



# Intercalated BSc degrees – why do students do them?

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**Students who do intercalated degrees are more likely to obtain honours in their medical degree**

An intercalated degree involves an additional year of study, usually between the second and third years of a medical (MBBS) course. Students study a chosen subject in greater depth which leads to a Bachelor's degree: BSc, BMedSci or BA. Almost a third of UK medical students selected this option in 1997/8, and numbers are thought to have increased since then.

Some medical schools in the UK (such as Imperial College London) have made intercalated degrees compulsory; some have reserved them for those students who scored the highest marks in the previous years' examinations (St. Bartholomew's and The London Medical School); and others have provided students with an open choice provided

they pass the previous year's examination at their first attempt (Guy's, King's and St. Thomas' School of Medicine).

Most medical degrees take five years to complete, so students have to consider both negative and positive aspects of studying for an extra year before making a decision. With the introduction of means-tested tuition fees, student loans (rather than grants), and the reduction in funding from sponsors such as the Medical Research Council (as well as the effective loss of one year of earnings as a qualified doctor), doing an intercalated degree can be a costly option.

There appear to be a number of academic benefits for students who do intercalated degrees: they

tend to attract substantially more research grants; have a better publication record (and are cited more often); and are more likely to obtain honours in their medical degree, hold academic positions, and have papers published. They may have an improved ability to critically analyse the literature and to comply with evidence-based practice after graduation. In a retrospective study of dental students, 78% of the students polled found their intercalated studies useful in the rest of their undergraduate course.<sup>1</sup> However, another study found no consistent short-term correlation between doing an intercalated BSc and subsequent marks in the clinical years.<sup>2</sup>

Pressure to intercalate comes from the London Deanery's person

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specifications, where an intercalated degree is considered desirable for various Specialist Registrar (SpR) posts (equivalent to a fellow in the USA), and such degrees also confer an advantage when applying for pre-registration house officer (PRHO) posts.

As there has not been any research examining the reasoning behind students' decisions to undertake an intercalated BSc, we set out to investigate students' views on these degrees.

THE SURVEY

A questionnaire was devised that asked respondents to state whether they would choose to intercalate a BSc, and then to select the reasons applicable to that decision from a list (12 statements in support of doing an intercalated BSc, and 10 against doing one, on the basis of what had been reported previously in the literature). There was no limit to the number of reasons students could select. Respondents were also asked to provide details of their age, gender and ethnic origin. The questionnaire was distributed to all 348 second-year medical students (140 male, 208 female) at Guy's, King's and St. Thomas' School of Medicine, London (GKT).

Graduates and mature students were excluded from the study when the responses were analysed, as it was felt that their presence would tend to skew the reasoning for the group that did not want to intercalate. There are no restrictions at GKT on the number of students eligible to take an intercalated BSc degree, and the only academic requirements are that students have passed their second-year examination at the first attempt (in the years 2001–3, 91% did so).

Of the 348 questionnaires distributed, 155 were returned (from 60 males and 95 females), a response rate of 44.5% (155/

348). However, 42 students in the sample were graduates and 66 were mature students (defined as over 21 years on entry to medical studies). Excluding these students increased the response rate to 64.6% (155/240). Responses to the question: 'Do you want to do an intercalated BSc?' were 84.5% 'Yes' (131/155) and 15.5% 'No' (24/155); see Table 1.

REASONS FOR WISHING TO  
INTERCALATE

The percentage frequency for each of the statements that applied to the decision to do an intercalated BSc are shown in Figure 1. The most frequent reason given was that an intercalated degree 'improves long term career prospects'.

EFFECT OF AGE

Those aged 20 years or less were significantly more likely to select 'broadens knowledge' ( $p = 0.026$ ), while those aged 21 years

or over were significantly more likely to select 'improve ability to critically analyse scientific papers' ( $p = 0.048$ ).

EFFECT OF GENDER

There was no significant difference between males and females in the reasons for wanting to do an intercalated BSc.

