The Hopes and Fears of new medical students:

An exploration of students' perspectives of applying to medical school

Report on a medical education research project conducted in 2008-10

Anja Timm, PhD
Medical Education Development Unit
Faculty of Medicine
University of Southampton
February 2013

Contents

Acknowledgements

This project would not have been possible without the continuing support of Faith Hill who created the medical education research post at the University of Southampton in the first place. The project was financially supported by the School of Medicine (now Faculty of Medicine) via the Education Research Advisory Group (ERAG).

Timing of the project

This project was conducted in 2008-10. The UKCAT had been introduced recently.

Introduction

This project explores the backgrounds, expectations and preparations of twelve prospective BM5 students prior to medical school entry and charts their transition during the early years curriculum (Years 1 and 2) of their undergraduate degree and the support that is available to them through their home environment.

The HE sector is increasingly concerned with the student experience. Mostly it refers to the measurement of student satisfaction through questionnaires; a key example being the National Student Survey (NSS) whose importance has risen rapidly since its inception in 2005. At times, focus groups or student panels are brought in, but these tools employ questions that the authorities / administration need answering and may not be relevant to the students. In contrast, this study sought to approach student experiences in an exploratory and holistic manner and thus directly addresses these shortcomings. The project employed range of qualitative methods and endeavoured to put the students' perspectives at the centre. Thus, the project attempts to raise and address a much broader issues that affect students' lives when starting medical school.

To my knowledge, there have been no qualitative studies that address the transition of prospective into medical school, i.e. following students from prior to arrival and throughout Y1 and Y2.[1] It is hoped that ultimately the findings from this study will be of interest to a wide range of stakeholders – educational researchers, sociologists of health, illness and the professions. One key constituency are medical school admissions committees and selectors who would like to learn more about applicants – and how they make sense of the process of applying to and gaining entrance to medical school. It is also hoped that it may provide an authentic picture of new medical students' experiences to prospective applicants.

Wider background / literature / developments

Within the medical education literature, debates about medical school entry mainly center on the fairness and reliability of selection mechanisms (e.g. Lumsden, 2005; Benbassat, 2007, Brown, 2008). Students' own perspectives (and reactions) to these issues are often side-lined. Furthermore, over the past decade the student body of medical schools has changed dramatically, however, not all groups are evenly represented. Policy objectives have prioritized research on widening participation and graduate entry cohorts; international students too are increasingly receiving attention. By implication, school leavers are becoming stereotyped as 'traditional' entrants, even though relatively little is known about them. This project addresses these gaps by studying 'ordinary' undergraduate entrants, i.e. school leavers in a way that goes beyond demographic indicators and social classification. A deeper appreciation of all medical student groups and their backgrounds will in turn make for richer comparative studies across cohorts. Moreover, the study elicits student's own

understanding of what it means to enter medical school; what it takes (financially, emotionally), how to prepare and how to succeed.

Why is this study worth conducting?

- Understanding how 'ordinary' successful applicants prepare for medical school entry can provide vital pointers for those who seek to broaden the pool of applicants and entrants.
- Learning about students' backgrounds and expectations may prove valuable to those in charge of induction (Darling, 2006), early years teaching and pastoral care within medical schools across the country.

Methodology

This is an exploratory study that uses a range of qualitative methods, i.e. interviews, focus groups and shadowing / observations of curricular activities. The study initially involved twelve new medical students (out of 210 entrants) from the BM5 cohort who started their degree in 2008/09.

Inclusion / exclusion criteria:

This study was concerned with prospective BM5 students who were school leavers/ deferred entry/ gap year applicants. Only 'home' students over the age of 18 were included. Willing participants were selected to ensure representation of both genders, different school types and with varying distances between applicants' home address and Southampton. Recruitment was closed once sufficient numbers of participants had volunteered (n=12). Participant demographics summary:

- Eight women / four men.
- Gap year: eight school leaver applicants and four applicants with one gap year.
- School type: Comprehensive / sixth form: five; Grammar school: two; Independent: five.

Research questions guiding the data collection with students:

1. What are prospective students' expectations of medical school (prior to arrival?)
2. How did prospective students prepare for successful entry?
3. What aspects of the transition into medical school are most problematic for school-leavers?
4. What are the hallmarks of a successful transition into medical school for school-leavers?
5. What kinds of support mechanisms are relevant to a successful transition of school leavers into medical school?

