

# Formal appraisal of undergraduate medical students: is it worth the effort?

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**SUMMARY** *Medical student stress is most often related to difficulties of adjusting to university academic standards, and work–social life balance. Faculty systems identify academically failing students for counselling, whilst the majority of students do not have opportunities for individual discussion about progress. This study reports a pilot formal appraisal process for first-year undergraduates. Preparatory material required students to reflect on their academic performance, factors contributing to their university life and satisfaction with career choice. Individual appraisal sessions were held with trained, experienced senior faculty staff, with completion of an appraisal record to document agreed outcomes. Individualized study skills advice was the commonest documented outcome on appraisal records. Students were overwhelmingly positive about the experience, reporting both enhanced perceptions of faculty and reduced anxiety about academic performance. Medical schools have responsibilities to consider ways to optimize students' performance; attainment can be related more to personal and motivational factors than academic ability.*

## Introduction

Evaluating progress of students through medical school is most often based on judgements about attaining academic standards. The responsibilities of medical schools towards their students should include clarifying the appropriateness of medicine as their career choice; this may involve exploration of the concepts of medical professionalism and demonstration of the appropriate attitudes (GMC, 2002).

Feedback on progress to undergraduate students predominantly comes from results of formal assessments. The main aim of assessments, particularly of the core curriculum, is to determine achievement of a defined 'minimum' standard. Thus obtaining feedback on performance from assessment results will give information to a student about reaching an adequate standard, not about achieving his/her potential or even information about the quality of the performance. However, individual performance is determined by a number of factors, which include not only demonstrated knowledge or skills, but also application and ability to use the knowledge/skills, and motivation.

Appraisal provides an opportunity for individuals to discuss their performance, and to develop personal needs and professional development (Arvey & Murphy, 1998). The format ideally offers a structured process that encourages dialogue. Feedback is arguably the most effective tool to encourage people to learn, raise their morale and motivation and improve their performance (Wigley, 1989). Effective appraisal should evaluate all the factors that contribute to individual performance whilst being challenging, supportive and personal, and on completion should be regarded as a

positive and beneficial process (Jolly, 1997; Arvey & Murphy, 1998).

## Is there a need for formal appraisal of undergraduates?

Medical schools have administrative systems in place to identify students failing academically. Most will also have mechanisms to provide support for students with personal difficulties despite their ability to achieve adequate academic standards. These systems thus act as a safety net, but rely on students self-identifying need and seeking appropriate help at times of crisis. Many students may not recognize they have problems, particularly when in the domain of attitudes to work, and the work–play balance. In a study from Dundee, which evaluated the effectiveness of a Personal Tutor system, some 45% of students felt "their personal life was adversely affecting their academic studies" (Malik, 2000). Malik also identified that some 50% of students in academic difficulty did not seek help from any source, and the majority of those seeking support did so from peers alone.

Stress and anxiety are substantially raised in undergraduate medical students, and this is not only during times of important assessments (Firth, 1986; Tooth *et al.*, 1989; Mosley *et al.*, 1994; Firth-Cozens, 2001). A range of strategies may be used by students to cope with stress, including alcohol misuse and peer support (Wolf, 1994). Correlations between examination performance and both anxiety levels and learning strategies are also recognized. Tooth *et al.* (1989) showed that students increasingly relied on surface learning strategies during their first year, whilst their assessment outcomes correlated with deeper learning strategies, including strategic learning. Whilst the role of different group teaching methods in helping students recognize the sources of their stress has been reviewed (Guthrie *et al.*, 1995), the role of individual structured appraisal has not been discussed.

Medical schools have a responsibility not just to be producing 'good enough' doctors, but to be optimizing the achievements of a very bright select group of students. Poor clinical performance can be related more to personal and motivational factors than any demonstrable differences in medical skills or knowledge. Hershberger and his colleagues (2000) postulate that explanatory styles (which describe a person's perception of an event) have been shown to affect performance, and also contribute significantly to emotional stress and ways in which students may cope with mistakes.

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This is described to be particularly so for students who have a pessimistic style of reflection on outcomes. However, the correlation does not appear to hold for optimists. This indicates that facilitating students to develop healthy, well-balanced and positive approaches to work and study should enhance academic performance.

