

Practice points

- Primary care has an important role in delivering undergraduate medical education, but can also deliver intercalated BSc courses
- Students on this iBSc in primary health care course perceive this adds value to their undergraduate experience
- More clinically relevant intercalated BSc courses should be offered to medical students
- Intercalated BScs need to be aimed at a broader group of students than those wanting teaching hospital consultant posts or laboratory based science careers
- The image problem of general practice may have a significant impact on students' choices of iBSc courses

The intercalated BSc degree

- Offered by most university medical schools (UK, Australia) in a wide range of basic science and clinical subjects. In the UK iBSCs are predominantly in laboratory based sciences
- There is no literature defining the overall role of an intercalated BSc in undergraduate medical education (although the descriptive literature suggests in depth exploration of part of the medical course, acquisition of new skills, and undertaking research)
- Optional in most institutions but compulsory in some for non graduates

- Most students take a year out of their medical studies and sit the final BSc examination at the end of the year. They then resume the medical course.
- In some universities the BSc is made up of modules taken throughout the medical course
- Students are formally assessed using written and oral exams, and submit project reports.

Abstract

Background More medical schools are moving towards a compulsory intercalated BSc. These courses have not traditionally been aimed at those students interested in general practice and have tended to have limited clinical relevance. This paper explores the perceptions of students who undertook a BSc in primary health care.

Methods Qualitative methodology comprising semi structured interviews with students just before completion of their course.

Results Interviews were undertaken with 24 of the 26 students who started the course over a 4 year period. All the students have finished the course and have graduated with good honours degrees. Students refine existing skills and develop new, relevant skills for medicine. The students discussed the prestige (or lack) of a BSc in this field and how the course has impacted on their career decisions.

Discussion A Primary Health Care BSc such as this appears to give students an in depth and to some, a positive view of general practice and primary care. The course allowed students to develop a more critical approach to medicine and enabled them to develop skills in addition to those acquired from their undergraduate medicine course. They perceived that these skills will serve them throughout their career in whatever branch of medicine they choose.

Introduction

British medical schools have come under increasing pressure to change medical education. There is a demand from medical students to be academically challenged and a need to produce junior doctors better equipped to deal with changing medical needs and patient expectations. The 1993 version of British General Medical Council's (GMC) *Tomorrow's Doctors* document recommends extending intercalated degrees and community based learning. (General Medical Council 2002) This institution has developed a BSc in Primary Health Care, which was launched in October 1997 and is described elsewhere.(Jones M, Lloyd M, & Meakin R 2001)

There appears to be no agreed generic objectives for the role of Intercalated BScs (iBSc) in medical education. However, the common themes that these courses possess include; they are optional courses that students elect to study; they aim to explore an area of medicine in more depth; students acquire new skills; develop their critical abilities and usually undertake some form of research within the discipline. (Rushforth 2001;Smith 1986) (Wyllie & Currie 1986a) BSc courses require students to withdraw from their medical course for 12 months (or extend it through extra modules). About 10-20% of UK medical students were estimated to do such courses in 1996 (Tamber PS 1996) growing to 33% by 1999. (McManus IC, Richards P, & Winder B.C 1999)

These courses are associated with deeper and more strategic learning styles. (McManus IC, Richards P, & Winder B.C 1999) However, there are conflicting reports on performance in undergraduate “finals” exams. (Wyllie & Currie 1986b) (Evered et al. 1987) (Tait N & Marshall T 1995) BScs have been shown both in the UK (Evered, Anderson, Griggs, & Wakeford 1987;McManus IC, Richards P, & Winder B.C 1999;Wyllie & Currie 1986b), and internationally (Gerrard et al. 1988) (Eaton & Thong 1985;Nade 1978) to be positively associated with the students’ subsequent progression in developing a research career, but not with general practice. (McManus IC, Richards P, & Winder B.C 1999) Beyond what is quantifiable, an important element of these courses seems to be helping individuals to develop intellectually. Smith quotes “that was the year I that I learnt to think and to question and to find out things for myself” (Smith 1986) and Rushforth says “many find (the iBSc) the most stimulating and rewarding year of their undergraduate studies”. (Rushforth 2001)

Despite 43% of UK medical undergraduates eventually entering a career in general practice (Lambert, Evans, & Goldacre 2002), there are few courses that allow study of primary health care at the BSc level.