Research approach

August – September 2008: Recruit new medical students from the BM5 intake 2008/09 (total student numbers approximately 210 per cohort). Once university conditions have been met and students have confirmed their place at Southampton, they will receive a letter asking them to consider taking part in this study in August 2008. Participants will essentially be self-selected. The initial approach will be made to 40 potential participants with the intention to convert ten of these into actual participants.

Prior to entry (September 2008): The initial data collection consisted of visits to a place of the participant's choice – possibly their home. Crucially it took place prior to their arrival at Southampton. The main interview was undertaken with only the student present.

When students did not object and if parents / guardians were available and willing, a second interview took place with the students and their parents / guardians jointly.

Years 1 (2008/2009) and 2 (2009/2010): Two weeks into their studies, students were invited to a one-to-one interview. All students were invited for interviews, periodically, every semester during the early years. All of these interviews were audio-recorded (with the permission of the participants).

In addition to these structured encounters, the researcher shadowed educational activities throughout the academic years, i.e. attending induction activities for new undergraduates and lectures, anatomy tutorials, pathology demonstrations, Student Selected Units, etc. so as to be able to appreciate the students' workload and teaching encounters. The emphasis was on the student perspective of the educational provision and institutional context.

Not all participants chose to respond to the regular invitations to attend interviews (five opportunities in total). From the initial interview, some participants chose to meet with the interviewer twice, others three, four or five times. All resultant audio-files were transcribed (by an external transcriber). Transcripts were entered – together with the observation data – into the qualitative analysis software package N-Vivo. The researcher undertook an inductive analysis process, starting out by reading and re-reading the interview scripts (as a whole) and then coding for themes across the twelve interviews to under-stand the students' perspective.

Ethics approval was gained from the School of Medicine Ethics Committee (reference: SOMSEC020.08 / Research Governance Reference: 5944).

Findings

The project has given rise to a range of follow-on research projects (see below) as well as ideas, queries and investigations that have been pursued locally. This report provides a summary of only of the initial interviews (data from Y1 and Y2 will be reported elsewhere).

Students' preparation for medical school entry:

- According to participants this started during or prior to Year 10 (in most cases).
- Several participants reported changing schools. This was either to enable them to access the subject areas required for Medicine, or as a conscious decision to influence one's chances for entry into medicine; for this reason both more and less prestigious schools were in demand.
- Most students reported subscribing to the Student BMJ and how they started paying attention to medicine stories in the news at around this time.
- Most participants reported visiting between two and three medical schools ahead of selecting their choices.
- Several also attended other events, e.g. Open Days at the Royal Colleges, Science Weeks, *PurePotential*.

Students also reported accessing the following resources:

- Books on entry to medicine
- Official (University websites) as well as specialised websites offering information
- Unofficial advice and guidance provided through online forum sites
- Attending *MedLink* and/or *MedSim* events

Alongside these activities directly focused on Medicine, participants also reported that they were o conscious of the need to demonstrate 'well-roundedness' in their applications. This led many to seek opportunities in terms of:

- Demonstrating leadership (taking on responsibilities at school, in sports, etc.)
- Completing the Duke of Edinburgh awards
- Pursuing 'respectable' hobbies, i.e. classical music

All of the above were described by participants as helpful in terms of their initial orientation and their general positioning. It is of course noteworthy that most of the above require substantial parental support as well as financial backing.

Personal statements

Participants explained that for the actual application, their activities intensified further and culminated in the completion of their personal statement that forms part of their UCAS application. From the research it emerged that personal statements undergo multiple stages of editing and that they are honed over months, based on feedback received. Applicants are unlikely to undertake this task entirely by themselves. Rather, participants reported drawing on whatever assistance was available to them, e.g. online examples and chat rooms, friends, family and guidance provided by their school. They also reported the use of tailored (paid for) services to access coaching / careers advice / personal statement editing. It is noteworthy that whereas the provision of these is included in the careers advice for many independent schools (paid for through school fees), other applicants may feel the need to purchase such services separately.

