

IN BRIEF

- This paper compares the motivations underlying the career choices of a selection of medical and dental students. Significant differences were revealed amongst six different dimensions.
- Medical students, when compared with dental students, manifested a more 'professional attitude' in which altruism and intellectual challenge constituted central motivating factors. Dental students, by contrast, expressed more of a commitment to personal and financial gain.
- This paper raises questions about dental students orientation and the apparent lack of 'public service' ethos. This is discussed in the context of recent changes in the British healthcare system.

A comparative investigation of dental and medical student's motivation towards career choice

M. L. Crossley¹ and A. Mubarik²

Objective A number of recent studies have investigated the motivations underlying the career choice of dental and medical students, suggesting that they may be very different. However, as yet, no studies have been conducted which provide a direct comparison of dental and medical students studying in the same place. Accordingly, the aim of this investigation was to conduct a survey which directly compared the motivation of a selection of dental and medical students at Manchester University.

Study design A questionnaire was developed for this study on the basis of previous surveys investigating the motivations of dental and medical students towards career choice. Six dimensions were covered in the questionnaire including: status and security; the nature of the occupation; career opportunities; patient care and working with people; use of personal skills; and interest in science. In addition, students were asked about the role of work experience in either dentistry or medicine. The questionnaire was distributed to 80 medical students and 80 dental students chosen from a random selection of lecture slots.

Results The results were analysed using the Mann-Whitney *U* test. Statistically significant differences were revealed in all six areas of career choice motivation. For instance, dental students were significantly more likely to be motivated by factors relating to status and security and the nature of their occupation (eg regular working hours, self employment and independence). By contrast, medical students were significantly more likely to be motivated by factors relating to career opportunities, patient care and working with people, use of personal skills, and interest in science. Work experience was a strong motivating factor in the case of both dental and medical students (though especially for dental students).

Conclusions In comparison with dental students, medical students manifested a more professional attitude in which altruism and intellectual challenge constituted central motivating factors. By contrast, dental students demonstrated more of a commitment to personal and financial gain. The paper queries how useful such attitudes are to a re-oriented dental profession whose aspiration is to provide more accountable and community oriented services.

In recent years a number of studies have investigated the motivations underlying the career choice of dental^{1,3,4,5,7} and medical students.² On the basis of these studies, it appears that dental student career choice may be motivated by very different factors to medical students. For instance, the Zadik

*et al.*¹ study of dental students revealed great emphasis placed upon the importance of financial motivations such as income and financial security, with 'person orientated' factors such as 'helping people' being low in priority. By contrast, a recent study of medical student motivation² revealed priority emphasis being placed upon 'person orientated' factors, with financial status and security factors considered of lesser importance.

None of the currently published studies, however, have actually provided a direct comparison of dental and medical students studying in the same location. The main

aim of this study was to present such a comparison and to shed further light on the factors motivating dental and medical students in their choice of profession. Having presented differences between dental and medical student motivation, this investigation concludes with some questions regarding the nature and future of the dental profession.

METHOD

A sample of 160 medical and dental students at Manchester University participated in this study; 80 students from the dental school (40 first year students and 40 final

¹Dr Michele L. Crossley, Turner Dental School, University of Manchester, Higher Cambridge Street, Manchester M15 6FH ²A. Mubarik, 38 Brunswick Street, Chorlton on Medlock Manchester.
Correspondence to: Dr. M. L. Crossley

year students) and 80 students from the medical school (40 first year students and 40 final year students) Each student completed a questionnaire. Four lecture slots (one slot each for first and final year dental and medical students) were randomly selected from a list of lectures provided by the faculty. The students who then completed the questionnaires represented a 'convenience' sample insofar as 40 students in each slot were approached at random at the end of the lecture and asked to complete a questionnaire. 94 (59%) of the participants were female and 66 (41%) were male.