EFFECT OF ETHNICITY

Those of South Asian origin were significantly more likely to select 'improves long-term career prospects' ( $p = 0.033$ ) and 'a "break" from the MBBS course' ( $p = 0.03$ ). They were also more likely to select 'a chance to gain publication in journals', although this didn't quite reach statistical significance ( $p = 0.057$ ).

REASONS FOR NOT  
WANTING TO INTERCALATE

The percentage frequency for each of the statements that applied to those not wanting to do an

Table 1. The structure of the study sample, and response to the question 'Do you want to do an intercalated BSc?'

	'Yes' response	'No' response
Number of respondents	84.5% (131/155)	15.5% (24/155)
Average age in years (range)	20.0 (19–23)	20.2 (19–23)
Sex		
Male	37.4% (49/131)	45.8% (11/24)
Female	62.6% (82/131)	54.2% (13/24)
Ethnicity		
White British	37.4% (49/131)	25% (6/24)
White Other	7.6% (10/131)	4.2% (1/24)
South Asian (Pakistani/Indian/ Bangladeshi/Sri Lankan)	28.2% (37/131)	33.3% (8/24)
Asian Oriental	12.2% (16/131)	16.7% (4/24)
Black African	2.3% (3/131)	8.3% (2/24)
Black Caribbean	0% (0/131)	0% (0/24)
Black Other	0.76% (1/131)	0% (0/24)
Other	11.5% (15/131)	12.5% (3/24)



Journal publication: a reason to intercalate?

