other member of the public. Normally in cases of grievous bodily harm if the evidence appears sufficient to secure a conviction and if the doctor presses for prosecution the assailant would be prosecuted, though each case is considered individually on its merits.

On the "counterassault" point, in private prosecutions for assault the accused often makes counterallegations of assault against the prosecutor; these cases are rarely worth proceeding with because magistrates have difficulty in deciding who is at fault and will usually just bind over both parties to keep the peace. This case, however, is quite different. The partners believed that the assailant consented to the injection, and even if he had not he suffered no injury from it and it was arguably no more than the use of reasonable force in self defence. Even if it were not, it would not in any way be a defence to the charge of grievous bodily harm.

Dr Cembrowicz's main concern, understandably, was compensation for financial loss because of time off work. He has gained nothing personally from the prosecution, except for the deterrent effect it may have on this patient or other potential assailants who may be aware of it (though its value as a deterrent must be doubtful, given that most patients who assault their doctors are presumably not acting rationally). The court can order someone who is convicted of a crime to pay compensation to the victim, but this depends on the perpetrator's ability to pay. Compensation by the Criminal Injuries Compensation Board does not depend on a prosecution; all that is required is that the crime must be a crime of violence reported without delay to the police, and the injuries must now be worth at least £550.

If the assailant is not arrested no record would be made on the incident sheet, say Bristol police. There would, however, be a record in the officer's notebook. (The Criminal Injuries Compensation Board writes to the police for confirmation that the incident was reported.) If the police refuse to act a victim can bring a private prosecution, but this is not advisable because he will probably have to pay the defendant's costs if he is acquitted and even if he is convicted the victim is unlikely to uncover all his legal costs.

The obvious bodies to provide legal advice and help for doctors assaulted in the course of their work seem to be the defence societies, who (in appropriate cases) will defend doctors facing criminal charges and therefore have some expertise in criminal law and procedure on tap. At the very least they should pay the costs of a Criminal Injuries Compensation Board appeal, which will otherwise leave the doctor out of pocket.

Practice Research

Determinants of mood in general practitioners

H J RANKIN, N M SERIEYS, C P ELLIOTT-BINNS

Abstract

A pilot study was conducted in which 44 general practitioners completed cognitive behavioural self monitoring diaries. Hourly changes in emotional state were recorded together with associated circumstances. Lowering of mood was associated mainly with "hassle" at work, pressure of time, and domestic dissatisfaction. Improvement in mood was associated with domestic happiness and satisfaction at working efficiently and to time. Mood was significantly lower when the doctor was on call. Women doctors were more prone to mood changes associated with domestic matters. Responses to a questionnaire suggested that the doctors preferred traditional clinical medicine to problems of a social or psychological origin.

Managerial skills would help alleviate several of the problems identified in this study and should be more prominent in the training that all doctors receive.

St Andrew's Hospital, Northampton
H J RANKIN, MPHIL, PHD, clinical psychologist
N M SERIEYS, BA, counsellor

20 Billing Road, Northampton NN1 5AS
C P ELLIOTT-BINNS, MD, FRCGP, general practitioner

Correspondence to: Dr Elliott-Binns.

Introduction

Most general practitioners find their work interesting but suffer at times from anxiety, boredom, and frustration. Cartwright found that the more pleasurable aspects of general practice stemmed from personal contact with patients, the variety of work, freedom of action, and satisfaction in helping people.[1] The less pleasurable aspects were associated with the unacceptable behaviour of patients, trivial consultations, lack of time, and late or inopportune requests for visits. The repeat of this survey by Cartwright and Anderson generally showed only minor changes, but lack of leisure time was no longer a major cause of dissatisfaction.[2] Balint and his followers have studied in depth the frustrations of general practitioners in their relationship with patients,[3] but little consideration has been given to the contribution of home life and outside interests to the mood of family doctors. Porter *et al* undertook a pilot study to develop methods of measuring stress factors experienced by general practitioners who were asked to keep half hourly diaries to record self perceived pressures.[4] As far as we are aware, however, no study has been completed in which the thoughts and actions of family doctors, both at home and at work, have been related to their mood over a specific period.

Thoughts, mood, and behaviour are intimately related, and there has recently been considerable interest in the theory and practice of cognitive psychology, which relates emotional disturbance to faulty thinking. Misperception, misinterpretation, and unrealistic evaluations are characteristic of the type of thinking that leads to poor mood states. Cognitive therapy uses various methods to help modify a person's thinking and belief systems: reason and logic, practical

behavioural tasks and experiments, written exercises, and self monitoring diaries all systematically tailored to the subject's problems and level of functioning.[5] Self monitoring diaries are particularly important: in addition to helping the subject gain more understanding of his behaviour, emotion, and thinking as an interactive process they provide a wealth of information that can be readily analysed and is likely to be more reliable and valid than simple self reported statements or questionnaires.

