

# Stresses, coping mechanisms and job satisfaction in general practitioner registrars

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## SUMMARY

**Background.** There is concern about the morale of general practitioner registrars. There may be stress-provoking factors that could be avoided or minimized.

**Aims.** The aims of the study were to assess the sources of stress and job satisfaction of general practitioner registrars, to compare registrars' job satisfaction with that of established principals using a recently published survey and to identify registrars' usual responses to stress.

**Method.** A postal questionnaire survey was sent to all 143 general practitioner registrars in the West Midlands Region. The main measures were: self-rating scales of stresses associated with work and training; the Warr, Cook and Wall job satisfaction scale; and self-reported responses to stress.

**Results.** A total of 118 (83%) general practitioner registrars responded. The most potent sources of stress were family-job conflict, working for the Membership of the Royal College of General Practitioners, patients' unrealistic expectations and disruption of social life. Registrars practised good coping responses to stress. Registrars in this study had significantly greater job satisfaction than general practitioner principals in a 1993 survey for three out of 10 items measured (responsibility given, hours of work and the job as a whole) and significantly worse scores for three items (recognition for good work, rate of pay and variety of work).

**Conclusions.** Registrars have additional stresses to those of established principals because they need to study for examinations, learn new tasks in general practice and carry out their service commitments at a stage in life when many are newly married or have a young family. Training in stress management for general practitioner registrars is recommended.

**Keywords:** general practitioner registrars; stress; coping; satisfaction.

## Introduction

THOSE concerned with vocational training for general practice have recently reported difficulties in recruitment as fewer doctors apply to train and fewer trainees/registrars commit themselves to a partnership after gaining their qualification.<sup>1,2</sup> Medical students<sup>3</sup> perceive that the problems of working in general practice deter students from considering it as a career. It has been claimed<sup>4</sup> that the dehumanization resulting from a career in medicine is responsible for much of the demoralization and mental ill-health of doctors when enthusiastic and interested medical

students become busy and stressed house officers. There have been calls<sup>3,5-7</sup> for medical students and doctors to be educated in the management of stress and better prepared for the transition from student to doctor.

Allen has followed cohorts of doctors qualifying in 1966, 1976, 1981 and 1986.<sup>8</sup> She found that there had been a lack of career opportunities for many doctors who had opted for general practice as a second choice. Three-quarters of the general practitioner (GP) trainees who qualified in 1986 'regretted' their decision to become doctors, and this proportion was 'dramatically higher' than their predecessors in earlier studies.

More is known about the stresses of established principals than those of trainees/registrars. Demands of the job, patients' expectations, practice administration, on-call duties, patient complaints, the work-home interface and fear of assault have all been commonly cited by GP principals in a succession of surveys.<sup>6,9,10</sup> A study of clinical psychology trainees<sup>11</sup> revealed a different set of causes of stress, associated with their younger age and their training status. These included poor supervision, travelling, deadlines, lack of finance, moving house, separation from partner, quantity of academic work and uncertainty about capabilities.

Sutherland & Cooper<sup>9</sup> have reported more stress, less job satisfaction and poorer mental health in GPs in 1990 than in 1987. The authors<sup>9</sup> attributed these changes to the introduction of the GPs' new contract in 1990. Rout & Rout<sup>10</sup> also reported an increase in stress and a decrease in job satisfaction when they compared GPs in 1987 and 1993.

Firth Cozens conducted a longitudinal study to assess the levels and causes of stress in doctors.<sup>12</sup> Women graduates from 1985 were significantly more depressed than men, but not more stressed or less satisfied with their jobs.

Younger doctors may be more susceptible to stress. Winefeld found that younger doctors had significantly more emotional exhaustion and depersonalization than older GPs,<sup>13</sup> and this finding was replicated in a recent study of British GPs.<sup>14</sup>

Sutherland & Cooper<sup>9</sup> found that women doctors were more likely to use social support as a strategy to cope with stress. Low use of social support was associated with high levels of depression.

The aims of the study reported here were to investigate the main causes of stress for GP trainees/registrars in their work in their practices and with regard to their training. We compared trainees'/registrars' sources of stress and their job satisfaction with recent published studies of established principals.<sup>6,9,10</sup> Finally, we tried to identify what coping mechanisms GP trainees/registrars usually use. General practice trainees have been renamed as registrars since the study was concluded and the new term will be used in this paper hereafter.