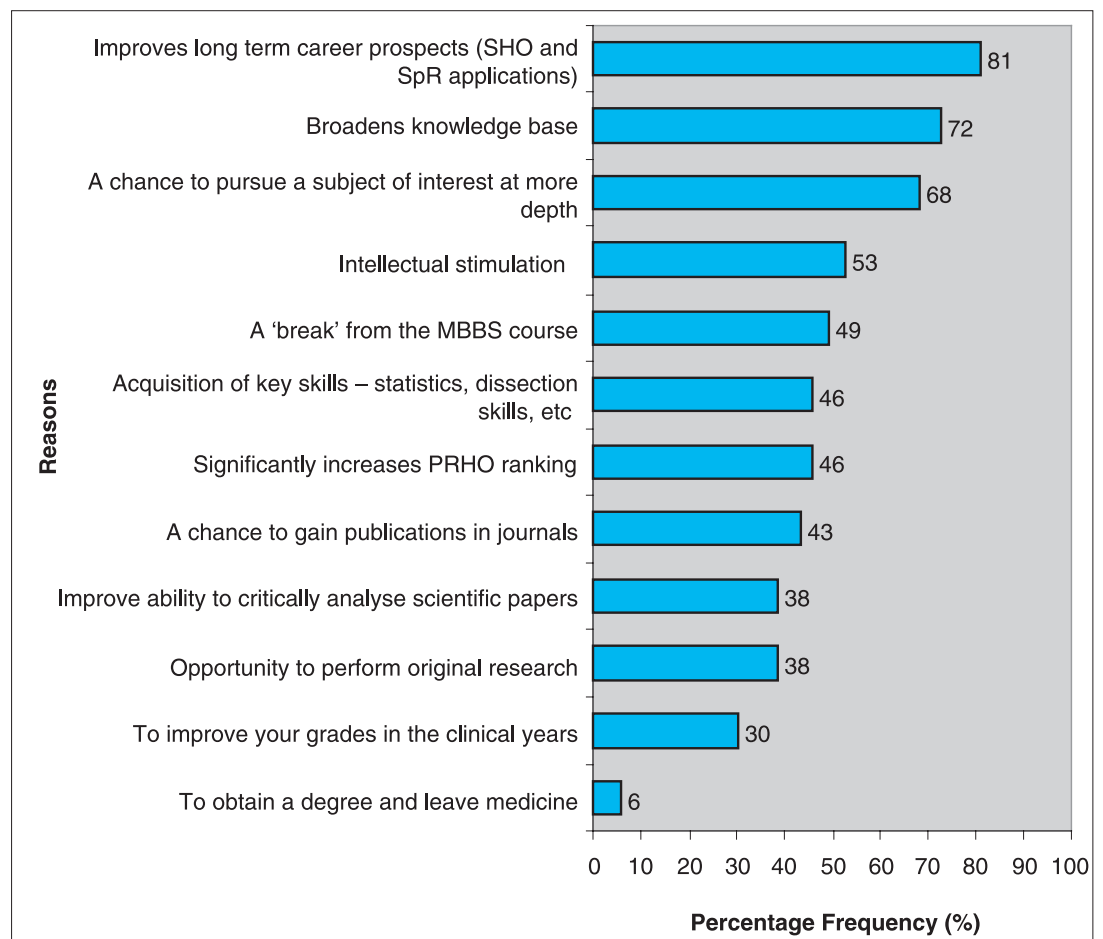


Figure 1. Percentage frequency of the reasons for wanting to do an intercalated BSc.

