Stressful incidents, stress and coping strategies in the pre-registration house officer year

Elisabeth Paice,[1] *Harry Rutter,*[1] *Mike Wetherell,*[1] *Belinda Winder*[2] *& I C McManus*[2]

Context Previous studies have drawn attention to the stresses experienced by doctors in their first year.

Objectives To gain a deeper understanding of the causes of stress in newly qualified doctors, how they cope, and what interventions might make the year less traumatic.

Design Postal questionnaire. This study focused on an open question asking about a stressful incident, the coping strategy used to deal with it, stressors in general and current levels of stress using the General Health Questionnaire.

Setting 336 hospitals throughout the United Kingdom.

Subjects A cohort of doctors followed from the time of their application to medical school, studied towards the end of their pre-registration year ($n = 2456$).

Results The response rate to the questionnaire was 58·4%. The incidents were categorised into the major groups Responsibility (33·6%), Interpersonal (29·7%), Overwork (17·0%), Death and disease (13·0%), and Self (6·7%). GHQ revealed psychological morbidity in 31% of respondents. Stress levels were highest in those reporting an incident about Responsibility or Self, lowest in those describing Death or disease. Stressors in general and preferred coping strategies differed between the groups.

Conclusion The incidents suggested the following interventions to reduce stress: better supervision in the first few weeks in post, at night, and for medical problems on surgical wards; more attention to avoiding sleep deprivation; more time for discussion with colleagues at work; more personal time with friends and family. The choice of incident described was influenced by the personal characteristics of the respondent.

Keywords Adaptation, psychological; cohort studies; education, medical, postgraduate/*psychology; Great Britain; interpersonal relations; medical staff, hospital; questionnaires; stress/*psychology.

Introduction

Doctors are among the most stressed professionals, and their first year is especially stressful.[1–4] A study of pre-registration house officers in 1987 demonstrated depressive illness in 28% of those tested. Factors associated with stress were overwork, with its impact on sleep and personal life; talking to distressed relatives; and serious treatment failures.[5] Since then, steps have been taken to reduce working hours and improve educational and clinical supervision.[6,7] Despite these measures, a recent study showed that the incidence of psychological morbidity among house officers remains high.[8,9] We attempted to gain a deeper understanding of the factors associated with stress in a recent cohort of pre-registration house officers by asking them to describe an incident that they had found particularly troubling, difficult or distressing during the year. We also explored how stressed they were at present, what aspects of their jobs they found stressful, and how they coped with stressful events. Our aim was to gain a deeper understanding of stress in newly qualified doctors and generate ideas about interventions that might make the year less traumatic.

[1]London Postgraduate Medical and Dental Education, UK, [2]CHIME, UCL Medical School, London, UK

Correspondence: Elisabeth Paice, London Postgraduate Medical and Dental Education, 20 Guilford Street, London, WC1N 1DZ, UK. Tel.: 020 76923355; Fax: 020 76923396; E-mail: epaice@london deanery.ac.uk

Methods

The study began as a prospective cohort study of medical student selection, looking at 6901 applicants to UK medical schools in Autumn 1990 for admission in October 1991.[10] Three thousand, three hundred and thirty-three applicants entered medical school, 2961 in

1991 and a further 372 in 1992. Two thousand, four hundred and fifty-six of the applicants graduated in 1996 and 1997, and 1230 began their first house officer post in August 1996, 140 in February 1997, 1017 in August 1997 and 69 in February 1998. House officers were sent a questionnaire about 8 weeks before the end of their second house officer post, in May 1997, November 1997, May 1998 or November 1998. Book tokens and entry to a prize draw were offered as incentives to respond. Non-responders were sent three reminders.

The main interest of the present report is the question which asked *Please think of a particularly stressful or difficult event that you have encountered during your house officer posts. By 'stressful' we mean a situation that was troubling for you, either because you felt distressed or because you had to use considerable effort to deal with the situation.* House officers were provided with a 3×11 cm blank box for the response.