It is important to recognize that appraisal is different from mentoring. Mentoring, i.e. befriending a student and becoming his/her 'senior counsellor', is often the role of a personal tutor or senior peer (Malik, 2000). A personal tutor (mentor) system exists in our medical school; its role has been clearly defined as pastoral/mentor with no academic responsibility. It was recognized that formal appraisal should not be addressed through the personal tutor system because of potential conflicts of interests and alteration in established relationships. A central system also exists for students to self-refer if in personal difficulties to a designated senior academic. This person will also interview students who also are identified to be academically struggling. Students may be referred through this system when appropriate to more formal university-based counselling services. Despite the personal tutor and central systems of student support, informal feedback from within the student body at our medical school suggested a high degree of anxiety amongst students who wanted more feedback on their academic performance. This was even when their assessment results included quite substantive detail of how the final overall grade was reached with a breakdown of the assessment components, and also indicated that they were achieving the expected standard.

A clear need for a formal, structured appraisal system was apparent. This needed to be designed to allow not only discussion of academic progress and study habits, but also space for consideration of personal issues, the appropriateness of career choice and a healthy, well-balanced approach to work and play! It was decided to implement this as a pilot for first-year students. This paper describes the process and outcomes of the pilot.

## Designing the appraisal system

### *Preparatory phase*

The format was designed recognizing that change is most likely to come from active involvement in the appraisal process by the students (Wigley, 1989; Arvey & Murphy, 1998). Students were informed of the appraisal process and issued with an information pack just prior to a short vacation and some two-thirds of the way through the academic year. This incorporated a single record of their academic assessment results to date, including an indication of how they compared with their peers in their academic year. Sets of questions were included designed to promote reflection on their academic progress, and to identify other aspects they would like specifically to address in the appraisal session (Table 1).

A limited number of appraisers were identified amongst senior academic staff, all of whom had prior appraisal training for either university or NHS commitments and were actively involved in the undergraduate programme. Further training sessions ensured commonality of approach and involved them in the development and evaluation of this pilot process.

**Table 1.** Preparatory questions for students.

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- (1) Do you think the results you obtained were a fair reflection of the work you put in?
  - (2) Think about how you worked or studied—was it always appropriate/efficient? Give an example of where it went well, what you are pleased about and why.
  - (3) Is there anything over the year that you didn't do as well in or learn as much from as you could have? How might you approach something like this differently again?
  - (4) The General Medical Council identifies working in a team as an early essential skill for all doctors. Think about teamwork—can you give an example of where it went well and why—and then an example of where it did not seem to work so well and why. These can be examples either from your own personal experience or examples that you observed or talked about that made an impact on you.
  - (5) Has anything this year changed your views on what being a doctor is about—either made you less or more enthused about your career choice?
  - (6) How would you measure a successful next year? What would you like to do to ensure this happens (both personally and in your undergraduate career)?
  - (7) Is there anything else you would like to discuss in this appraisal meeting in relation to your own personal or professional development?
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Personal tutors were contacted and invited to submit any information they felt relevant to the appraisal. The form stipulated that they should consider not including information that might break confidentiality or compromise their relationship with their students.

### *Study habits survey*

A study habits survey was undertaken over a one-week period in the preceding term. Students were asked to record their pattern of working on course-related work. Additionally they recorded the proportion of time spent on employment and social activities.

## Appraisal session

The appraisal sessions were all timed to occur in the first week of the final term immediately after vacation. This was chosen as an appropriate stage in their first year to have accumulated sufficient experience to be able to judge their performance, whilst not being too late to allow for improvements before the end-of-year assessments. Twenty-minute appointments were given to all students. The sessions were all delivered in a central teaching resource offering quiet rooms with a suitable waiting room providing refreshments. It was recognized to be important to ensure that the environment was both conducive to private discussion as well as sufficiently formal to ensure student and appraiser alike took it seriously.