## Method

Questions for the study questionnaire were drawn up after two separate enquiries of GP registrars in the West Midlands in summer 1994. In the first preliminary study, individual registrars from three vocational training schemes were asked to list, without ranking, their most significant sources of stress associated with their work and education. Responses were anonymous and returned directly to the investigators in freepost envelopes. In the

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second preliminary enquiry, a group of 12 registrars from another half-day release course discussed causes of stress arising from the service work and the educational part of their lives, and their coping methods and sources of satisfaction at work. The discussions were audio-taped and transcribed.

A questionnaire was constructed from the combined information from the postal enquiry and group discussion (Appendix 1). It included 21 questions about educational stresses, 17 on causes of stress at work, 14 enquiries about responses to stress at work, and the Warr, Cook and Wall job satisfaction scale,<sup>15</sup> which measures 10 items appropriate to a GP population, each on a seven-point scale. In addition, some questions were also appended about the doctors' personal details, the extent of on-call duty, past experience of verbal or physical abuse while on-duty and exercise habits. Free text comments were also invited.

The questionnaire was piloted on 10 doctors who were just completing their registrar year in general practice and would not be part of the study population, and was amended appropriately.

A database was compiled from information held in the Regional Adviser's office on all 143 GP registrars employed in general practices in the West Midlands in December 1994. Questionnaires identified by detachable code numbers were distributed to each of the 110 registrars attending a regional study day, and by post to those 33 registrars not attending. Replies were returned directly to the investigators in freepost envelopes. Non-respondents were reminded once.

A Minitab statistical package was used to process the results. Levels of stress in different subgroups (such as the two genders) were compared using the Mann-Whitney test (including an allowance for ties). Job satisfaction was compared using the unpaired *t*-test. All statistical tests performed were two-sided.

## Results

A total of 118 GP registrars replied (response rate = 83%). Forty-nine (42%) respondents were male. Ten out of the 25 (40%) non-

respondents or anonymous respondents were male. The age of respondents varied from 24 to 56 years (mean 30 years; SD = 4.4); the mean age of the non-respondents was 31 years (SD = 5.1).

Twenty registrars (17%) lived alone, eight lived with friends, four lived with their parents, and 86 (73%) lived with a spouse or regular partner. Thirty-two (27%) registrars had at least one child under 5 years old.

Two registrars were never on call during the evening and/or night, 31 registrars (26%) were on call once per week or less, another 79 (67%) registrars were on call between once and twice per week, and five registrars (4%) were on call more than twice per week.

The median length of time respondents had worked as GP registrars was 4 months, the mean was 6 months and the range was 1–12 months.

Twenty-four registrars (20%) did not exercise at all, 53 registrars (45%) exercised 2 h or less per week, 21 registrars (18%) exercised more between 2 and 4 h per week and 16 (14%) registrars exercised more than this (there were four non-responses).

Table 1 shows the levels of educational stresses reported by the GP registrars. Three of the top five of these causes of stress were related to the Membership examination of the Royal College of General Practitioners (MRCGP). Arrangements for tutorials featured as three of the least sources of stress.

The cause of stress rated most highly as an educational stress was 'family-job conflict', and this finding was similar to the 'lack of family time' perceived as most stressful in the list of sources of stress at work as shown in Table 2. Relationships with patients featured as more stressful than the registrars' relationships with the trainer and staff in the practice.

Table 3 shows the responses to stress reported by the registrars. The five responses most commonly practised are all generally regarded as good or adaptive responses.

### Gender differences

The top three and bottom three reported educational and work

**Table 1.** Degrees of stress reported by 118 general practitioner registrars to 21 education-related causes of stress. Causes of stress are listed in decreasing order of magnitude.