The questionnaire asked house officers to describe how they had coped with the stressful incident described, and other similar incidents, using a 14-item abbreviated version of the Ways of Coping Checklist.[11] They were also asked to assess, on a six point scale, how stressful they had found each of a list of 24 potential stressors devised by the authors. Stress was measured using the 12-item version of the General Health Questionnaire (GHQ-12)[12] which asks about current levels of stress-related psychological symptoms. This was scored both by the Likert method (items scored 0–3) and the GHQ method (items scored 0 or 1, maximum 12) where a threshold score of 4 or more indicates significant psychological distress. The stressful incidents were coded by three of the authors (EP, HR, MW) who were blind to the rest of the questionnaire whilst coding. The classification process involved three meetings of the coders to discuss the themes that were emerging, several trial runs of coding, and a final coding where HR and MW worked together and EP separately and compared results. In presenting the quotes we have used the respondents' exact words except where acronyms and abbreviations have been translated for ease of reading.

Results

Questionnaires were sent to 2456 house officers of whom 1435 (58·4%) responded. The response rate was slightly higher in females (62%; 787/1266) than in males (55%; 628/1151; Chi-square = 14·4, 1 d.f., p < 0·001). The 1435 respondents worked in 336 hospitals distributed throughout the United Kingdom.

One thousand, three hundred and twenty-one (92%) respondents described an incident, 28 (2%) could recall no stressful incident, and 84 (6%) left the question unanswered. The GHQ revealed that 31·3% (448/1430) of respondents showed symptoms of significant psychological morbidity.

Classification of the responses

Within the incidents described, we identified the following stressors: having to take professional responsibility; sense of inadequacy; dealing with death; dealing with terminal illness; recognising the limitations of medicine; breaking bad news; hours and/or intensity of work; mundane or inappropriate duties; interpersonal relationships with medical colleagues, nurses, patients and their relatives; mistakes by self or others; medico-legal or ethical problems; self-criticism; and anxiety about own health, life or career. In the majority of incidents more than one of these factors could be identified, making coding difficult. By reducing the categories to the broad headings Responsibility, Death and disease, Overwork, Interpersonal and Self and agreeing rules for determining which of these was the dominant factor where there was more than one, it was possible to assign each of the incidents to a single major category with good agreement (kappa 0·864) between coders. The distribution of responses by category is

presented in Table 1, with the average GHQ scores of those doctors reporting the different types of incident. There were highly significant differences between groups (oneway ANOVA, $F_{4,1276} = 4.47$, $P = 0.001$), stress levels being highest in those who reported an incident concerned with Self or Responsibility, and lowest in those for whom the incident related to Death and disease. There were small but significant differences in the distribution of incident category between male and female house officers (Chi-square $= 11.9$, 4 d.f., $P = 0.018$), males being somewhat more likely to report incidents related to Overwork and females to report incidents related to Responsibility.

Responsibility

The largest group (444, 33·6%) described an incident where they were faced with professional responsibility beyond their competence or experience. Sometimes this occurred because they were simply the first on the scene. Many referred to incidents in the first few days of a job, when they were unsure what to do or how to access help in an emergency. Failure to access senior support was a factor in 251 cases. Reasons given for lack of cover were that the supervising senior house officer (SHO) or registrar was in clinic, in theatre, busy with another emergency, off-site, sick or on leave. In another 105 cases the supervising senior was available but was reluctant or refused to come to the assistance of the house officer, often at night. Failure to access help was in itself sometimes perceived as incompetence on the part of the house officer. Difficulty in getting senior support for the management of patients developing medical problems on a surgical ward was mentioned by 72 respondents. Finally, the experience of coping with responsibility at night appeared to add another dimension of loneliness to the situation.

Table 1 Main category of incident

Category	Number (%)	GHQ-12* Mean (SD)
Responsibility	444 (33·6)	13·1 (5·7)
Interpersonal	392 (29·7)	12·5 (5·7)
Overwork	225 (17·0)	12·0 (5·5)
Death and disease	172 (13·0)	11·3 (4·9)
Self	88 (6·7)	13·6 (5·6)
Total	1321 (100)	–

*Likert score 0–3, the higher the more psychological symptoms.

'First day of medical job, with 60 patients – SHO off sick – on my own, not having a clue what to do or where to start with no senior cover available. Truly horrible!'

