

Career preferences of medical students: influence of a new four-week attachment in general practice

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SUMMARY

Background. *It is not clear why medical students choose one specialty over another. Experiences at medical school are extremely strong determinants of attitudes to the medical specialties, and attitude is the most important factor in determining choice.*

Aim. *This study sought to describe the factors influencing career choices of final year medical students, the effect of a new four-week attachment in general practice on career choices, and changes in career choices towards or away from general practice between the final year and the end of the preregistration house officer year.*

Method. *Career preferences, and influences on them, were assessed by questionnaires administered to 206 medical students undergoing their final clinical attachment at the University of Glasgow immediately before and immediately after a four-week attachment in general practice. These were followed up by a postal questionnaire at the end of the preregistration house officer year.*

Results. *One hundred and thirty-one students returned all three questionnaires. Before the attachment, students born outside the UK, and those who had a previous or intercalated degree were significantly less likely to put general practice as a career preference; female students were more likely to put it as their first career choice. After the attachment, the number stating that it was 'likely' or 'very likely' that they would choose general practice as a career increased from 60 to 72 — mainly through male students changing their preference — but after the preregistration house officer year it had fallen back to 56. Seventeen of the preregistration house officers were planning to undertake a GP training scheme and 32 were planning to complete posts which would qualify for GP training. Reasons for changing preference towards general practice were mainly to do with a dislike of and disillusionment with hospital medicine and with the perceived lifestyle advantages of general practice. Reasons for changing preference away from general practice were mainly to do with positive feelings about hospital medicine and a dislike of the management aspects of general practice.*

Conclusion. *The general practice attachment influenced students, especially males, towards a career in general practice, but this effect was transient. This cohort of doctors should be followed up in order to discover their ultimate career choices.*

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Introduction

THERE is no clear agreement about why medical students choose one particular specialty over another. Factors which have been considered include personality, demographic characteristics and attitudes about the specialties themselves, with the latter apparently being the most important factor.¹ Experiences at medical school are extremely strong determinants of students' attitudes, and curriculum content is a commonly mentioned, potential determinant of specialty choice.²

There has recently been a fall in applications for vocational training schemes in general practice and it is thought that this reflects uncertainty about career prospects.³ Although general practice is perceived as being more compatible with family life, and therefore a popular choice with women,⁴ there is particular anxiety concerning the ability of women to find partnerships in general practice.³

In 1992, a four-week attachment in general practice was introduced for the first time at the University of Glasgow. This occurs during the final clinical attachment which begins in the third term of the fourth year and continues during the first and second terms of the final year. Eight sections of approximately 26 students rotate through each clinical specialty. This attachment increased undergraduate exposure to general practice by around 200%. It was decided to try to ascertain the factors that influenced the career choices of the students, and the effect of the attachment on these choices for the first year of students undergoing the attachment. It was also decided to follow up this cohort of students until the end of their preregistration year in order to ascertain whether any changes were maintained. Particular attention was focused on a preference towards general practice as a career and on the preferences of female students.

Methods

On the first morning of the attachment, the students were asked to complete a three-part questionnaire, which was developed after a review of the literature. The first section requested the following information: sex; age; place of birth; if the students had any relatives in medicine; if they had a previous or intercalated degree; if they had ever won any prizes or distinctions; and if they had previously undertaken any resits. The second section asked them to give the three subjects which they had enjoyed most during the course so far and the three they had enjoyed least. The third section asked them to select their first three career choices and to indicate how likely they would be to choose general practice as a career on a five-point scale from 'very likely' to 'very unlikely'. At the end of the four weeks they were asked to complete a further questionnaire which repeated the second and third sections of the first questionnaire.

In June of 1994, towards the end of this cohort's preregistration house officer (PRHO) year and 16–26 months after their GP attachment, current addresses were obtained from the postgradu-

ate office (permission had previously been received from the students to contact them in the future). They were mailed a third questionnaire with one reminder, which again asked them to give their first three career choices and the likelihood of them choosing general practice as a career. It also asked them to state whether they were planning to undertake a GP vocational training scheme or were going to complete posts which would qualify for GP training, and whether they had changed their preference away from, or towards general practice as a career, giving their reasons for this change.

The questionnaires were numbered and could be linked by referring to a list held by the first author; however, all information given was treated in a confidential manner. Statistical analysis was by chi-square test.

