing an iBSc.

Review methodology

Search Strategy: We searched: Medline / National Library of Medicine (NLM), PsychINFO, EMBASE, the student BMJ database and ERIC

Search Terms: medical student AND (outcome OR progress OR exam OR success OR fail) combined bsc OR bachelor OR degree OR intercalated OR honours OR honors OR complementary]

Inclusion and Exclusion Criteria: restricted to intercalating degrees at a Bachelor's level for medical students,

- i) Meta-analysis - observational or trial designs, ii) controlled for previous academic performance, iii) a focus on undergraduate medical students, iv) outcomes compared with the general undergraduate and graduate medical population, v) availability of an English language abstract, vi) an adequate description of the course to allow a judgment on the similarity with UK iBSc degrees.
- ii) Critical interpretive synthesis -
 1. Research papers, letters, opinion pieces and other articles (grey literature) relating to intercalated degrees within the medical undergraduate course.
 2. Date range 1.1.1984 - 1.11.2012.
 3. Articles were included for the qualitative analysis where they contributed useful or important insights from student, faculty or a broader societal perspective.
 4. Data identified from the meta-analysis / quantitative synthesis were included, when they contained reflective comments on their results.

Data Extraction: Data was extracted by MJ for the statistical meta-analysis and by two reviewers (PH & SE) for the critical interpretive synthesis.

Data Synthesis: Data is reported as odds ratio (OR) of BSc students' performance ÷ non-BSc students, and presented as Forest plots. For the critical interpretive synthesis data was analysed using a thematic framework approach.

Edited by Professor Marilyn Hammick, BEME Consultant, 2013