'On call for ENT whilst doing urology job. Called to see woman with severe stridor, short of breath with heart failure. Little support during examination from nursing staff. Called medical SHO who called registrar; patient died. Felt should have been able to cope more.'

'I was left to deal with an extremely poorly patient (whom I had become quite close to) – struggled on my own as my seniors were tied up elsewhere – patient then arrested and it was the first arrest in my house officer job – felt very helpless.'

'Looking after a very sick patient on my own with the registrar on call from home. He didn't come in despite me ringing him four times during the night sounding very worried. I didn't actually say 'can you come in' but instead 'don't you think you ought to come in.' I realise now that what you say is very important.'

'Unable to get a medical SHO to review a very ill patient during the night (refused to see patient). The patient had a medical problem but was on a surgical ward. Surgical SHO no help.'

'On call overnight. Very sick patient in multiorgan failure. Nurses anxious. SHO unhelpful. Rude on phone, would not attend. Totally out of my depth. Nasogastric tube needed, nurses refused, had to pass my first one, patient alert and communicating. I felt I was deceiving, pretending I knew what I was doing. Long stressful night. Inevitable but harrowing.'

Interpersonal

The second largest category (392, 29·7%) included difficult interpersonal relationships, conflict or communication problems. In 200 of these cases the incident involved dealing with patients or their relatives and handling their anger, criticism or aggressive behaviour. Often the context was the breaking of bad news. A theme that emerged was the difficulty house officers had in coping with this task when tired, distressed themselves by the failure of treatment, or when they did not know the patient. In 133 cases the difficult relationship was with senior medical colleagues who were critical, unreasonably demanding, incompetent, or uncaring. The impact on the whole team of a

dysfunctional consultant could be devastating. Sometimes the house officer was caught in the crossfire between warring seniors. Several cases described the house officer trying to act as the advocate for the patient against unwanted interventions by seniors. In 44 cases the house officer was supervised by a senior colleague they considered to be incompetent or uncaring. Conflict with nursing staff featured in 56 cases, and usually involved being harassed to get trivial jobs performed or being unsupported when dealing with a crisis. Conflict with hospital managers was mentioned three times, and receiving racial abuse (from a patient or their relative) twice. None of the incidents concerned any relationship of a social, sexual or personal type.

> 'Very aggressive patient who shouted out that I was incompetent at the rest of the ward because I took two goes at venepuncture. Absolutely horrid, very upsetting. Didn't know what to do.'

> 'Breaking news of death of a patient to the relatives at midnight on New Year's Eve. Their grief reaction was one of anger which was directed towards me. Feeling stressed by the patient's death myself, it was difficult to deal with their anger.'

> 'Shortly after starting new job with many new patients had a ward round where I was asked whether a patient's chest was clear. I had not had time to examine the patient and confessed this to consultant. He went mad, said I was a 'disgraceful' doctor in front of about 15 people on the ward round.'

> 'Job 3 involved working for a particularly difficult consultant, who made his business to terrify his patients, cause the registrar to cry 1–2/week, and humiliate the juniors in front of as large an audience as possible. The entire firm is continuously tense and stressed.'

> 'Writing requests for inappropriate radiological investigations on consultant's instructions then being shouted at by radiologists.'

> 'A terminal patient with liver metastases, jaundiced, did not want any more doing. I was asked to consent her for a procedure – I refused knowing her wishes – but was made to in the end. She died 3 days later.'

> 'Continuous calls from unhelpful, uncooperative nurses when on call and had several sick patients to attend to.'

Overwork

Overwork underlay many of the incidents in other categories, and was the major theme in 225 cases (17·0%). Long hours, intensity, conflicting demands, missing meals and going without sleep were all frequently mentioned in responses in this category. Intensity was the main feature in 124 incidents, many of which described the house officer being pulled in several directions simultaneously. Mundane or inappropriate duties added to the strain, but were the main topic of only 12 incidents. Long hours alone were the subject of only 9 responses, but the combination of long hours and intensity was the subject of 72. The respondents got little sympathy from their seniors. In some cases the pressures left the young doctors without the emotional resources to offer what they themselves considered an appropriate level of care. The potential of these conditions for rapidly producing burnout was clear.