Results

There were 206 students in this cohort, of which 200 (97.1%) completed the first questionnaire. The demographic characteristics of these 200 students are shown in Table 1. One hundred and ninety (92.2%) of the students completed the second questionnaire.

Addresses were not available for eight of the cohort towards the end of the preregistration year and seven questionnaires were returned 'not known at this address'. One hundred and forty-six of the remaining 191 questionnaires were returned (76.4% response rate). One hundred and thirty-one (63.6%) of the origi-

nal class completed all three questionnaires. A comparison of responders and nonresponders for all three questionnaires revealed no significant differences in terms of sex (male: responders 61, nonresponders 34; female: responders 70 and nonresponders 35), mean age (responders 22.3, nonresponders 22.6 years), place of birth (born in UK: responders 108, nonresponders 53; born outside UK: responders 22, nonresponders 16), or in patterns of initial career preference. The three subjects which they had enjoyed most so far in the course, before and after the attachment, are shown in Figure 1. The most notable change is the increase from 4% to 47.1% of students putting general practice as one of their three most enjoyed subjects.

The top career preferences before and after the attachment and towards the end of the preregistration year are shown in Figure 2. Before the attachment the students were significantly more likely to have put general practice as one of their top three career choices if:

- They had been born in the United Kingdom: 62.7% of students born in the UK chose general practice (101 out of 161), and 31.6% of students born elsewhere also chose it (12 out of 38); chi-square 12.2 on 1 degree of freedom; $P < 0.001$
- They did not have a previous or intercalated degree: 15.9% of students with a previous/intercalated degree chose general practice (7 out of 44) and 61.5% who did not have a previous/intercalated also chose general practice (96 out of 156); chi-square 28.6 on 1 degree of freedom; $P < 0.0001$.

There was no association between putting general practice as one of their three career choices and age, sex, having a relative working in medicine, previous prizes or distinctions, or previous results. However, among the 131 students who completed all three questionnaires, the female students were significantly more likely to put general practice as their first career choice before the attachment: first choice of female students 36.6% (26 of 71), male students 8.3% (5 of 60); chi-square 14.4. on 1 degree of freedom; $P < 0.0005$. There was no difference between the sexes when putting general practice as their first choice after the attachment or after the PRHO year. The likelihood that the 131 students who answered all three questionnaires would choose general practice as a career is shown in Table 2. The female students significantly more often put general practice as a 'likely' or 'very likely' career choice before the attachment.

Two students failed to complete at least one part of one questionnaire and so were excluded from this analysis. There was no difference in changing preference for general practice between students who completed their GP attachment at the beginning of their final clinical rotation, i.e. 26 months before the final questionnaire, and those who completed it at the end of their final

Table 1. Characteristics of the students questioned in the study ($n=200$).

Sex		
Male	Female	
96 (48%)	104 (52%)	
Age (years)		
Range	Mean	Median
20 - 37	22.5	22
Place of birth		
UK	Non-UK	
162 (81%)	38 (19%)	
Other characteristics	Number of students	
Relatives working in medicine	65 (32.5%)	
Possession of a previous/intercalated degree	45 (22.5%)	
Possession of previous distinctions/prizes	54 (27%)	
Having to resit examinations	73 (36.5%)	

Table 2. Likelihood of choosing general practice as a career ($n=129$).

Likelihood	Number of students (%)					
	Before attachment $\chi^2=15.6$ (2df) $P < 0.0005$		After attachment $\chi^2=7.56$ (2df) $P=0.02$		After PRHO year $\chi^2=6.11$ (2df) $P=0.05$	
	Male	Female	Male	Female	Male	Female
Likely/very likely	20.3% (12)	54.3% (38)	40.7% (24)	64.3% (45)	23.7% (14)	44.3% (31)
Neutral	54.2% (32)	32.9% (23)	40.7% (24)	27.1% (19)	45.8% (27)	35.7% (25)
Unlikely/very unlikely	25.4% (15)	12.9% (9)	18.6% (11)	8.6% (6)	30.5% (18)	20% (14)