MATERIALS

The questionnaire used in this study was based on previous studies.^{1,2,3,4} In particular, Vaglum *et al.*² identified three broad dimensions motives which influenced medical students in their choice of study. These included motives categorised as 'people oriented', 'status/security' orientated, and 'natural science' orientated. In their study, Vaglum *et al.* summed up the items relating to these three areas in order to construct three separate index scores. However, in the current study, although the items relating to these areas have been replicated, they have not been used to construct a score as the internal consistency (Cronbach α) pertaining to each of the three areas remained unsatisfactory. In addition, three other dimensions covered in other studies have been addressed. These included 'the nature of the occupation', 'career opportunities' and 'use of personal skills'.

This resulted in a questionnaire in which 17 items addressed six potential areas of motivation. These are shown in Table 1 and can be summarised as follows:

- 1) Status and security (questionnaire items 4,5,6,7)
- 2) The nature of the occupation (questionnaire items 1,8,9)
- 3) Career opportunities (questionnaire items 10, 11, 12)
- 4) Patient care and working with people (questionnaire items 2,3)
- 5) Use of personal skills (questionnaire items 16,17)
- 6) Interest in science (questionnaire items 13, 14, 15)

There was also an additional question relating to whether work experience with dentists or doctors had had an impact on the student's choice of degree subject.

Each item on the questionnaire contained a statement which required the respondent to indicate their level of agreement on a five point Likert scale ranging from 1=strong agree to 5=strongly disagree. Lower scores therefore indicated greater agreement with the statement concerned.

Table 1 A comparison of the % of dental and medical students agreeing that they were motivated to study their subject area by the factors relating to the six dimensions of career choice

Questionnaire items relating to the 6 dimensions	% of dental students in agreement	% of medical students in agreement
Dimension 1: status and security:		
Q4. High professional status*	45	24
Q5. Prestigious social standing	6	19
Q6. Provides a secure career**	42	20
Q7. High income**	61	35
Dimension 2: nature of occupation		
Q1. Regular working hours**	53	4
Q8. Responsible job	13	16
Q9. Self employment and independence	28	18
Dimension 3: career opportunities		
Q10. Diverse career opportunities**	6	34
Q11. Interesting career**	53	81
Q12. Challenging career**	24	60
Dimension 4: patient care and working with people		
Q2. Opportunity to care for/ help people**	26	91
Q3. Interacting with other people**	16	51
Dimension 5: use of personal skills		
Q16. Requires use of manual skills	48	51
Q17. Requires use of mental skills*	16	48
Dimension 6: interest in science		
Q13. Opportunity to perform research work	14	8
Q14. General interest in science**	14	85
Q15. Science based occupation**	23	38
Q18. Work experience with dentists/ doctors	75	56

* = statistically significant at p<0.05
 ** = statistically significant at p<0.001

Analysis

Results were analysed using the Mann-Whitney *U* test. This test was used because the assumptions for using independent *t*-test were not upheld. The p-values cited therefore derive from the *U* statistic unless otherwise stated.

RESULTS

Table 1 compares the per cent of dental and medical students 'strongly agreeing' or 'agreeing' that they were motivated to study their subject area by the factors relating to the six dimensions of career choice. This table highlights numerous important differences with regard to the factors motivating career choice between dental and medical students.

In particular, it appears that dental students, when compared with medical students, were significantly more likely to be motivated by factors relating to status and security (dimension 1) and the nature of their occupation (dimension 2). For instance, in relation to status and security, dental students were significantly more likely than medical students to cite factors

such as high professional status (p<0.01), career security (p<0.0001) and high income (p<0.0001) as important in their choice of career. Likewise with regard to factors related to the nature of the dental occupation. Dental students were significantly more likely to agree that regular working hours (p<0.0001) and self employment and independence (p<0.007) were important to their choice of career.