Prior experience of health and/or social care

This is an important additional requirement by medical schools that applicants need to meet. All participants reported great efforts and much energy spent on this area: applying for shadowing to various hospitals and charities, consciously putting together a profile that included different age groups, levels of care and a range of conditions and disabilities. Within the (limited) sample, participants' exposure clearly varied considerably:

- One-day / one-week intro sessions at a hospital
- Some afternoon's session in the parental GP practice (answering phones)
- Serving coffee to elderly people in nursing homes
- 'Volunteering' with mental health / children's charities
- Hands on working as a health care / operating theatre assistant over a 12 months+ period (gap year)

From participants reports it emerged that sorting out voluntary work experience was time consuming and sometimes quite difficult, especially for school pupils who were also studying for A-

levels (or other qualifications) and undertaking all of the activities outlined above; it might be further exacerbated by living rurally. According to interviewees, it required not only organisation and time management on their part, but also strategy.

References

From the data references emerged as quite similar to personal statements in that content and format are not the work of one person, but (potentially) many. Participants reported that references were routinely seen by students prior to submission, which is likely to mitigate against unflattering content. But there was also another aspect to this: whereas participants from independent schools talked of specialised career guidance that was accessed with ease, some students from state schools reported having to take a more active role. In the case of secondary schools less familiar with access into medicine, students' knowledge of what is required / expected emerged as a key aspect to widening access, i.e. accessing 'the Oxbridge tutor' (if there is one).

Aptitude tests

The UK Clinical Aptitude Test (UKCAT) was introduced by a conglomerate of British medical schools in 2006; it is currently used by 25 universities to help with decisions for entry into medicine and dentistry. The test's chief purpose is to help medical school admissions teams to distinguish between many candidates that are all equally highly qualified. In this it is similar to the Bio-Medical Admissions Test (BMAT) that has been used by some schools since 2003. Admissions testing in medicine is becoming increasingly widespread: for entry in 20010/11, only the Universities of Bristol, Liverpool and Birmingham do not require applicants to complete any kind of admission test. (http://www.medschoolsonline.co.uk/index.php?pageid=78).

Since the UKCAT's introduction, the testing service – which is run on a commercial basis - has been keen to establish its legitimacy and to widen its reach. Several studies have been conducted into the UKCAT's predictive validity and reliability (Lynch et al. in MedEd 2009, Yates & Nicholson in BMJ 2010); others have sought to compare A-level and UKCAT performance (James et al. in BMJ 2010). For the time being, however, it is too early to say to what extent the UKCAT presents added value. In the meantime, the way in which applicants' test results are interpreted and used in the admissions process varies hugely between medical schools. Some operate a cut-off point (either fixed or flexible), others use it to rank applicants prior to making interviewing decisions. Some schools decline to operate a mean or total and seek to assess each application individually. Yet other schools use the UKCAT only to help with the selection of borderline candidates. (http://www.thestudentroom.co.uk/wiki/UKCAT)

Among the 12 applicants interviewed, there was not a single one that claimed to fully understand the logic of the UKCAT. They all appreciated that selecting medical students was a very difficult process – especially given the larger number of applicants to the restricted number of places and in view of a medical degree bringing with it special responsibilities (and opportunities), but they were struggling to link these aspects to the format and contents of the test they had encountered. For applicants the use of two different tests effectively results in a double burden (should they chose to apply to medical schools that use different ones). Most medical schools seem to be focused primarily on their own procedures, but applicants have to negotiate the requirements of four different regimes.

Interviews

At the time when the research was conducted, Southampton medical school did not routinely interview all applicants (it interviews a subsection, i.e. international applicants and those applying for the graduate entry (BM4) and widening access (BM6) programmes. However, study participants were asked about the process of applying to medical school as a whole – not merely their experience of applying at Southampton.

Gaining interviews at several medical schools – i.e. moving onto the next level of the selection process – is ultimately what all applicants hope for. However, interviewing is also associated with considerable anxieties, especially for school leavers. These anxieties can be addressed by training, which is internally available in some schools (often independent ones), but not others. Its absence may lead applicants to seek and procure paid for coaching, which is often combined with other forms of advice, i.e. personal statement editing.

The timing and the number of interviews can also interfere with other activities. For parents it means having to take time off to accompany their children. For applicants themselves it means taking time out from studying/ working to prepare and then to attend interviews. Some interviews last several days and require long distance travel / overnight accommodation.