A student remarked on the lack of options

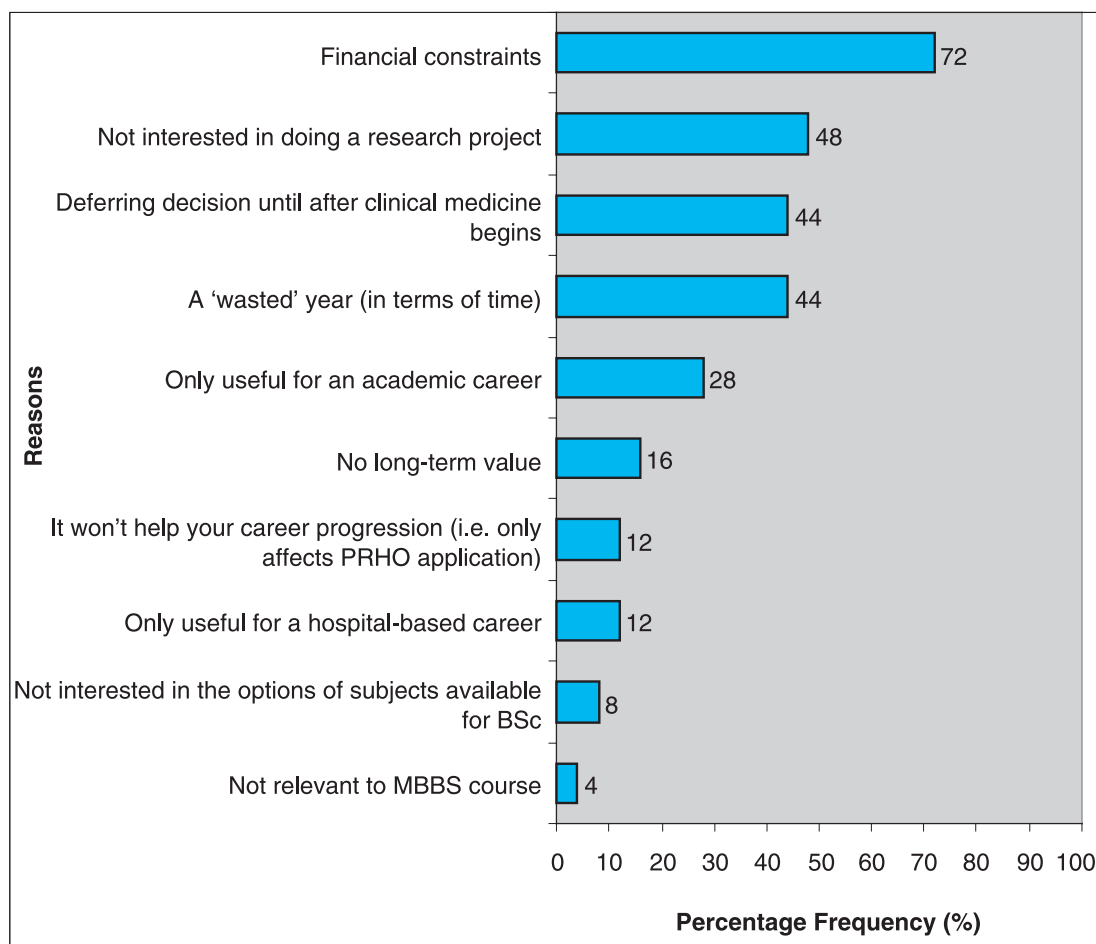


Figure 2. Percentage frequency of the reasons for not wanting to do an intercalated BSc.

intercalated BSc are shown in Figure 2.

As the number of students who did not want to take an intercalated BSc was relatively low (24), it was not feasible to calculate the effects of age, sex and ethnicity based on these results.

## CONCLUSIONS

The most commonly selected reason for intercalating was to improve long-term career prospects (81.2%). However, only 45.7% selected 'significantly increases PRHO ranking' and only 43.5% chose 'a chance to gain publica-

tion in journals'. Publication in journals is a 'desirable' achievement when applying for Senior House Officer (SHO) and SpR posts, and this has been ranked, in a survey of postgraduate deans and careers advisers,<sup>3</sup> as the second most important aspect of a CV after references. Some students may not recognise these reasons as having an impact on their future career, but others do see the intercalated BSc as means of achieving these positions.

Students of South Asian origin were more likely to select 'improves long-term career prospects' and 'a chance to gain publication in journals' but were also more likely to intercalate in order to take 'a break from the MBBS course'. It is conceivable that these inconsistencies could arise as a result of misinformation (or a lack of information) regarding the potential benefits and costs of intercalating,



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as well as the nature of the workload involved (for example, its difficulty and quantity).

For those who did not want to do an intercalated BSc, financial (72%) and time (44%) costs or a lack of interest in doing research (48%) were the main reasons given. One student wanted to defer a decision to do an intercalated BSc to give the option of doing a 'clinical BSc'. Currently no intercalated BSc option exists at GKT that necessitates one, or even two, years of clinical experience as an absolute prerequisite. Another student remarked on the lack of options. Currently, GKT has more options available to intercalated students than any other medical school in the UK. These statements may reflect a lack of information among the student sample on certain aspects of intercalated degrees.

The overall response rate of 64.6% is statistically acceptable but may still contain responder bias. The low number of students who did not want to do an intercalated BSc is a limitation of this study. There is unlikely to be any significant sex bias, however.

This study's significance will vary in different parts of the UK, as the uptake and indeed availability of the intercalated degree varies between medical schools. Thus in areas of low uptake and/or availability, doing an intercalated degree could be viewed as 'getting ahead' or gaining a significant edge on the competition, whereas in areas of high or compulsory uptake/availability, it

might be viewed as a way of competitively 'staying afloat'. These perceptions have probably permeated the student body and thus in themselves also have an effect on uptake and the reasoning behind student choice regarding intercalated degrees.

Future work could involve in-depth interviews with a smaller sample of students to ensure greater precision and detail in determining the reasoning behind their decisions. This study focused on one year group in one medical school based in London, and hence the results may not be generalised to all medical schools. This study should be repeated another year, in another medical school in a different area. Our group intends to follow up the number of students who did in fact intercalate, repeating this questionnaire together with in-depth interviews.

Deciding whether to do an intercalated BSc seems to be a balance between the opportunity for career and personal development versus financial and time costs, as well as some lack of interest in an academic career or research. Students may not be fully aware of the career benefits of having papers published in journals, having research experience, and developing the ability to critically analyse the literature. Medical schools in future should take proactive steps to inform students of the potential benefits and costs regarding intercalated degrees, thus allowing them to make a more informed choice.

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