Medical Education 1992, **26**, 17–20

The anxieties of new clinical students

F. MOSS & I. C. McMANUS

St Mary's Hospital Medical School, Imperial College of Science, College and Technology, London

Summary. The specific anxieties of 74 medical students beginning their clinical training were assessed by means of a questionnaire at the start of the clinical introductory course at St Mary's Hospital Medical School, London. Situations differed in the amount of anxiety that they engendered, and students also differed in the number of situations that they found anxiety producing. Students particularly reported that interactions with senior staff on ward rounds were anxiety provoking. The same questionnaire was also distributed to 52 teaching hospital doctors who were asked to complete the questionnaire *as they thought the students had done.* Compared with students, the doctors considered more situations to be anxiety provoking, and they differed in their rank ordering of the situations. Doctors tended to overestimate anxiety concerning communication problems, and to underestimate anxiety concerning routine clinical tasks such as phlebotomy.

Key words: students, medical/*psychol; *anxiety; *educ, med, undergrad; clinical competence; attitude of health personnel; questionnaires; London

Introduction

The start of clinical teaching is a watershed for medical students; the rigid preclinical structure of lectures and laboratory is replaced by the less organized routine of ward rounds and bedside. Students must cope with a changed educational style and also form professional relationships with patients and staff, deal with sick individuals, and perform practical procedures. Introductory clinical courses (Moss *et al.* 1987) ease this transition, and alleviate the stress of the 'rite of passage' denoted by the white coat, stethoscope and 'going across the road'. Although medical students are stressed during the preclinical and clinical courses (Firth 1986; Tooth *et al.* 1989), we here assess the extent of the specific anxieties at the very start of clinical studies, and the perception of those anxieties by teaching hospital doctors.

Correspondence: Dr I. C. McManus, Academic Department of Psychiatry, St Mary's Hospital School, Paterson Wing, Praed Street, London W2 1NY, UK.

Methods

In October 1988 on day 1 of the clinical course, an alphabetical list of 40 possible sources of anxiety was distributed to introductory clinical students at St Mary's Hospital Medical School. The instructions read:

> 'Being a clinical student will involve you doing many things which you have not done as a preclinical student. Some of these new activities you will be looking forward to; others, however, you may be approaching with some anxiety or trepidation. We would like to get some idea of how you feel about a range of clinical activities that you will be taking part in during the next few years, and to know how anxious you feel about undertaking them.'

Students indicated their anxiety for each situation on a 4-point scale ('Not anxious', 'Slightly anxious', 'Fairly anxious' and 'Very anxious'), scored as 1, 2, 3 and 4 for statistical analysis. The perception of student anxieties by teaching hospital doctors was assessed using the same questionnaire by doctors at the staff round at St Mary's and Central Middlesex Hospital. Doctors were asked to complete the questionnaire *as they thought the introductory students had done.*

Results

Seventy-four introductory clinical students completed the questionnaire (approximate response rate = 78%). Table 1 rank orders the situations by mean anxiety score. Students reported some anxiety to an average of 21·4 (SD 6·6) of the 40 situations, and reported being 'fairly' or 'very' anxious to 7·7 (SD 5·1). Factor analysis suggested a single underlying dimension.

Fifty-two doctors (19 consultants, 8 senior registrars, 13 registrars, 8 senior house officers and 5 pre-registration house officers) completed the questionnaire. They significantly overestimated the number of situations perceived as anxiety provoking (mean = 26·9, SD = 6·6; t = 4·7, 125 df, $P < 0·001$). The rank orders differed dramatically between doctors and students (e.g. situations ranked 1, 8, 21 and 31 by students). Because of differences in overall scores of doctors and students, differences for particular situations were only tested for significance, using a t-test, on a corrected score, obtained by subtracting each individual's mean anxiety level from their score for that situation. In 21 of the 40 situations significant differences in anxiety were reported by students and doctors.

Discussion

As in other studies (Lloyd & Gartrell 1983; Linn & Zeppa 1984; Firth 1986), students perceive interactions with senior medical staff especially anxiety inducing: for example, presenting cases on ward rounds, getting diagnoses wrong, and admitting ignorance to consultants. Additional anxieties concerned situations requiring students to control or perform tasks on patients: suturing, cardiac arrests, and dealing with drunk or abusive patients.

Doctors underestimated the anxiety of getting diagnoses wrong, becoming infected, phlebotomy, giving injections, and completing blood request forms and overestimated anxieties concerning communication with patients — dealing with sick children and seriously ill and dying patients, and being asked difficult questions.

Doctors may underestimate the anxiety of trivial, familiar tasks such as phlebotomy due to forgetting their own difficulties and fears of some years earlier. By contrast, experience tells them that tasks such as breaking bad news continue to be demanding and threatening. Lacking experience the introductory students cannot realize that communicating with patients is a difficult and anxiety-provoking task.