The aim of the current study was to explore students’ experiences of undertaking a BSc in Primary Health Care, what they had gained from the course and the impact on their future career choices. We opted to explore the students’

experiences and motivations with in depth interviews using a qualitative methodology.

Methods:

Detailed taped recorded interviews were undertaken by one author (MJ). The interviews started in 1997 and were stopped at the end of the 2001 cohort. Students were interviewed after completion of their written exams but before submission of their projects (to maximise the response rate). Every student was invited to participate and 2 declined. Therefore, 24 of a possible 26 interviews were available.

The interviews were semi structured, covering students' motivations and expectations of the course, their perceptions of their peers' opinions about the course, their career intentions, and the positive benefits and negative aspects of undertaking the course. The interviews were iterative, building on issues explored in previous interviews and were flexible enough for students or the interviewer to explore developing areas or arguments. The tapes were then transcribed verbatim. We achieved saturation of themes after four cycles of interviews.

Analysis

The interviews were analysed using domain analysis and a constant comparative method. (Spradley J 1979) (Green 1998) The transcripts were reviewed by two

researchers (MJ and SS) for emerging themes. This was carried out separately and at different times. Any inconsistencies were discussed in four meetings and agreement was achieved without use of the final arbiter (ML). A literature review and several informal discussions with students ensured the main “issues” were valid, consistent and reflected what students were saying about the BSc experience. The results are split into three main themes, broadening medical students’ undergraduate experience, prestige and status in medicine and finally making career decisions.

Results:

The course attracted 26 students from English medical schools, who intercalated up to September 2001. Since completion of data collection, 46 students in total (as of June 2003) have completed the course and 7 have gained first class honours degrees. Among study respondents there was an even number of male and female students and six (approximately 2 per year) who intercalated between year 2 and 3 (the old pre-clinical phase of the medicine course), with the rest intercalating in the clinical course.

Broadening medical students’ undergraduate experience

The students have developed and extended skills in several areas such as clinical skills, critical appraisal and research skills.

Developing research skills

The research project allows students to develop projects from the student's original idea through to completion. (Jones M, Lloyd M, & Meakin R 2001)

"We really have found out for ourselves that the sort of need for rigorousness, the drudgery that goes with research... now we really know what it (research) means ... do it ourselves and I think that's really important". (Male clinical student)

The ability to undertake their own research is highly valued.

"so different from the, sign up here for "professor what's his name's" project do some tiny slice of his research" (Male clinical student).

The students feel ownership of their projects and feel they go beyond the role of unpaid laboratory assistant that is perceived in many intercalated BSc projects.

Critical appraisal skills

Overlapping with developing research methods skills, the course specifically looks at critical appraisal skills.

" being able to look at papers in the BMJ or the Lancet and to be certain in your mind whether you think it is a good paper ... in order to improve the quality of care for your own patients". (female clinical student)

" I am more critically aware. In the past I would just read a paper and think 'Oh right that's the answer' and now you think 'well actually, (I'll) have a look at their methodology.. ' (Male clinical student).

Students appear not only to evaluate evidence but are starting to think about how they might use and apply evidence in their role as doctors.

Developing clinical skills

An essential element of this course was that we maintained and helped develop students' clinical skills during the course. A specific focus of the course is on developing consultation skills.

"it helped me take a step back and view .. a consultation, with a bit of background knowledge... to think about the end point and whether the consultations been successful or not". (Male clinical student)

"I think it probably did help me a lot with my own consultations... having done (a) GP firm ... patients were picked.. sort of "good" patients who would give good histories. ...this year ..they feel like proper patients ".

(Male clinical student)

So students are developing their own skills, gaining a sensitivity to the outcome of consultations, dealing with more complex, unselected patients, and also developing an understanding of the theory around the consultation.

Students also perceived that they had gained experience of the social sciences and medical anthropology in particular,

“ medical anthropology, the way in which you perceive your patients and the way you treat your patients and how you incorporate.. their views.. into their healthcare I think is very important” (male clinical student).