> 'Having to deal with very ill patients on ward and meanwhile all emergency admissions have arrived at same time – not sure how to prioritise them – and registrar is elsewhere seeing a surgical referral. Bleep keeps going one after another and I've missed my lunch and dinner.'

> 'Working 56 h with only 4 h sleep with 80 patients between 2 house officers at the end of on call.'

> 'Weekend on call. No sleep for 48 h. Consultant then wanted me to work all day Monday as well. Informed by consultant that this was good for me and character building.'

> '2 out of 3 medical house officers off sick. Had to cover admissions and wards alone. Had very ill patient at 4:00 am, young with lung cancer. Begged me not to let him die. I felt so numb and tired I just wanted him to stop bothering me. He asked me if his wife and children should be called and I said of course you won't die tonight – of course he did. Nurses being very hostile and I felt very upset.'

> 'On a particularly busy general medical take I felt so completely dehumanised through lack of food, sleep, washing, it took all of my concentration not just to throw my bleep away and walk out.'

Death and disease

Almost all the incidents took place in the context of death and disease. We included in this category those who described an incident where the fact of death or

serious disease was the central or the only point (172, 13·0%) – rather than feeling responsible, in conflict, overworked or anxious about self. Unexpected or sudden death was the subject in 88 cases, sudden or serious illness in 51, and terminal illness in 33. In each of the above groups, most of the responses added some detail about the youth or other special nature of the patient that added poignancy to the incident. Recognising the importance of the patient to their family added to the distress. The personal vulnerability felt by young doctors in the face of death or disease in someone of their own age group was obvious.

'Young patient upon whom we did a mastectomy. 2 weeks later had to do major surgery for Crohn's disease. After the end of it turned out the breast cancer was very advanced with bony mets. She was 34.'

'The slow decline and eventual death of a patient whom I had developed a rapport with and whose wife had considered me a friend.'

'Certifying a patient on Christmas Eve – a young man who I had admitted 3 nights previously with pneumonia, found to have cancer. He had young children and his wife was devastated.'

'Seeing patients my own age with cancer, especially when only palliative treatment can be offered.'

Self

In the smallest category (88, 6·7%) the incident centred on the self-esteem, safety, career or personal health of the respondent. Self-criticism for real or imagined mistakes, omissions or inadequacy was the subject of 57 of these. Some respondents were uncomfortably aware of their own inadequacy and the threat of the medico-legal consequences of making mistakes was specifically referred to in three cases. The threat of physical harm featured in eight responses. Anxiety about getting the next job and career progression was mentioned six times. Anxiety about the respondent's own health featured six times. The illness or death of a close relative, and the impact of this on work or vice versa, was mentioned three times. There were three references to being off sick with anxiety or depression and one to having attempted suicide. There was only one passing reference to a social relationship and no mention of personal financial difficulty, drugs or alcohol.

'Sudden death of a postoperative patient from a surgical complication. Feelings of guilt that I should have recognised the condition and death could have

been prevented. Talk of coroner's inquiry, court cases, etc.'

'I had a knife pulled on me.'

'Being disciplined for going 'AWOL' during my first job.'

'Applying for surgical SHO rotations. Difficulty in making decision between deciding to take A & E job for six months or to take a gamble and wait for surgical SHO rotation.'

Stressors in general during the house officer year

In addition to describing a stressful incident, house officers were asked about stressors in general. *Some aspects of a house officer job are stressful. Please indicate how stressful you have found each of the following areas* Table 2 shows their ranking of 24 possible stressors. Sleep deprivation, overwork and too little personal time ranked as the top three. Many of the most highly ranked stressors correspond to our broad categories of stressful incident, with the exception of interpersonal relationships. Relationships with patients and professional colleagues ranked low in the list of stressors, but were a common theme in the stressful incidents, while the effect of work on personal relationships ranked high as a stressor but was not the topic of any of the incidents. The question then arises as to whether the incidents respondents chose to describe were representative of the stressors of the job generally. Table 3 shows the possible stressors in relation to the category of stressful incident described. House officers reporting an incident concerned with Responsibility particularly reported stress from overwork, too little personal time, too little knowledge, lack of support, too few skills, dealing with ethical dilemmas, and decision making. Those reporting incidents related to Death and disease, Interpersonal, and Self, particularly rated as stressful talking to distressed relatives, dealing with ethical dilemmas, and dealing with death and terminal illness. Those reporting incidents concerned mainly with Overwork reported no stressors as significantly more or less stressful when compared with other house officers. We concluded that this group represented the norm, where the external stresses of the post were more important than the susceptibility of the person, but that for the rest the choice of incident was related to the factors they found most stressful.