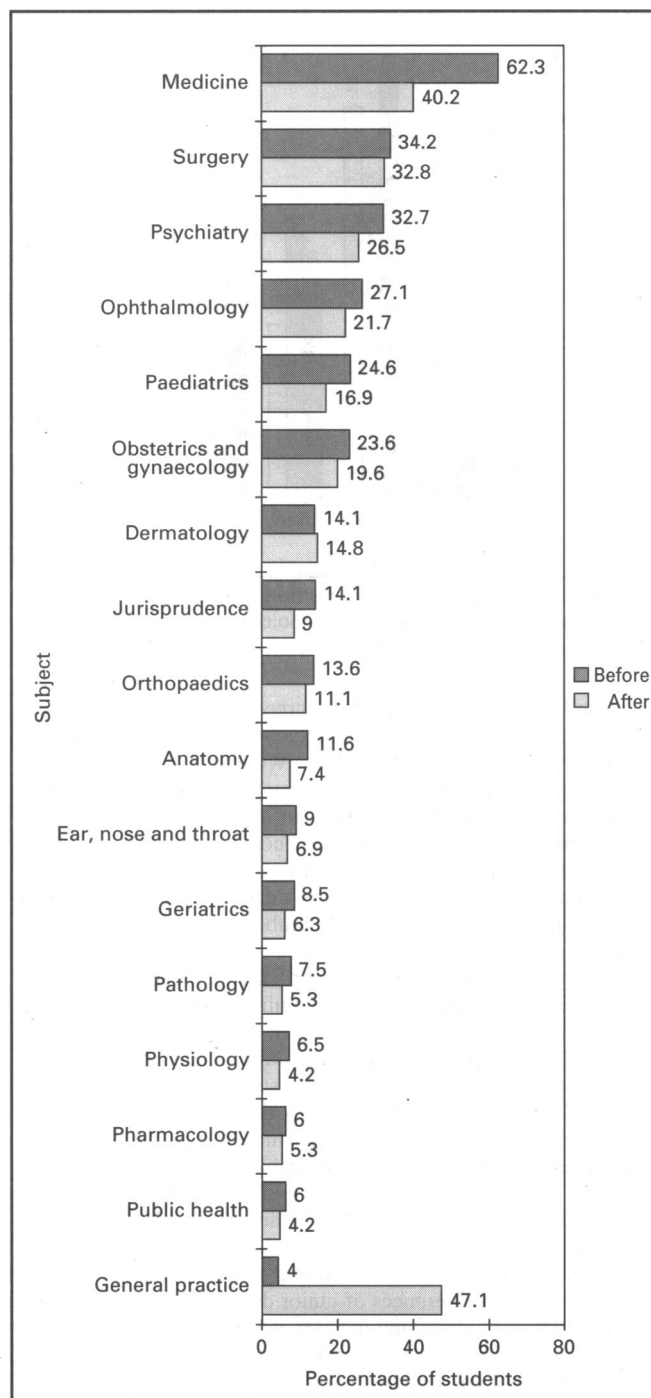


Figure 1. Most enjoyed subjects before and after the attachment.

clinical rotation, i.e. 16 months before the final questionnaire.

Seventeen out of the 146 students who completed the third questionnaire (11.6%) were planning to undertake a GP vocational training scheme and 32 (21.9%) were planning to complete posts which would qualify for GP training. The reasons given for changing career preferences towards and away from general practice are given in Table 3.

Discussion

The students were asked to give their preferred courses and

Table 3. Reasons given for changing career preferences towards and away from general practice.

Reasons for changing towards general practice	No.	Reasons for changing away from general practice	No.
Dislike/disillusioned with hospital work	13	Enjoyed hospital work	9
Better lifestyle/hours in general practice	10	Dislike management aspect of general practice	4
Continuity of care/ community care	5	Prefer to specialize	3
Dislike hospital career structure	4	Did not enjoy general practice attachment	1
General practice more flexible	4	Hospital suits personality	1
In general practice you are your own manager	4	Hospital work more academic	1
Hospital work is too impersonal	3	Dislike being on-call in general practice	1
Frustrated by hospital management	2	Dislike hospital training for general practice	1
Dislike being on call in hospital	2	General practice too boring	1
Family considerations/ part-time work	2		
Enjoyed general practice attachment	1		
Found general practice challenging	1		
Secure future in general practice	1		

career choices in open questions on the questionnaires rather than by choosing from a list of subjects. It is therefore possible that their choices could have been affected by recall bias such as time proximity; for example, they may have been more likely to choose clinical subjects than biomedical science subjects because they had studied these more recently. However, the pattern of career choice generally mirrored that reported by Parkhouse and colleagues in their series of reports.⁵⁻⁸

This study showed that the new general practice attachment at Glasgow had an effect on student career preference, and confirmed the finding that exposure to a specialty increases preference for it as a career.¹ This attachment was popular with students. Having completed it, they were more likely to cite general practice as one of their preferred career choices if they also put it as one of their most enjoyed subjects. However, the increase in students citing general practice as a career choice after the attachment was transient. By the end of the PRHO year, the number of students preferring it as a career had reduced to about the same level as before the attachment. This may also be due to a proximity effect. It was disappointing as it was hoped that the trend away from applying for general practice vocational training schemes in the West of Scotland might have been reversed if students had encountered a positive experience of general practice in their final undergraduate year.