	Percentage of general practitioner registrars reporting*			
	No/little stress	Mid-scale stress	Stressful	Not applicable
1 Family/job conflict	27	22	49	2
2 Vast syllabus MRCGP	11	17	46	25
3 Working for the MRCGP	8	14	42	33
4 Lack of protected study time	30	31	37	3
5 Pressure to take MRCGP	24	19	39	17
6 Need to complete projects	16	33	34	16
7 Not knowing what you don't know	34	31	34	1
8 Trainer sitting in on trainee	30	14	33	22
9 Unsure patients' questions	30	38	32	0
10 Analysing videos of consultations	37	15	32	13
11 Lack of protected time for research	36	21	21	19
12 Inability to attend family planning training	64	13	21	25
13 Pressure to take external exams	57	20	20	31
14 Trainee poorly prepared for tutorials	64	14	19	3
15 Ignorance of forms/paperwork	66	17	17	0
16 Lack of peer support	74	14	11	1
17 Inability to attend child health surveillance training	76	13	10	29
18 Interruptions in tutorials	69	19	9	3
19 Difficulty arranging tutorials	74	19	8	0
20 Unable to attend regional study days	77	6	6	9
21 Trainer poorly prepared for tutorials	75	12	6	6

\*Likert scale: (0/1) no/little stress; (2) mid-scale stress; (3/4) stressful. Respondents indicating 'not applicable' were excluded from the denominator in calculation of percentages in questions 12, 13 and 17. Non-respondents varied between 0 and 3 for each question.

**Table 2.** Degrees of stress reported by 118 general practitioner registrars to 17 related causes of stress. Causes of stress are listed in decreasing order of magnitude.

	Percentage of general practitioner registrars reporting*			
	No/little stress	Mid-scale stress	Stressful	Not applicable
1 Lack of family time	33	20	47	4
2 Unrealistic expectations of patients	21	34	45	0
3 Social life disrupted	32	24	44	0
4 Patients' complaints	34	22	43	0
5 Life-threatening patients' illnesses	30	31	39	0
6 Home visiting in unfamiliar area	40	24	36	0
7 Lack of protected time for meals/sleep	52	16	30	3
8 Interruptions during surgery	42	31	27	1
9 Lack of control over practice work	49	24	27	0
10 Off-duty time different from partner's	56	17	26	15
11 Difficult home visits	39	36	25	0
12 Fear of attack during home visits	58	16	25	1
13 Financial problems	56	22	18	3
14 Lack of support at home	68	14	13	6
15 Lack of professional support	66	19	12	3
16 Trainer-trainee difficulties	71	14	8	7
17 Staff-trainee difficulties	78	8	6	8

\*Likert scale: (0/1) no/little stress; (2) mid-scale stress; (3/4) stressful. Respondents indicating 'not applicable' were excluded from the denominator in calculation of percentages in questions 1, 10 and 14. Non-respondents varied between 0 and 1 for each question.

**Table 3.** General practitioner registrars' responses to stress at work, in decreasing order of magnitude ( $n = 118$ )

Response to stress	Percentage of general practitioner registrars reporting that response occurs*			
	Seldom	Sometimes	Often	Not applicable
1 Take complete break	17	14	69	0
2 Seek discussions friends	10	20	68	0
3 Passive relaxation	18	28	53	0
4 Laugh/joke	27	25	46	1
5 Exercise	40	29	32	0
6 Anger	46	28	25	0
7 Avoid stressful situations	44	35	21	0
8 Drink alcohol	48	25	19	7
9 Manage time better	51	30	17	1
10 Overeat	63	17	17	3
11 Drive fast	58	25	13	3
12 Be irritable	64	22	13	0
13 Delegate tasks	65	22	11	1
14 Seek counselling	86	2	1	9

\*Likert scale: (0/1) seldom; (2) sometimes; (3/4) most often. There were between 0 and 2 non-respondents to each question.

stresses were analysed to investigate possible gender differences. As regards educational stresses, there was no evidence of any associations between gender and the levels of stress reported from conflicting demands of family and job, the vast syllabus or working for the MRCGP, registrar difficulties in arranging or preparing for tutorials, or ability to attend regional study days. There was some evidence that patients' unrealistic expectations of medical care were more stressful for female registrars than for males ( $P = 0.03$  by Mann-Whitney test). Female registrars reported higher levels of stress than male trainees for difficulties in the trainer-registrar relationship ( $P = 0.002$  by Mann-Whitney test) and for ancillary staff-registrar relationships ( $P = 0.005$  by Mann-Whitney test). There was no evidence that the gender of the trainer was important in the degree of stress from difficulties in the trainer-registrar relationship. No gender differences were found for questions about lack of time for partner or family, social life disrupted by time on, call, and lack of support at home or from practice colleagues.