Conclusions

Study participants described the process of applying to medical school as all-consuming. They reported on a long period of dedicated and intense preparation. Moreover, their own involvement was fraught with confusion, anxiety as well as – at times – desperation. This meant that interviewees were carrying a considerable burden. It is important to note that study participants were the 'lucky ones' – they had all managed to get a place at medical school, where the vast majority of applicants fail, they had succeeded. For every successful applicant there are several unsuccessful ones who have undergone this process:

- Time / intensity: Participants had spent a large part of the past two-three years trying to figure out what it was they were meant to be doing to increase their chances. Several of them described the process as a seemingly endless series of hoops that they had to jump through, oftentimes without fully understanding what it was they were asked to do or why. Several students revealed that they had changed schools (or were selecting schools consciously) so as to appeal to selection committees.
- Focus: The literature on medical school admissions is very clear that A-level results are the only reliable predictor of medical school success. It seems ironic then that most study participants were not focusing on their school grades, but on deciphering and meeting the additional extracurricular requirements (actual and perceived) for entrance into medicine.
- Support required: From the interviews it was also becoming clear that participants were requiring substantial financial and other support to allow them to spend this time and effort. This need was met by parents who were supportive of students' ambitions and who were able to pay for the costs incurred.
- Paid for services: all respondents were aware of a growing market that was emerging around admissions – commercial providers were exploiting applicants' insecurities and offering a range of services, from interview training, to personal statement 'editing'. Some participants were willing to admit that they had used these. Others pointed out that they considered it

somewhat illicit or an admission of personal failure. Increasingly, it is also possible for applicants to pay for pre-medical internships in developing countries, which are intended to improve their chances at selection.

The process – and the burden that individual applicants carry – is only partly of the making of the medical schools themselves. The popularity of medicine is presumably due to a combination of the nature of the work, the status and prestige of the medical profession and the stable career prospects; all of these make it desirable and available places are heavily over-subscribed. Some institutions (though not all – especially in terms of their use of the UKCAT) are at great pains to be transparent in their expectations and requirements. Nevertheless, the burden that applicants are carrying cannot be ignored. Moreover, these young peoples' experiences are likely to shape their lives and expectations, not just during the time that they spend preparing, but beyond. Norman (2001), for example highlighted the personal devastation many rejected candidates experience (especially those that were interviewed). However, the fallout of the process is not only relevant to rejected candidates.

The GMC is explicit in terms of the duties of a doctor and what constitutes good medical care, but from the research it appears that these ideals are not 'modelled' at the point of entry into medicine. From the interview data it seems that the very process that facilitates access into the profession essentially contradicts its ideals. For example *Good Medical Practice* highlights the need for "working in partnerships" and the respect for colleagues, but applicants often find that the business of applying for medicine is a cut throat competition. Also, *Good Medical Practice* emphasises the need to "Treat patients as individuals", but this is not the experience of applicants who are excluded on the basis of tests – such as the UKCAT – that have no clear indication of validity. The expressed need and desire of the profession for individual integrity is undermined by individual clinicians selling coaching and advice to those who can pay.

Thus, young school leavers' first encounter with the profession was communicating a subtext along the following lines:

- Strategy and competitiveness are the most important attributes and are likely to see you through.
- Privilege breeds privileges – and if you don't have it already (i.e. through the advice and support provided within independent school sector), you might consider buying information and support at the point of need.
- Don't ask why – just do it (i.e. UKCAT).
- Early preparation is vital (even if this is at the expense of thoughtful consideration and a gradual process of maturation) – if you don't start early, you don't stand a chance.

In contrast, applicants who had taken a gap year were much more considered about their application, their role as applicants and the position taken by the various medical schools. Several of them had used the intermediate year to work within health or social care and this had allowed them to mature in their choice of a future career – they knew what they were getting themselves into and had the time to figure out that this was indeed an appropriate career for them. They were also able to distance themselves and their aspirations from the drama of the high stakes selection process.

Whereas school leaver applicants tended to believe that the selection process had accurately chosen (them) and were left with a sense of having successfully outcompeted less suitable candidates, gap year applicants appeared to think of it much less in terms of a judgment on themselves – their experiences had made them realise that the process of choosing applicants was a complex one and to some extent a matter of chance. They appeared to be less motivated by the desire to 'get in', but by the job itself.

a. Implications for medical schools

Applicants are carrying a quite substantial burden as they seek to respond – as best as they can – to the differing admission criteria laid down by the different medical schools. Given that all schools are working towards the policies produced by the GMC, they may wish to consider negotiating joint requirements and joint selection processes, which would reduce the burden on the applicants.