Two groups of students were less likely to put general practice as a future career — students born outside the UK (perhaps indicating lack of prestige for general practice in other parts of the

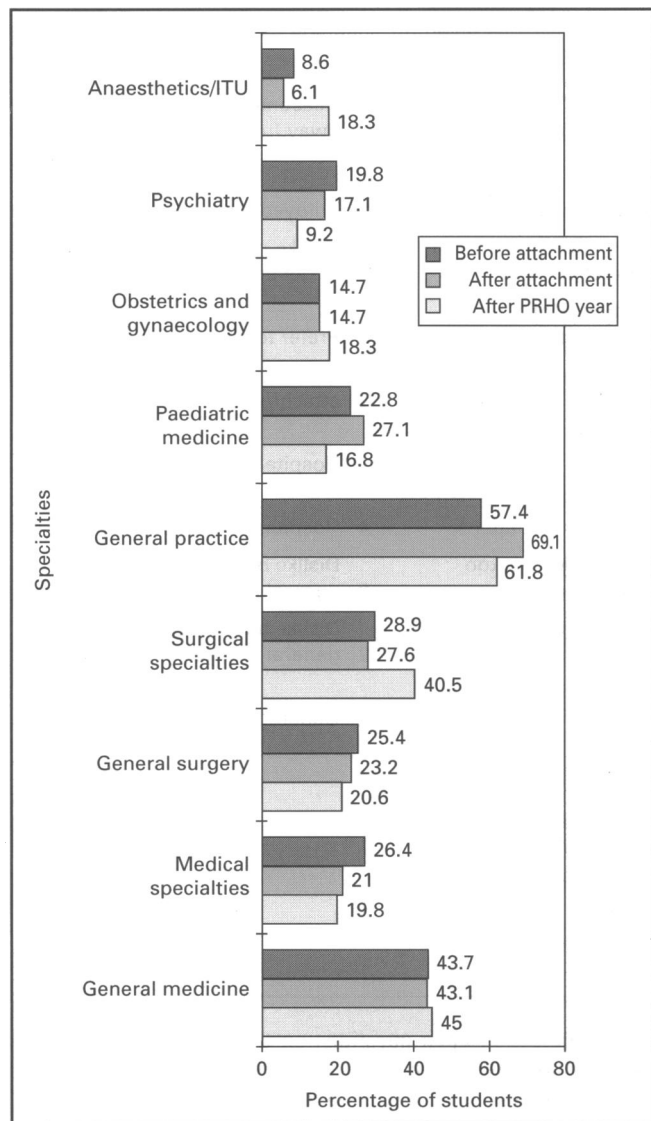


Figure 2. Percentage of students putting one of the top nine specialties as one of their three career choices before and after the attachment and after their PRHO year.

world), and students who elected to study medicine after a previous degree or who did an intercalated degree during their medical course. It has been suggested that these students may initially see themselves as becoming medical scientists. Our study tends to confirm this finding. It is of interest that there has been a noticeable trend among this group towards general practice.⁹

There was no difference in choice of general practice as a career between those students who had previously won prizes and distinctions, and those who had done resits. These categories were used as proxies for academically gifted and weak students. It would appear, therefore, that general practice attracts students of all academic standards.

Before the attachment, female students were much more likely to put general practice as their first career choice, but after the attachment and the PRHO year the magnitude of the sex difference was reduced. It would appear that male students are more likely to see themselves as general practitioners after gaining work experience in general practice. This may be accounted for by modelling, i.e. emulation of the behaviour of an admired or