Coping strategies

People differ in the coping strategies that they adopt for dealing with stressful incidents. After the house officers

Table 2 The ranking by importance of 24 potential causes of stress*

	Not at all stressful	Mildly stressful	Quite stressful	Stressful	Very stressful	Extremely stressful
Sleep deprivation	4%	18%	21%	25%	18%	15%
Overwork	3%	19%	22%	28%	20%	8%
Too little personal time	5%	21%	25%	25%	17%	7%
Too little knowledge	4%	24%	29%	25%	15%	5%
Talking to distressed relatives	4%	22%	31%	27%	14%	2%
Effects on personal relationships	11%	25%	22%	22%	13%	7%
Lack of support	12%	26%	24%	20%	12%	7%
Too few skills	6%	32%	28%	21%	10%	3%
Inadequate catering arrangements	19%	26%	19%	20%	9%	8%
Dealing with ethical dilemmas	9%	32%	33%	19%	5%	1%
Dealing with death and terminally ill patients	9%	36%	32%	18%	4%	1%
Administrative duties	16%	35%	21%	19%	6%	4%
Treatment failures	7%	42%	28%	16%	6%	1%
Decision making	10%	40%	31%	15%	3%	1%
Constant anticipation of crisis	19%	36%	24%	14%	6%	2%
Financial problems	38%	28%	12%	13%	6%	3%
Being under-utilised	36%	31%	17%	10%	4%	2%
Relations with nursing staff	26%	42%	18%	10%	4%	2%
Inflicting pain	23%	45%	19%	9%	3%	1%
Emotional involvement with patients	27%	41%	20%	9%	2%	1%
Relations with consultants	28%	50%	13%	6%	2%	1%
Relations with registrars	55%	33%	8%	3%	1%	<1%
Relations with SHOs	66%	23%	6%	3%	1%	1%
Dealing with patients' sexuality	64%	26%	8%	2%	1%	<1%

*Results presented as percentages of respondents giving each response, ranked by mean Likert score.

had described a stressful incident, they were asked *How much do the following statements describe the way you responded to that and other similar situations?* There then followed a list of 14 coping strategies derived and slightly modified from the Ways of Coping Questionnaire.[11] The authors of the questionnaire carried out factor analysis and identified five broad coping strategies, labelled as Seeks social support, Problem-focused, Wishful thinking, Blamed self, and Avoidance.

Table 4 shows the 14 strategies ranked from most frequently used to least frequently used. The commonest strategy was Seeks social support, followed by Wishful thinking. Problem-focused approaches were generally less used. The unhelpful strategies of Blamed self and Avoidance were little used. Table 5 shows that the five categories of incident reported were related to different overall coping strategies. Those reporting problems about Death and disease (and also to a large extent about Self) were more likely to be Problem-focused, looking at positive aspects of the experience, and Seeking social support, particularly from others within medicine. A similar pattern of Problem-focused ways of coping was reported by those with problems concerned with Responsibility, although they did not

Seek social support. Those reporting Interpersonal problems tended to talk to someone who could do something about the problem, and changed something about themselves, but also used Wishful thinking in hoping the situation would go away. Those reporting problems with Overwork were characterised by wishing that the situation would go away and refusing to believe it had happened, both suggesting that they felt that solutions to the problem were outside their control.

Discussion

The incidents described by house officers from across the UK paint a depressingly familiar picture of young doctors trying to come to terms with death and disease while struggling with excessive demands, lack of support and supervision, and sleep deprivation. The normal coping strategy of talking things through with friends or family was obstructed by long hours of work. With a combination of high demand and low control over workload, it is not surprising that a third of the respondents were showing symptoms of psychological distress.