Female registrars were significantly more likely than males to cite their responses to stress at work as overeating ( $P = 0.01$ ) and being irritable ( $P = 0.02$ ), or feeling angry ( $P = 0.01$ ) with colleagues or patients (all by Mann-Whitney tests). Male respondents were significantly more likely than women to report using laughter or jokes as a response to work stress ( $P = 0.03$  by Mann-Whitney test). There were no other gender differences for the enquiries about responses to stress.

There was no association with gender for whether or not a registrar reported experiencing verbal abuse. No gender differences were found for any of the 10 aspects of job satisfaction.

#### *Registrars with children compared with those without children*

There were strong associations between having children and being stressed by the conflicting demands of family and job ( $P < 0.0001$  by Mann-Whitney test), and also being stressed by a lack of time for partner or family ( $P = 0.0005$  by Mann-Whitney test).

There were no significant associations between having children and stress experienced from working for the MRCGP, extent of tutorial preparation, off duty not coinciding with partner's and social life disrupted by being on call.

#### General practitioner registrar satisfaction levels compared with published data<sup>10</sup>

Table 4 shows the mean satisfaction scores for the 10 aspects of the Warr, Cook and Wall job satisfaction scale<sup>15</sup> in this study compared with those from another published study of established GPs carried out in 1993.<sup>10</sup> The GP registrars had significantly greater satisfaction scores ( $P < 0.05$ ) from responsibility given, from hours of work, and from the job as a whole, and significantly lower satisfaction scores ( $P < 0.05$ ) from recognition for good work, from rate of pay, and from variety in work.

#### Association between reported stress and job satisfaction

There were significant negative associations between two of the top three work-related causes of stress and overall job satisfaction: there was a negative association between the level of stress reported from lack of time for partner or family and overall job satisfaction ( $P = 0.0005$  by Spearman's rank correlation coefficient), and also between stress from the registrars' social life being disrupted by on-call duties and overall job satisfaction ( $P = 0.02$  by Spearman's rank correlation coefficient). There was no such association for stress from patients' unrealistic expectations.

#### Verbal abuse experienced during registrar post

Fifty-five out of 117 respondents reported verbal abuse, mainly from patients, with only one respondent citing his trainer and another naming another doctor as the 'abuser'. Seven doctors reported experiencing physical threats from patients.

## Discussion

The results of the survey are likely to be representative of GP registrars because of the high response rate (83%) to this survey and because of the large geographical area over which they were drawn (the West Midlands Region has a population of 5.2 million).

As with any questionnaire study of stress and satisfaction, it is impossible to know whether respondents are giving their true opinions, whether they tend to play down the negative aspects of

their job (in order to deny that they are not coping) or whether they exaggerate them in order to obtain some improvement. But the comparisons between different sources of stress and satisfaction should be less vulnerable to this source of bias.

The stress-related concerns of the respondents seemed to be more similar to those of psychology trainees published elsewhere<sup>11</sup> than those of established GP principals.<sup>6,9,10</sup> General practice trainers should be aware that registrars have additional stresses to those of principals; in particular, they have worries about studying and the MRCGP, and are uncertain about their own knowledge base. Trainers need to be supportive and allow for the registrars' stresses, especially if the registrars have young children or no obvious support at home. Vocational training course organizers should be alert to the possibility that female trainees may have difficult relationships with trainers. This might present problems in the future for proposed mentoring schemes when the relationship between two doctors supporting one another will be necessarily very close.

Much stress centred around the examination for the Membership of the RCGP. This may be expected to increase when summative assessment is compulsory. To reduce this source of stress, it will be necessary to make available sufficient study leave and protected prime time for personal study and development.