Appraisers and students were provided with duplicate information. An appraisal record form was completed (Table 2) at the end of the session; this was designed to document and give feedback on progress as well as identify objectives for the next academic year. It was also possible

**Table 2.** Appraisal record form.

Appraisal Record Form—Year 1	
Student name	
Appraiser	
Date	
Topic	Outcome notes
Overview of the year's academic progress, including assessment outcomes	
Positive evaluation: What went well during the year, what achieved of last year's objectives	
Personal learning needs identified	
Activities planned/to be considered over next academic year	
Student signature	Appraiser signature
Refer to Dean	<input type="checkbox"/>

to use this to identify students who would benefit from contact with the dean of students for more senior direction. Copies were entered into the students' individual medical school undergraduate record as well as being retained by the student and sent to the personal tutor.

Students completed feedback questionnaires, including free-text answers and direct questions immediately after their appraisal session. Appraisers completed evaluation questionnaires the following week.

### Study habits survey

The response rate was low with only 44% (101/251 students) fully completing the week-long survey. The survey week was chosen as being representative of the first-year curriculum in terms of timetabled and self-directed activities expected; only 20% of respondents felt they had worked less hard this week than usual. The average number of hours spent per week on self-directed learning was reported to be 19 (range 3 to 43, SD 9.1); 90% of this time was spent studying alone, 74% within the home environment. Some 65% of students reported no difficulties in working in their term-time residence, and 60% reported satisfaction with the balance between work and social life, with levels of commitment to social activities ranging from 1 to 16 hours per week (median 4, SD 3.7). It is of interest that only 50% of respondents believed they managed their time well.

### Outcomes of the appraisal sessions

#### Attendance at sessions

In total, 243 of 251 students (96%) attended their appraisal session. Of the eight 'no shows', five were in the process of leaving the course, or had already left, and two subsequently failed their end-of-year assessment although they subsequently did progress after a successful resit in the summer.

#### Advice documented on appraisal record form

All forms were completed with documentation of comments on academic progress, which reflected discussion between student and appraiser. The forms were analysed and coded, to allow identification of the pattern of issues addressed. The commonest advice documented was in relation to study habits, with advice regarding improved efficiency of working, and shifts in study practice from superficial to deep learning techniques cited most. This related well to the student feedback with 62% considering their study habits would alter as a consequence of the appraisal session.

#### Student progression

Altogether, 29 students did not progress into the second year. The outcome in these 29 cases included 17 who were repeating the year because of failure to pass all the required components, four who transferred to other university courses and three who will be returning after a year out; the remainder have left medical school with no definite plans as yet. Reviewing the analysed and coded appraisal record forms of these 29 students revealed that six were students who had not attended their appraisal session and who had either already left or had already made the decision to leave before the end of the academic year. The remaining 23 appraisal record forms had all recorded problems; all had advice regarding study skills and/or career choice documented on their appraisal record form.

#### Student perspective

Questionnaire response rate was high (86%). The appraisal sessions were rated very highly by the students: 96% felt well informed about the process, 99% considered they could be honest in discussion with their appraiser, 98% agreed that the topics covered during the session were personally relevant and 96% considered that the feedback they received was useful and accurate.

The vast majority (98%) considered that the formal appraisal record was a fair representation of the points discussed, and 18 students were identified as requiring further input from the dean of students. Some 62% of students considered that they would change their study habits on the basis of the appraisal session.

Analysis of the free-text feedback was the most revealing on the positive benefits perceived by the students. Qualitative analysis identified two main outcome themes from the feedback: altered perspectives on their personal progress, and on their perceptions of the medical school. These are illustrated by the two following quotes:

... a more positive feeling about how I am doing. I truly believed I was doing badly, and without this appraisal I would have maintained this disheartening and negative feeling.

... feel like a person, not just a statistic, the Med School does care!

Students were asked to identify two things that they would take away from the appraisal session. Analysis revealed four categories of response:

- (1) personal issues—"increased confidence", "reassurance";

- (2) work/social balance—"I can join more societies", "keep healthy balance between social and academic life";
- (3) study skills advice—"develop a more consistent working pattern", "learning techniques for long-term memory";
- (4) academic progress—"my grades are not too bad—a C is fine".