The anxiety anticipated by medical students beginning their clinical studies is unlikely to be of educational benefit, and may be positively disadvantageous. The two broad areas of concern expressed here — of interacting with senior medical staff and of carrying out simple practical procedures — require different treatments. Students are anxious concerning their dealings with consultants because previous experience reported by students in the years above report that students on ward rounds and in clinics are often embarrassed and made self-conscious in front of their colleagues; as Allen (1988; p. 76) put it, 'Some consultants appeared to have adopted very intimidating teaching methods'. The solution to this problem must lie in the education of clinical teachers in appropriate and effective teaching methods. The solution to the other area of anxiety, the carrying out of simple tasks such as phlebotomy, requires firstly an awareness of the nature of the problem — and our data suggest that many doctors are *not* aware of students' anxieties — and then appropriate teaching of such skills, perhaps through the development of graded tasks, as in 'Skills Labs'.

It might be objected that our present study has concentrated too much on those aspects of clinical training which are negative, and about which students are concerned, and that in so doing we have omitted to consider the very important *positive* aspects of becoming clinical students, aspects to which the students are looking forward. In a subsequent, preliminary study we have asked students to note down features of being a clinical student which they are anticipating positively. A wide range of general characteristics emerged, which included learning about different illnesses, learning to carry out practical procedures, learning with a purpose (often contrasted with preclinical teaching), talking and working with patients, being part of a team, and going on electives. Specific subjects mentioned included obstetrics, paediatrics, surgery and accident/emergency medicine. We

Table 1. The anxiety reported by introductory clinical students to 40 different situations in rank order. The sixth column shows the rank ordering as assessed by doctors. Significance is indicated by a + indicating that students assessed the situation as more anxiety provoking than did doctors, and − indicating it to be less anxiety provoking: +/− $P < 0{\cdot}05$; ++/−− $P < 0{\cdot}01$; +++/−−− $P < 0{\cdot}001$

	% Not anxious	% Slightly anxious	% Fairly anxious	% Very anxious	Rank order		
					Students	Doctors	Significance
Getting diagnoses wrong	10	28	39	23	1	15	+++
Presenting cases on ward rounds	7	43	37	14	2	2	
Inadvertently hurting patients	11	45	32	12	3	12	+
Helping with a cardiac arrest	16	35	37	12	4	4	
Telling consultants that you do not know something	24	38	28	10	5	13	
Suturing patients in casualty	16	52	26	6	6	16	
Dealing with drunk/abusive patients	24	41	27	8	7	11	
Getting infected by patients	27	39	22	12	8	32	+++
Dealing with psychiatric patients	15	57	26	3	9	8	
Making diagnoses	20	47	31	1	10	19	+
Delivering babies	31	34	28	7	11	7	−
Talking with dying patients	28	42	23	7	12	3	−−−
Carrying out rectal examinations	28	41	28	3	13	14	
Carrying out vaginal examinations	27	44	27	1	14	5	−−−
Being asked difficult questions by patients	21	60	19	1	15	10	−
Dealing with sick children	32	43	22	3	16	6	−−−
Talking to seriously ill patients	29	52	18	1	17	9	−−
Explaining to a patient that a diagnosis is not known	37	43	18	3	18	21	
Taking blood from patients	35	47	15	3	19	22	+
Giving injections	33	53	10	4	20	24	++
Being left alone with a sick patient	38	49	12	1	21	1	−−−
Examining patients	39	47	14	0	22	23	
Telling patients that you do not know something	43	43	14	0	23	20	
Talking to relatives of patients	47	39	12	1	24	18	
Taking histories in out-patients	57	32	11	0	25	29	
Getting up early for ward rounds	70	14	10	7	26	34	+
Going to post-mortems	65	28	4	3	27	28	
Being up all night	74	14	8	4	28	27	
Taking blood pressures	72	22	7	0	29	38	+++
Going to operating theatre	72	24	3	1	30	25	
Undressing patients of the opposite sex	70	27	3	0	31	17	−−−
Filling in blood request forms	74	23	3	0	32	40	+++
Dealing with elderly patients	73	26	1	0	33	35	
Undressing elderly patients	73	27	0	0	34	30	
Finding your way around hospital	82	15	3	0	35	36	+
Interacting with nursing staff	84	14	1	1	36	31	
Carrying a bleep	81	18	1	0	37	26	−
Sitting watching in out-patients	86	12	1	0	38	37	++
Talking with patients	87	12	1	0	39	33	
Taking a pulse	96	4	0	0	40	39	+++

are at present attempting to measure these positive aspects more systematically.

References

Allen I. (1988) *Doctors and their Careers*. Policy Studies Institute, London.

Firth J. (1986) Levels and sources of stress in medical students. *British Medical Journal* **292,** 1177–80.

Linn B.S. & Zeppa R. (1986) Stress in junior medical students: relationship to personality and performance. *Journal of Medical Education* **59,** 7–12.

Lloyd C. & Gartrell N.K. (1983) A further assessment of medical school stress. *Journal of Medical Education* **58,** 964–7.

Moss F., Cochrane J.P.S. & Yudkin J.S. (1987) Introducing medicine to tomorrow's doctors. *Lancet* **i,** 203–5.

Tooth D., Tonge K. & McManus I.C. (1989) Anxiety and study methods in preclinical students: causal relation to examination performance. *Medical Education* **23,** 416–21.

Received 6 *August* 1990; *editorial comments to authors* 5 *October* 1990; *accepted for publication* 10 *July* 1991