Table 3 The mean importance of each general stressor* in relation to the main category of stressful incident reported**

	Responsibility	Death and disease	Overwork	Interpersonal	Self	Sig
Sleep deprivation	3·91	3·56	3·86	3·82	3·98	NS
Overwork	**3·84**	3·54	3·77	3·59	3·83	$P = 0.017$
Too little personal time	**3·63**	3·31	3·44	3·45	3·62	$P = 0.05$
Too little knowledge	**3·56**	3·25	3·19	3·31	**3·59**	$P < 0.001$
Talking to distressed relatives	3·36	**3·41**	3·07	**3·46**	3·38	$P < 0.001$
Effects on personal relationships	3·30	3·05	3·29	3·21	3·40	NS
Lack of support	**3·54**	2·84	3·09	3·08	2·77	$P < 0.001$
Too few skills	**3·24**	2·96	2·91	3·02	3·12	$P = 0.005$
Inadequate catering arrangements	3·00	2·91	3·12	2·94	2·81	NS
Dealing with ethical dilemmas	**2·90**	**2·99**	2·54	**2·91**	**2·86**	$P < 0.001$
Dealing with death and terminally ill patients	2·78	**2·92**	2·50	**2·87**	**2·95**	$P < 0.001$
Administrative duties	2·72	2·77	2·87	2·80	2·80	NS
Treatment failures	2·83	2·80	2·63	2·72	2·85	NS
Decision making	**2·80**	2·64	2·55	2·53	2·74	$P < 0.001$
Constant anticipation of crisis	2·69	2·58	2·59	2·51	2·57	NS
Financial problems	2·39	2·11	2·29	2·33	2·20	NS
Being under-utilised	2·23	2·21	2·02	2·26	2·24	NS
Relations with nursing staff	2·31	2·12	2·28	2·41	2·34	NS
Inflicting pain	2·27	2·35	2·22	2·32	2·31	NS
Emotional involvement with patients	2·19	**2·33**	2·01	2·28	2·23	$P = 0.013$
Relations with consultants	2·06	1·96	2·04	2·16	2·13	NS
Relations with registrars	1·61	1·65	1·68	1·69	1·55	NS
Relations with SHOs	1·53	1·43	1·46	1·59	1·62	NS
Dealing with patients' sexuality	1·47	1·61	1·49	1·56	1·49	NS

*Scored 1 = not at all stressful through 6 = extremely stressful.
**Where overall differences in means are significant (oneway ANOVA) the largest value has been indicated by bold type. In addition if multiple comparisons using Tukey's HSD test indicate a subset of means which are higher than the others, then these means are also in bold type.

From a theoretical perspective, a key question in trying to understand the stressful incidents reported here is whether they are simply random anecdotes, or whether they are indicators of a more general situation. In particular, do they tell us anything about house officer posts in general, or about house officers and the way they respond to their posts? Differences between house officers in their susceptibility to stressors in general, in ways of coping, and in GHQ score according to the type of incident reported, suggest that the incidents are informative in a general sense.

Overall reported levels of current stress, as assessed by the GHQ-12, differed between those reporting different types of stressful incident. Those house officers reporting an incident related to Self or Responsibility were most stressed overall, whereas those reporting incidents related to Death and disease – an inevitable feature of life in medicine – were the least stressed. This suggests that although most of our respondents were only describing a single episode, the choice of the type of episode was not random but was related to the house officer's overall response to the job. This response might depend either on the circumstances of the post or the personality or psychological make-up of the house officer. Those reporting an incident concerned with having to take responsibility or worrying about themselves and their career were currently the most stressed and perhaps failing to cope.

Psychologists in recent years have emphasised the importance of 'autobiographical memory'.[13] When asked to recall events from our past, without any specific guidance about the content of that memory, the choice of event is informative about the person, and tends in some sense to be representative of the psychologically meaningful events which have occurred to them. The events recalled in this study may be treated in a similar fashion, and they are almost certainly informative, as is much qualitative research, about the richness of the experience which individuals undergo. The patterns shown in the quantitative part of the study support the interpretation of the specific incidents as being meaningful and representative.