Analysis of responses in relation to naming the 'best thing' about the appraisal process revealed the majority to be enhanced perceptions of the medical school and senior academic staff. Despite the personal tutor system, students identified the opportunity to "meet with a person from the medical school on a one-to-one basis" as beneficial, and valued the quality of the information gleaned from the session—"professional advice from someone in the know".

Negative comments in relation to invitations to identify problems with the whole process were sparse—and predominantly minor organizational issues. There were no adverse comments about the outcomes of the session. Four students did comment that they would have preferred an appraiser they had known, although many more students commented on this as being a positive point in the earlier question!

#### *Appraiser feedback*

This was overwhelmingly positive and almost certainly reflected the selection process of appraisers, i.e. those with a commitment to and involvement in learning and teaching activities. The majority of appraisers would be prepared to be involved again despite a commitment of approximately 12 hours each to this. All commented on the personal satisfaction gained from participating in such close interactions with the first-year students. Access to all the students' results in one transcript provided a valuable area of discussion. The study habits audit data proved valuable to promote discussion about study techniques.

#### *Costs*

The cost to the medical school in person time was considerable: 108 hours of senior academic staff time was required together with a part time administrator for four months. Despite this, the overwhelmingly positive response from students and appraisers alike means that the appraisal will continue and be implemented for later academic years in an appropriate format.

#### **Conclusions**

One cannot underestimate the importance to students of perceiving they are regarded as individuals by their university. A significant beneficial outcome of this appraisal system must be their enhanced views on the medical school and perceived authority figures. We feel we had underestimated the students' perceptions of the importance of this aspect. Many studies have highlighted acknowledged stress amongst medical students, and those students who were perceived to be most at risk of significant morbidity were those who relied almost exclusively on classmates for social support (Abramovitch *et al.*, 2000). Improvements in emotional health amongst students studying some distance from their home have been found since the medical school provided improvements in social support. The measures included a

type of staff–student committee, which empowered students to find solutions to academic and social problems. This principle underpins the design of our structured appraisal system. Requiring the student and appraiser to reach consensus on strengths and weaknesses (Jolly, 1997) was a crucial and achieved outcome, and contributed to satisfaction.

Objectively measuring changes in study habits and a healthier work–social life balance may be difficult. Considering academic outcomes alone as a measure of changed study skills is not appropriate in that this does not overcome the problem of measuring achieved potential. Reinforcement of the advice to students on study skills will come not just from looking at their assessment outcomes but also from advice that is perceived to come from a person whose opinion they value. This underpinned our choice of appraisers, and was successful in the immediate student reflections. Change in behaviour is most likely to follow if the student perceives it to be pertinent to him/her, and this was reinforced during the appraisal session by giving feedback on assessment outcomes and considering them in relation to study habits. Self-esteem and a positive attitude to work have been documented to deteriorate over the first year at medical school (Wolf *et al.*, 1991); the positive student evaluation of the appraisal system strongly implies that this trend has not been fostered. Better stress coping strategies are also anticipated to be an important outcome from the appraisal process. Tonge and colleagues from London (Tooth *et al.*, 1989) indicated that activities outside work can contribute to student stress, although the measures of students' perceptions of well-being and stress indicated the great variability, which may not only relate to assessment times (Tooth *et al.*, 1989).

Medical students are a potentially high-achieving group as undergraduates. Hershberger and colleagues (2000) recognized that poor clinical performance after graduation can be related more to personal and motivational factors than any demonstrable differences in medical skills or knowledge. Explanatory reflective styles, and especially a more negative or pessimistic style, were been shown to affect performance, and also contribute significantly to emotional stress and ways in which students and new graduates may cope with mistakes. These correlations have not been shown to hold for optimists, and facilitating students to develop healthy, well-balanced approaches to work and study aims to contribute to success in a medical career, and may enhance coping strategies.

#### **Practice points**

- Medical student stress can result from misconceptions about academic achievements and inefficient study skills.
- Medical school responsibilities include optimizing performance.
- Formal undergraduate appraisal provides opportunities for individualized discussion for all students on personal and academic progress.
- Providing individual appraisal for all students enhanced their perception of faculty and was reported to reduce anxiety.

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## Notes on contributors

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