It would be unwise to place much weight on the comparison of job satisfaction scores for registrars with those of established principals published elsewhere.<sup>10</sup> Changes in management and other conditions will have occurred since the comparative study<sup>10</sup> was conducted, but more importantly, many of registrars' working conditions will be different from those of established principals, especially pay, hours and responsibilities. But it was reassuring to find that registrars had significantly better overall general satisfaction scores than principals. The results of this study corroborated the important inverse relationship between job satisfaction and stress levels that has been reported previously in other work.<sup>16</sup>

Registrars' reported coping methods were generally good, although it is well known that people often behave differently from how they predicted they would in a given situation. Only one-third of the respondents exercised for more than 2 h a week, showing the potential for GP registrars to improve their personal lifestyle habits. Resorting to anger and alcohol was reported quite frequently, and this emphasizes the need to teach stress manage-

**Table 4.** Comparison of general practitioner registrars' mean job satisfaction scores with those of established principals from another published study<sup>10</sup>

Source of satisfaction	Job satisfaction scores				
	General practitioner registrars (1995) (n = 118)		General practitioner principals (1993) (n = 380)		P-value*
	Mean	Standard error	Mean	Standard error	
1 Conditions	4.86	0.11	4.73	0.08	0.4
2 Freedom	4.37	0.12	4.68	0.08	0.06
3 Colleagues	4.94	0.12	5.12	0.07	0.2
4 Recognition	4.10	0.13	4.47	0.07	0.01
5 Responsibility	4.82	0.12	3.99	0.07	<0.0001
6 Pay	3.26	0.15	3.78	0.09	0.005
7 Opportunities	4.39	0.11	4.55	0.07	0.3
8 Hours	4.06	0.13	3.63	0.08	0.01
9 Variety	4.64	0.12	4.96	0.07	0.03
10 Everything	4.82	0.11	4.49	0.07	0.02

\*t-value by unpaired t-test.

ment skills to registrars during their trainee year, and for earlier training at medical school. Female registrars appeared to need most help in learning how to handle irritability and anger rather than misdirect their feelings onto patients and colleagues, although male respondents may have been less aware of their own feelings and responses than female registrars were. This problem will need a lead from regional advisers and undergraduate departments of general practice as course organizers and trainers will also have been brought up to deny their own stresses and need for preventive help, and may not perceive training in stress management as a priority for others. Communication skills training should have a high profile during the training years — reporting of verbal abuse was high, especially as respondents had only been in post for a mean of 6 months. The high frequency was likely to be a result of the registrars' relative inexperience in handling potentially emotionally charged patients.

Other researchers have reported the deterioration in mental health, enthusiasm and interest as young doctors progress to becoming more established principals. We have to intervene effectively to prevent such a reduction in mental well-being and job satisfaction; we must help registrars develop to become motivated, enthusiastic and fulfilled GP principals.

**Appendix 1. Survey of West Midlands Region GP trainees.**

Please will you answer the questions by circling or ticking the appropriate answer or filling in the details

**Educational stresses**

Here is a list of 21 stresses that trainees in the West Midlands have listed as being of some concern to them. They are in no specific order. Please rate each stress on the Likert scale opposite each question, as to how stressful you think each one is to you personally (0 = no stress at all through to 4 = extremely stressful to you). Please tick 'not appropriate' (n/a) if the stressor is not relevant for you (e.g. if you did not do an audit/project).

	No stress		Extreme stress		n/a
	0	1	2	3	
Working for the MRCGP					
Pressure to take MRCGP					
Vast syllabus for MRCGP					
Need to complete audits/projects					
Finding protected time to study					
Conflicting demands of family and job					
Unsure of answers to patients' questions					
Not knowing what you don't know					
Difficulty in arranging tutorials					
Lack of peer support for learning and discussion					
Need to learn about request forms and routine paperwork					
Analysis of tutorials in the practice using video					
Trainers sitting in on trainee's consultations					
Unable to get away to regional study days					
Unable to get to family planning training					
Unable to get to child health surveillance training					
Pressure to do external exams (e.g. DRCOG, DCH, etc.)					
Trainer poorly prepared for tutorials					
Trainee poorly prepared for tutorials					
Interruptions during tutorials					
Lack of protected time for research					

**Causes of stress at work**

The causes of stress listed below are not in any order of priority. They have been identified by other GP trainees as causes of stress at work for them. Please score each factor according of how important a stress it is for you. Please score 0 if the suggested stressor is not stressful and 4 if it is extremely stressful for you. Please tick not appropriate (n/a) if the stressor is not relevant for you.