Table 4 Ways of coping used by respondents*

Strategy		Does not apply at all	Applies a little	Applies somewhat	Applies quite a bit	Applies a great deal
Talked to someone about how you were feeling	Seeks social support	11%	17%	21%	30%	21%
Realised you would come out of the experience better than when you went in	Problem-focused	12%	17%	24%	27%	20%
Talked to someone who could do something about the problem	Seeks social support	21%	15%	17%	27%	20%
Accepted sympathy and understanding from someone in medicine	Seeks social support	14%	19%	24%	29%	14%
Wished that you could change what had happened	Wishful thinking	18%	22%	20%	19%	21%
Wished the situation would somehow go away or be finished	Wishful thinking	21%	20%	19%	19%	21%
Accepted sympathy and understanding from someone outside medicine	Seeks social support	22%	21%	19%	23%	15%
Felt bad that you couldn't avoid the problem	Avoidance	23%	20%	20%	22%	15%
Concentrated on something good that could come out of the whole thing	Problem-focused	24%	25%	23%	20%	9%
Came up with a couple of different solutions to the problem	Problem-focused	23%	22%	28%	21%	5%
Changed something about yourself so you could deal with the situation better	Problem-focused	26%	26%	25%	17%	7%
Criticised or lectured yourself	Blamed self	36%	28%	16%	14%	6%
Realised you brought the problem on yourself	Blamed self	61%	24%	10%	4%	1%
Refused to believe it had happened	Avoidance	88%	8%	3%	1%	<1%

*The ways of coping have been sorted from most used to least used.

Conclusions

The themes which emerged from the stressful incidents suggest interventions to make the year less stressful. Learning to take professional responsibility is an inevitable process in the making of a doctor, but many of the incidents showed that these new doctors did not have the easy access to senior cover that they had a right to expect. New doctors should be closely supervised in the first few days or weeks in a post and should not feel forced to cope with emergencies, ward work or breaking bad news without a senior easily accessible for advice and support. Surgical teams should ensure that their house officers are supervised when the rest of the team is in theatre, and that they have access to support when medical problems arise on surgical wards. House officers should be learning from experience under supervision, not from their mistakes.

Some of the incidents described difficult relationships with senior colleagues, who made unreasonable demands, shouted or subjected the house officer to public humiliation. The relationship between the doctor in training and the supervising consultant is central to the learning experience, and can have a lasting impact on the career decisions made by young doctors. Bullying trainers are likely to produce juniors who are stressed and disillusioned or who become bullies in their turn. Good employers are introducing antibullying policies to tackle this sort of behaviour.[14]

The stresses of excessive intensity of work and sleep deprivation are well recognised, and this study showed that house officers were still being subjected to both, despite the New Deal limiting the total hours of work.[6] There is so much for the young doctor to learn in the first year it seems perverse to expect them to do this under conditions of sleep deprivation. The tradition of having house officers covering wards at night should be reviewed, since much of what they do could be done by nursing staff, or left until morning, or requires a more experienced doctor.[15] Reasonable working hours make it easier to maintain the personal relationships that provide support in times of stress.

Dealing with death and disease featured as the major topic discussed by those respondents who were least stressed. Learning to cope with human tragedy, the limitations of medicine, and their own mortality is hard emotional work even for the most resilient of young doctors, and time should be made available for properly supported discussions in the workplace[16] as well as at home. Jobs which do not impose excessive responsibility or pressure on young doctors allow them time and energy to tackle these adjustments and mature into well-balanced individuals with

Table 5 The mean importance of each way of coping* in relation to the main category of stressful incident reported**