At present, the evidence base for admission processes (see special issue of Advances in Health Sciences Education, 2004:9) appears to be ignored by many medical schools. Whilst the literature clearly indicates that the use of personal statements or references in selection is questionable, applicants are nevertheless being asked to produce these. In fact, school leavers appear to spend most of their energies and efforts on manufacturing these multi-authored pieces of fiction. Is this really the best use of their time? And – if these documents are not used, why are applicants asked to produce them? The same also goes for the UKCAT – unless there is evidence to support its use in a particular way, applicants should not be asked to carry the cost for an experiment even if they are subjected to testing (which is in the longer term interest of medical schools, rather than applicants).

Rather than relying on voluntary work – which is difficult to verify – perhaps medical schools need to demand that applicants have gained work experience – ideally, though not necessarily, in healthcare settings. This in turn would result in a record and workplace references, which are likely to be more reliable. Working in healthcare may also be a useful testing ground for those applicants who have been 'pushed' towards medicine because they happen to have the required grades (rather than a desire for and understanding of a medical career). Medical schools may seek to make a substantial period of work experience mandatory as this is likely to make for more mature applicants.

b. Scope for future work

Conduct update and comparative research locally – what is the impact on higher fees on applications? How do the applicants for the BM6 and BM4 cohorts approach the preparation and application to medical school? What about international students – especially those wishing the join the BM (EU)?

Nationally / internationally:

- Try to quantify the cost of the application process – both from the medical school side (Norman, 2001), but also the cost to the students (hidden and direct).
- Undertake further research into the commercial service provision and its use by medical school applicants.

Recommendations

1. Consider student perspectives as and when changes are made to medical school admissions regimes – both locally and nationally. Joint selection with other medical schools might lessen the burden.
2. Re-consider the use of personal statements and references for selection purposes as both their provenance and authorship may be questionable.

Dissemination

Findings from the Hopes and Fears Project were disseminated both internally and externally:

- To the Medical Selection Committee in January 2009 (preliminary findings) regarding the student experience of medical school admissions
- As a conference presentation at ASME's Annual Scientific Meeting in Edinburgh in July 2009, entitled: "Students perspectives on preparing for and getting into medical school"
- At the Faculty of Medicine Programme Director's meeting in 2011 (as part of a larger presentation on education research conducted within the medical school)
- At a national workshop on Medical School Selection and Admissions funded by the HEA's Subject Centre MEDEV (Medicine, Dentistry and Veterinary Sciences). The workshop was organised by Anja Timm, Faith Hill and Nick Dunn and ran at the School of Medicine, University of Southampton in 2011.

This project has also helped to define a number of other medical education research projects:

a. A research project that is currently undertaken by Greg Bailey (as part of the BMedSc 2012/13). He is specifically focusing on how students procure work experience / voluntary work and the uptake of paid-for services such as interview training, etc.
b. It has also contributed to the design of the Beyond Competence Project (2010-2012), which explored students' experience of moving from the classroom into clinical placements. The survey in particular asked respondents about prior work experience in health and social care.

References

Benbassat, J & Baumal, R (2007) “Uncertainties in the selection of applicants for medical school”, Advances in Health Science Education, 12, pages 509-21

Brown, CA (2007) “A qualitative study of medical school choice in the UK”, Medical Teacher, 29, page 27-32

Brown, CA & Lilford, RJ (2008) “Editorial: Selecting medical students”, BMJ, 336, page 786

Darling et al (2006) “How to introduce students to the new learning environment: induction to medical school”, The Clinical Teacher, 3, pages 210-214

Greenhalgh et. al (2004) “’Not a university type’: focus group study of social class, ethic and sex differences in school pupils; perceptions about medical school”, BMJ, 328, pages 1541-4

James, D. , Yates, J. and Nicholson, S.”Comparison of A level and UKCAT performance in students applying to UK medical and dental schools in 2006: cohort study”
BMJ 2010; 340: c478, doi: 10.1136/bmj.c478 (Published 16 February 2010)