	No stress			Extreme stress		
	0	1	2	3	4	n/a
Please tick in the left-hand margin the three most important stressors for you						
Off duty not coinciding with partner's						
Home visits — difficult to do full examination						
Lack of emotional support at home						
Financial problems						
Fear of attack during home visits						
Interruptions in the surgery						
Lack of time for partner or family						
Lack of support from senior doctors/colleagues in the practice						
Home visiting in unfamiliar area						
Social lift disrupted by on-call						
Lack of control over pattern of work done in the practice						
Potentially life-threatening patients' illnesses						
Patients' unrealistic expectations of medical care						
Patients ready to make complaints, often unjustifiable						
Lack of protected time for meals/sleep						
Difficulties in trainer/trainee relationship						
Difficulties in practice ancillary staff/trainee relationship						
Other:						

**Present mood**

A number of statements which people have used to describe themselves are given below. Read each statement and then tick the most appropriate number to the right of the statement to indicate how you feel *right now, at this moment*. There are no right or wrong answers. Do not spend too much time on any one statement but give the answer which seems to describe your present feelings best.

	Not at all	Somewhat	Moderately	Very much
	1	2	3	4
I feel calm				
I am tense				
I feel upset				
I am relaxed				
I feel content				
I am worried				

**Responses to stress at work**

Please can you tick the columns to indicate how you usually respond to stress at work (or tick n/a if it is not appropriate for you). Please score 0 if it is hardly ever a response you make to stress at work, ranging to a score of 4 if it is very often your response to stress.

	Hardly ever			Very often		
	0	1	2	3	4	n/a
Seek discussions with colleagues or friends						
Driving at high speed						
Overeating						
Delegate tasks to practice staff						
Choose passive relaxation (e.g. TV)						
Have a complete break when not on duty						
Seek counselling						
Be irritable with colleagues or patients						
Drink alcohol						
Take exercise						
Manage time better						
Avoid stressful situations						
Feel anger towards patients or colleagues						
Use laughter or jokes						

**Job satisfaction of GP trainees at work**

This set of items deals with various aspects of your job. We would like you to tell us how satisfied you feel with each of these features of your present job. Use the scale below to indicate your feelings. Remember: there are no right or wrong answers. Give your first and natural answer by working quickly, but be accurate, and answer all questions.

Aspects of your work	I'm extremely dissatisfied			I'm extremely satisfied			
	1	2	3	4	5	6	7
The physical working conditions							
The freedom to choose your own method of working							
Your colleagues and fellow workers							
The recognition you get for good work							
The amount of responsibility you are given							
Your rate of pay							
Your opportunities to use your abilities							
Your hours of work							
The amount of variety in your job							
Taking everything into consideration, how do you feel about your job							

Please will you add some details about yourself to help us interpret the results of the survey.

#### Personal details:

Gender? *male female* How old are you? ..... (years)

Domestic state? *live alone/live with friends/live with spouse or partner*

Number of children? *none ..... ≤ 5 years ..... ≥ 6 years*

How often are you on call during the evening and/or night?  
*never/≤ 4 times per month/5-8 times per month/≥ 9 times per month*

During your trainee period have you suffered from:

- (i) verbal abuse? *Yes/No* If yes, from whom? .....
- (ii) physical threats? *Yes/No* If yes, from whom? .....
- (iii) physical abuse? *Yes/No* If yes, from whom? .....

How many hours per week do you usually spend exercising?  
..... hours/week

How many months as a GP trainee have you completed?  
..... months

Are there any other comments you wish to make about stresses you encounter as a GP trainee? Please state:

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Candidates who have passed the MRCP(UK) Part 1 Examination in October 1993 or subsequently are exempt from Paper 2 (MCQ) and will automatically proceed to the Clinical Section.

The examination fees are: Written Section £100 (£60 for candidates with exemption) and Clinical Section £150. The College will require separate cheques.

Experience of six months in the care of children is recommended before candidates apply to sit the examination.

Possession of the Diploma in Child Health is regarded as satisfactory for accreditation of General Practitioners in Child Health Surveillance.

Further details and an application form may be obtained from:

The Examinations Office  
Royal College of Physicians of London  
11 St Andrews Place  
Regent's Park, London NW1 4LE  
Registered Charity No. 210508