Strategy		Responsibility	Death and disease	Overwork	Inter-personal	Self	Sig
Talked to someone about how you were feeling	Seeks social support	3·22	3·41	3·12	3·48	**3·86**	<0·001
Realised you would come out of the experience better than when you went in	Problem-focused	**3·45**	3·39	2·92	3·09	**3·47**	<0·001
Talked to someone who could do something about the problem	Seeks social support	**3·44**	2·93	2·71	**3·05**	2·97	<0·001
Accepted sympathy and understanding from someone in medicine	Seeks social support	3·11	**3·29**	2·85	3·07	**3·48**	<0·001
Wished that you could change what had happened	Wishful thinking	3·09	**3·32**	2·68	3·02	**3·68**	<0·001
Wished the situation would somehow go away or be finished	Wishful thinking	2·94	2·58	**3·44**	**3·06**	2·89	<0·001
Accepted sympathy and understanding from someone outside medicine	Seeks social support	2·73	**3·18**	2·89	2·88	3	0·007
Felt bad that you couldn't avoid the problem	Avoidance	2·84	3·04	2·75	2·9	2·95	NS
Concentrated on something good that could come out of the whole thing	Problem-focused	2·73	**2·79**	2·53	2·51	2·74	0·029
Came up with a couple of different solutions to the problem	Problem-focused	2·71	2·4	2·6	2·62	2·49	NS
Changed something about yourself so you could deal with the situation better	Problem-focused	**2·63**	2·57	2·23	2·56	**2·64**	0·002
Criticised or lectured yourself	Blamed self	2·3	2·28	1·86	2·15	**3·17**	<0·001
Realised you brought the problem on yourself	Blamed self	1·44	1·5	1·52	1·7	**2·22**	<0·001
Refused to believe it had happened	Avoidance	1·14	1·12	**1·27**	1·2	1·13	0·019

*Scored 1 = does not apply at all through 5 = applies a great deal.
**Where overall differences in means are significant (oneway ANOVA) the largest value has been indicated by bold type. In addition if multiple comparisons using Tukey's HSD test indicate a subset of means which are higher than the others, then these means are also in bold type.

the motivation to continue in a demanding profession.

'First post: so distressing – poor support, lonely, unrewarding, very long hours – required 3 months off sick! Present post – very good support from all members of staff. Most upsetting was seeing a long-stay patient at end stage of liver failure, fitting, etc.'

Contributors

EP led the coding team and drafted the paper. ICM devised the study, helped write the paper and provided the statistical analysis and tables. BW organised the survey, data entry and analysis. HR entered data, coded and helped with drafting. MW entered data, coded and took part in discussions.

References

1 Caplan RP. Stress, anxiety and depression in hospital consultants, general practitioners and senior health service managers. *BMJ* 1994;**309**:1261–3.
2 Cousins N. Internship: preparation or hazing? *JAMA* 1981;**245**:377.
3 Reuben D. Depressive symptoms in medical house officers: effects of level of training and work rotation. *Arch Intern Med* 1985;**145**:286–8.
4 Hsu K, Marshall V. Prevalence of depression and distress in a large sample of Canadian residents, interns and fellows. *Am J Psych* 1987;**144**:1561–6.
5 Firth-Cozens J. Emotional distress in junior house officers. *BMJ* 1987;**295**:533–6.
6 NHS Management Executive. *Junior Doctors Hours. The New Deal.* London: NHSME; 1991.
7 West R, Goldberg I, Harrigan P, Paice E. Pre-registration house officer training: implementing change. London: COPMED; 1993.
8 Birch D, Ashton H, Kamali F. Alcohol, drinking, illicit drug use and stress in junior house officers in north-east England. *Lancet* 1998;**352**:785–6.
9 Bogg J, Gibbs T, Bundred P. Training, job demands and mental health of. pre-registration house officers. *Med Educ* 2001;**35**:590–5.

10 McManus IC, Richards P, Winder BC. Intercalated degrees, learning styles, and career preferences. Prospective longitudinal study of UK medical students. *BMJ* 1999;**319**:542–6.

11 Vitaliano PP, Russo J, Carr JE, Maiuro RD, Becker J. The Ways of Coping checklist: Revision and psychometric properties. *Multivariate Behav Res* 1985;**20**:3–26.

12 Goldberg DP. *The Detection of Psychiatric Illness by Questionnaire*. London: Oxford University Press; 1972.

13 Conway M, Pleydell-Pearce CW. The construction of autobiographical memories in the self-memory system. *Psychological-Review* 2000;**107**:261–88.

14 Adult Bullying. *Peter Randall*. London and New York: Routledge; 1997.

15 McKee M, Black N. Junior doctors' work at night: what is done and how much is appropriate? *J Public Health Med* 1993;**15**:16–24.

16 Davis M. Intern discussion group: a supportive educational experience for junior doctors. *Hospital Med* 1999;**60**:435–9.