Lumsden, MA et al. (2005) “Assessment of personal qualities in relation to admission to medical school”, Medical Education 39 (3), 258–265

McHarg et. al (2007) “Why people apply to medical school: implications for widening participation activities” Medical Education, 41, pages 815-821

McManus, I., Powis, DA, Wakeford, R. , Ferguson, E., James, D. & Peter Richards, Intellectual aptitude tests and A levels for selecting UK school leaver entrants for medical school ,
BMJ 2005;331:555-559 (10 September), doi:10.1136/bmj.331.7516.555

Norman, G. (2004) “Editorial: The morality of medical school admissions”. Advances in Health Science Education, 2004: 9: 79–82.

Norman, G. (2001) “Editorial: The Fiscal and Psychic Costs of Admissions”. Advances in Health Sciences Education, 2001:6: 89-91, Number 2

Jayne Parry, Jonathan Mathers, Andrew Stevens, Amanda Parsons, Richard Lilford, Peter Spurgeon, and Hywel Thomas Admissions processes for five year medical courses at English schools: review**,**
BMJ Apr 2006; 332: 1005 - 1009; doi:10.1136/bmj.38768.590174.55

Appendix: Interview schedule (version 1, dated 1/06/08)

Hopes and fears of new medical students: Interview frameworks

This study is exploratory and themes will emerge over time on the basis of what the participants are reporting as relevant in terms of their experiences as they enter medical school. These interview frameworks are indicative of the initial topics that will be covered.

A. Initial interview with prospective student

The research questions to be answered in the research sessions with students are as follows:

> What are prospective students' expectations of medical school (prior to arrival?)
>
> How did prospective students prepare for successful entry?
>
> What aspects of the transition into medical school is most problematic for school-leavers?
>
> What are the hallmarks of a successful transition into medical school for school-leavers?
>
> What kind of support mechanisms are relevant to a successful transition of school leavers into medical school?

The initial interview is going to take place in a venue of the participant's choice (either in or near their home prior to entering the School of Medicine at Southampton). Prior to this interview the participant would have had a copy of the participant information sheet together with a letter inviting them to take part in the study. They would have established contact and stated that they would like to take part. They would have arranged a venue, time and date for the interview.

Before the interview begins the researcher and the participant will seek to clarify any outstanding questions and the participant will be asked to sign the consent form. The participant will be asked whether they would mind if the session was recorded. If permission to record is not granted, the researcher will ask whether it would be acceptable to take notes during the session.

1. Please tell me about your decision to study medicine and how it came about. (prompt for relevant role models / family members involved in medicine).
2. Did anyone help you to make the decision to apply for medical school? If so, how?
3. How did you prepare for medical school entry? (prompt for how long ago students began preparing / whether they used any websites or books / especially for UKCAT preparation)
4. What type of support did you receive from your secondary school / from family members / from commercial coaching / other?
5. How did you decide to make Southampton your first choice and why?
6. What do you expect medical school to be like?
7. When you think ahead, what aspects do you find most exciting about joining medical school?
8. Which aspects do you find daunting?

9. Do you expect to do any further preparation before you start in October?

B. Initial interview with prospective student's parents / guardian

Talking to students is the main aspect of the project, but parents / guardians tend to be heavily involved in their children's education – especially in a degree programme that requires such extensive preparation. Parental / guardian perspectives on which subject to study and which institution to enter are relevant. It would also be of interest to probe the financial implications of preparing to enter medical school.

Research questions to be covered in the joint interview are as follows:

> How do parents/ guardians and families support school leavers in their preparation for medical school entry?
>
> What is their role in terms of selecting a school and in their transition into medicine?

The primary relationship is with the students – bringing in their parents / guardian must not be seen as seeking a more authoritative account or as a way of checking up on the student's statements, hence any interview with parents / guardian will also involve the student him / herself. In fact, it is likely that student and parents / guardian have worked together to bring about successful entry into medical school. In any case, their likely financial contribution and the less tangible support that they provide is worth investigating.

1. Were you involved in X [prospective student's name]'s decision to attend medical school?
2. Did you support X's decision? How?
3. Where there other friends or family member that you think were helpful?
4. What was the role of X's school?
5. Did you help X decide on which medical schools to apply for?
6. Can you quantify the financial cost of helping X gain entry to medical school?