Overall students appear to have reinforced and further developed skills that might be expected of a medical student (such as critical appraisal and consultation skills), but they have gone on to develop new skills and knowledge in areas such as research methods, and the social sciences. They have also developed their attitudes within medicine, becoming more reflective, taking responsibility for their learning, changing their approach to patients and developing a more bio-psychosocial model of illness.

Prestige and status in medicine

Students are familiar with how general practice is regarded within the medical school hierarchy, thus:

“..I think they (students have) a very negative attitude towards general practice. I think it (the MB BS course) is very much geared towards hospital medicine, so they see a department predominantly made up of general practitioners and public health doctors as...a little bit, I suppose as soft” (female pre-clinical student).

It is important to realise that while these students are undertaking this course their colleagues and peers are often doing degrees in molecular biology, anatomy or medical physics – all highly ‘scientific’ subjects.

“They (other students) value science, like a first in physiology, or cardiology... They'd think that was absolutely the bees knees, because it is a clinical science. And they see that as the being the big emphasis of medicine, of being the “big medical subjects” and getting a first (class degree) in it. But in fact that's a small element of it. The big element is dealing with the patients and how you get on with them. And it's not all about um, good exam results, in “big science-y subjects”. But that's what a lot of medics push for” (Male clinical student)

Status of an iBSc

On the other hand, many students perceive a BSc – any BSc - as beneficial. The reasons for this may be in gaining those extra letters after one's name, time for reflection or for career progression. There is a perception that such courses are there for career progression and that inevitably means aiming to be a teaching hospital consultant

“I seem to have had a fairly negative reaction amongst my friends ‘what are you doing a course in general practice for?’...it's sort of , ‘why're doing that, I mean what's the point?’ because a BSc is to help you become a consultant” (male clinical student)

It is difficult to know exactly why such a subject area receives so much opprobrium, but perhaps the nature of the subject, its perceived position within the medical school hierarchy and that it is often regarded as the antithesis of hospital medicine gives some clues. The very nature of general practice and

'dealing with uncertainty' may be another reason why students find the subject area difficult. In the early years at medical school students acquire knowledge in certain terms. In clinical practice, patients' problems may be viewed as medical or non-medical, differentiated or otherwise and this may be the beginning of students having to deal with clinical uncertainty:

"The way that people deal with different things, ..deal with illnesses, or whether they sort of cloak it in terms of...a psychosomatic sort of thing and...(the) way the doctor will deal with that themselves, whether they go in for a lot of... examinations, investigations" (male clinical student).

Nevertheless, it seems that this facet of primary care was attractive to some students:

"I've never really been a true scientist,so I'm always open to studying around the subject, not just studying pure bio-medicine but having to look at the social aspects or things that tend to get lost perhaps in the routine of the wards and the hospital clinic" (male clinical student)

and,

"you've go to look beyond the bio-medicine aspect and realise that the reason people are coming to see doctors ... is not necessarily just to stop the physical problem. There could be more .." (male clinical student).

Students appear to be gaining quite sophisticated skills, often not seen in more experienced clinicians. They are gaining some understanding of the importance

of the psychosocial aspects of health and illness, doctors' consulting styles, and how clinicians deal with clinical uncertainty.

Making career decisions

We were interested in giving students a broader perspective on general practice as a career.

Reinforcing an existing career choice

Many students were already committed to a career in general practice. So the course merely reinforces their career aspirations.

"It's made me feel like I know much more about what being a GP entails and I'm still as interested in it a year on as I was a year ago, which I think is a very good sign.... I think a lot of people see general practice as being sort of very minor conditions because that's what medical students see their GP's for" (female clinical student).

Making a more informed career choice

Other students now feel able to make a more informed career choice having left the course with a better idea of what a career in general practice entails. Some remained committed to their initial career plan, but others despite their increased knowledge were still uncertain about this as a career

"I thought it would have also made me want to do general practice a lot more, which it hasn't necessarily. It's just made me understand primary care and general practice" (male clinical student).

Several students commented on the need to make important decisions about their career on the basis of the very short attachments, which may give them a distorted view of the discipline.