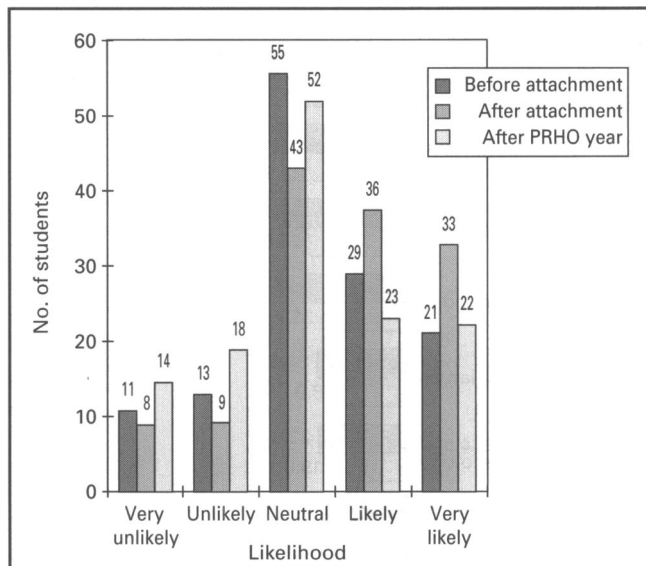


Figure 2. Percentage of students putting one of the top nine specialties as one of their three career choices before and after attachment and after their PRHO year.

respected figure.¹⁰ Approximately three-quarters of the GP tutors who teach students during the attachment are male and as a group they are enthusiastic teachers. We would suggest that during the attachment our male students see many positive role models and this encourages them to look more favourably on general practice as a career. By the end of the PRHO year there was a further reduction in the sex difference in the choice of general practice or hospital medicine as a career. This may be due to these young doctors seeing equal numbers of men and women at the next (senior house officer) level.

Among those doctors who were planning a career in general practice, a greater number were planning to construct their own GP rotation as opposed to joining a preconstructed training scheme. It would appear that these young doctors prefer to have the greater flexibility of choosing posts in specialties and geographical locations in order to keep their options open, rather than experience the greater security which comes from being part of a formal, preconstructed training package. This has been facilitated by the expansion of senior house officer posts and the large number of general practice trainee posts which are available. This finding requires further consideration by those responsible for designing formal GP training schemes if they are to be responsive to the preferences of junior doctors.

This study provides some insights into the reasons why junior doctors changed their career preferences towards or away from general practice. The reasons given for changing towards general practice were centred around a dislike for and disillusionment with aspects of hospital medicine, including the inflexible career and management structures, and the perceived lifestyle advantages of general practice. A minority stressed positive aspects of general practice itself; for example, the continuity of care for patients. It is disappointing that the change in preference towards general practice was as a result of negative selection, but this finding corroborates previous work.¹¹ In contrast, most of the reasons given for changing career preferences away from general practice centred around positive feelings about hospital medicine. There may be some proximity effects operating at this stage, and it is possible that general practice appears less attractive when viewed from the perspective of hospital.

Several students were discouraged by the management aspects

of general practice. They may have been influenced by their general practitioner tutors who were still coming to terms with the increased administrative burden imposed by the 1990 contract. Only one student had specifically changed career preference away from general practice after failing to enjoy the GP attachment.

Information from this study could be relevant to those designing undergraduate curricula and making manpower decisions. For example, students may feel less discouraged about the management aspects of general practice if they have learned about management in the health service as undergraduates.¹² If the trend away from general practice is to be reversed, this period could be explicitly used to promote general practice as a career. In a recent exercise in the Department of General Practice at Glasgow, small focus groups of students were asked to define their own learning objectives for the attachment. The students identified: 'demonstrate their personal suitability for general practice as a career', as one of the objectives they would like to have for the attachment (paper in preparation). Perhaps making more of the opportunity to promote general practice as a career during periods of attachment might help to balance the influence of longer periods in hospital during undergraduate and postgraduate training. Allen advocates 'systematic continuing personal assessment of the aptitude and ability of individual students with particular reference to future career choices'.¹¹

It has been suggested that particular help is required for women doctors, including specialized careers advice and retraining, updating and re-entry schemes.¹² At least half of the students entering medicine are women and a higher proportion of them choose general practice. Thus, some of the recruitment difficulties in general practice might be alleviated if these kinds of specialized help were extended.

The attachment at Glasgow, although greatly increasing the exposure of students to general practice, still only accounts for a short period of undergraduate clinical teaching. In North America the best strategies for increasing the numbers of students choosing generalist careers include emphasizing generalist training, increasing the size of the generalist faculty and increasing the time spent in generalist training.¹³ These strategies may be implemented in the UK in the light of recommendations from the Education Committee of the General Medical Council.¹⁴

There are likely to be further changes in the career choices of the cohort of doctors described in our study, and we will continue to follow them over the next few years to find out about their final careers and what influences prevail upon them.

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