By contrast, with regard to factors relating to career opportunities (dimension 3), patient care and working with people (dimension 4), use of personal skills (dimension 5) and interest in science (dimension 6), dental students manifested lower motivation in comparison with medical students. For instance, in relation to career opportunities, dental students were significantly less likely to cite diverse career opportunities (p<0.0001), interesting career (p<0.0001) or challenging career (p<0.0001) as important in their choice of study. Similarly in terms of the opportunity to care for/help people (p<0.0001), or to interact with people (p<0.0001). And in terms of an opportunity to use 'mental

skills', dental students displayed significantly less interest than medical students ($p < 0.02$). Finally, this picture was also consistent with dental students' comparative lack of 'general interest in science' ($p < 0.0001$) and in working in a 'science based occupation' ($p < 0.0001$).

The data were also analysed in order to determine significant differences in career choice between male and female students. No significant differences were yielded with regard to any of the 18 items covered in the questionnaire.

It was interesting to note that a high proportion of students (75% of dental students and 56% of medical students) agreed that work experience played an important role in their choice of degree subject.

DISCUSSION

The results of this study are consistent with other studies of dental students¹ which have revealed a primary interest in professional status and financial rewards and security. Although a study by Lawson *et al.*⁴ suggested that many dental students perceived dentistry to be of inferior professional status to medicine, the high value placed on professional status by dental students is not necessarily inconsistent with this finding; it may actually constitute a defensive reaction to such perceived inferiority and a subsequent overvaluation of status related issues.

Likewise, the high importance of 'person oriented motives' and the desire to 'care for and help others' amongst medical students, is consistent with surveys in other countries^{2,8} which have consistently reported altruism as a prime motivation of medical students. By contrast, considerations of status and prestige were of comparatively low importance. Unlike the Vaglum *et al.* study,² however, in this study female students did not score higher than men on 'person oriented' factors, nor were there significant gender differences on any of the motivational items covered in the questionnaire.

Other surveys have also shown the 'scientific nature and intellectual challenge of medicine' to be an important motivation for medical students.^{2,8} This is revealed in

the comparative percentages of medical/dental students agreeing to items such as 'challenging career' (60% medical students versus 24% dental students), 'opportunity to use mental skills' (48% medical students versus 16% dental students) and 'general interest in science' (85% medical students versus 14% dental students).

Drawing conclusions from this study, it could be argued that the findings feed into stereotypical images of medicine as an intellectually challenging profession which affords the opportunity to 'save lives' and take care of the health of the public. It may be this mixture of intellectual challenge and altruism which contributes to the public perception of medicine's high status. More negatively, at least from a dental point of view, the study suggests a rather parochial dental student orientation, in which there is a distinct lack of a sense of public service and altruism (a sense in which serving the community and acting in the best interests of the 'client' are more highly valued than opportunities for personal gain). This 'public service' dimension is often cited as one of the characteristics associated with 'professional status'; it is therefore reasonable to assume that its absence amongst dental students may be detrimental to the public perception of the dental profession as a whole.

Such parochialism is also worrying in the light of changes in the orientation of British healthcare services introduced with the advent of the 1992 *Health of the Nation*⁹ document. Emphasising the need to focus on health promotion as much as traditional healthcare, a number of key concepts underpinned this document. These included: the pursuit of equity and the reduction of inequalities in healthcare; empowerment and community participation; and health professionals working as community advocates for the health of local communities. Clearly, such an agenda has important implications for the dental profession in which the depoliticised individual 'mouth', rather than the health of the wider 'social body' has traditionally been the main focus of interest. From the point of view of this

paper, however, the main point to emphasise is that such a re-orientation of dental services requires, at a very basic level, the motivation and commitment of dental practitioners to an ethical stance of public service. The findings presented in this paper, however, suggest that such motivation is lacking within the sample of dental students surveyed, and has instead, being supplanted by considerations of personal and financial gain.

Finally, it is important to consider the limitations of this study. The students participating in this study did not comprise a representative sample, but simply a 'convenience sample'. Although their views represent an interesting snapshot of dental and medical students attending Manchester University, they cannot be taken as representative of the views of dental/medical students at the university as a whole, or of dental/medical students attending other universities. The next stage of this investigation will therefore be to conduct a larger scale study in which dental/medical students are randomly selected from different universities both in the UK and internationally, in order to assess the generalisability of these findings.

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