“so many of my...ideas about careers and what various specialities entail are to do with really short exposures...which can be overly and incorrectly positive or negative” (male clinical student).

Overturing a career choice

But for one student their experience has helped them decide not to be a GP.

“I really got fed up of seeing every single thing determined by this guideline or this policy. And having to keep up to date with so many things. Just the idea that the general practitioner is going to know something about everything, and that's just really daunting, I think .. I'd rather just be looking after the patients rather than going to so many meetings ”. (female clinical student)

It is reinforcing decisions in those committed to general practice as a career and giving a sounder base for those who are uncertain to make an informed decision about general practice as a possible career.

Discussion

This paper aimed to explore students' experiences of undertaking a BSc in Primary Health Care, what they had gained from the course and the impact on their career choices as future doctors. The results show that overall the course

appears to be adding a richness and breadth to the students' medical undergraduate experience. The students perceive that they have extended their existing range of skills and knowledge with enhanced clinical and consultation skills, and reinforcing of critical appraisal skills. Additionally students believe they are acquiring new skills and knowledge in areas such as such as anthropology and the experience of performing research. Specifically these students have developed in the areas with which traditional medical curricula have struggled, such as the range of problems presented to doctors, how patients react to illness, and how illness behaviour varies in different groups. (General Medical Council 2002) The students have gained skills that they perceive will be useful for them as doctors, in terms of a greater understanding of patients' needs, expectations, an insight into their own skills and working styles, and how this may impact on the care they provide.

Becoming a "good doctor"

Interestingly students seem to have acquired some of the "softer" clinical aspects of being a good doctor as raised in a BMJ theme issue such as creativity, and a knowledge and respect of patients' cultural beliefs. In addition students had "time out" during their medicine course, to stop themselves "going rotten through overload, cynicism and neglect". (Tonks A & et al 2002)

The course is also helping students to add some depth of experience to their career choice. The surprising result however, was the ambivalence felt towards

general practice as a clinical specialty and a career even amongst student who sign up for an additional year in this field. This finding may cast some light generally on medical students' career choices with regard to primary care.

Strengths and weaknesses of the study

This paper has strengths in that a large proportion of the students agreed to participate and their views are very frank. The validity of our analysis is reinforced by the views of an ex-student who independently has published her views on the course in an essay on GP training. (Karretti M 2002) Karetti identifies her colleagues' perception of the BSc course as an "airy fairy" endeavour", but felt it "was probably the best decision (she) ever made". She expounds on the added value to her as a doctor from "studying the meaning and value of health and illness to the doctor and the patient", Overall she says "My BSc year was also a welcome release from the conveyor belt of the norm. It allowed me to stop and really think about general practice... as a career".

There are weaknesses to our paper. Firstly from a methodological perspective the interviewer as a course organizer was too closely related to the course to be independent. Secondly, we have been unable to formally obtain a validity check by triangulation of methods, but Karetti's piece (as described above) suggests we have successfully identified several key themes within the interview data. (Karretti M 2002)

Implications of the study

Are there implications arising from this work? Firstly there should be some debate about the purpose of the iBSc in undergraduate medical education. These courses are costly to students, institutions and funders, delay entry of students into medicine (at time when the UK government has a priority to expand medical school spaces and make more doctors available) and there is sparse evidence of their benefit. We feel that more clinically relevant BSc courses need to be offered, and these should not just be targeted just at those pursuing elite teaching hospital research careers but also at mainstream medical careers. (Rushforth 2001) This is particularly important with some institutions moving towards mandatory intercalated BScs for all non-graduate medical school entrants.

Another implication is that general practice and primary care still has an image problem and a perception of a second class status among some students. If general practice is a “fall back” career choice, then for some, there appears to be no motivation to excel or extend themselves. The quote in the title that the BSc was only necessary for career progression to becoming a hospital consultant reinforces this idea. It is important to realize however that many of these negative perceptions are not held by this group of students, but by their peers. Overall the course is helping to meet the demand to extend the range of intercalated BSc courses, beyond traditional laboratory based science courses to

include one that is perceived as clinically relevant. Importantly, we have no information about the impact on GP recruitment of this course.

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