This pilot study set out to investigate by means of self monitoring diaries mood changes of general practitioners over two days.

Methods

Questionnaires were sent to 51 family doctors before their attendance at a three day course entitled "Towards better general practice" arranged by the Thames Valley faculty of the Royal College of General Practitioners. Most of the doctors were highly motivated towards postgraduate training.

The first section of the questionnaire concerned personal, professional, and practical details. The second section consisted of a list of 14 typical professional activities. Subjects were asked to rate each activity for the amount of pleasure that it typically gave on a five point subjective rating scale (1-5). The third section was a self monitoring diary, which required subjects to record their main activity for each hour of the day from 8 am to midnight or when they went to bed. For each recorded activity they were required to rate on a scale of 1-10 their general mood, anxiety/tension, and anger/frustration. On the scale for general mood 1 represented extreme unhappiness and 10 complete joy. If there was a change in any of these scores from that of the previous hour the doctors were asked to record up to three reasons for the change. If a patient was responsible they were asked to record the age, sex, and diagnosis. The forms were completed during two typical working days, one while on duty for emergency calls and one when not on duty. A comprehensive instruction sheet for completing this part of the questionnaire was included plus a completed imaginary chart as an example. The figure shows a typical chart. The final section of the questionnaire invited comments from the participants on what this self monitoring exercise had shown them about their practice and what implications there were for possible change.

Results

The subjects were aged 28-60; mean and median ages were 40·6 and 41 years, respectively. Years of experience showed a parallel distribution pattern. Women constituted a quarter of the sample compared with a fifth of all general practitioners in England. Comparisons with statistics from the Oxford Regional Health Authority indicated that the 35-39 age group was overrepresented in the sample and the 55+ age group underrepresented. These differences, however, were not significant ($p=0·06$, χ^2 test).

Although the moods were rated on a 10 point scale, most subjects gave ratings of between three and eight, thus in effect using a six point scale. For the purposes of analysis all occasions when there was a move of two points from the last reading were defined as an appreciable change of mood. The activities associated with such a change were then recorded and categorised into those responsible for positive and those responsible for negative changes in mood.

A total of 44 doctors replied, recording 1496 hourly assessments, of which 85 (6%) showed appreciable negative changes in mood by the criteria described above. The perceived reasons associated with this drop in mood were: "hassle" (unexpected demands, intrusions, and delays) 30 assessments (35%), pressure of time 16 (19%), domestic 15 (18%), dealing with psychiatric problems 9 (11%), concern about patients' health 6 (7%), starting work 6 (7%), physical state of doctor 2 (2%), and finishing work 1 (1%). A similar number of the hourly assessments, 86 (6%), showed appreciable increases in mood. The reasons given were: domestic 29 (34%), time 16 (19%), work satisfaction 16 (19%), physical state of doctor 6 (7%), patients' health 5 (6%), hassle 5 (6%), finishing work 5 (6%), and dealing with psychiatric problems 4 (5%).

In section 2 of the questionnaire subjects were asked to rate on a five point scale their preference for various typical activities in general practice (table).

Responses to questionnaire preferentially rating typical general practice activities on a scale of 1-5

	Activity	Mean rating
1	Treating a patient with acute asthma	3·93
2	Diagnosing acute appendicitis in a child	3·90
3	Having morning coffee with your partners	3·77
4	Successfully taking blood from a patient with difficult veins	3·75
5	Having plenty of time to clear your desk of paperwork	3·66
6	Doing an antenatal clinic	3·61
7	Having time to read a medical journal	3·55
8	A discussion with partners and staff about practice organisation	3·3
9	A 20 minute discussion with a patient with emotional problems	3·25
10	Talking with an elderly patient at home	3·18
11	Attending a postgraduate educational meeting	3·11
12	Doing a well baby clinic with your health visitor	2·8
13	Talking to an alcoholic's wife	2·39
14	Admitting a schizophrenic patient under section	1·77

There was no significant difference between the men (n=35) and women (n=11) in any of their preferred activities.

In a comparison of the psychological state of general practitioners when on call and off call there was a significant difference in all three categories, the on call doctors showing a lowering of mood ($p<0·0015$), an increase in tension ($p<0·0043$), and an increase in frustration ($p<0·0001$) (binomial test).

Domestic problems were more commonly reported as being the cause of negative mood changes by women than men. This difference was significant ($p<=0·0144$, χ^2 test).

Time	Mood score	Anxiety/ tension score	Anger/ frustration score	Main activity in previous hour	Reasons
8 am	4	5	5	Getting up; breakfast; going to work	Wished I'd gone to bed earlier; children naughty
9 am	2	5	4	Arrived at surgery; saw patients	Surgery crowded; expected difficulties (rushed morning)
10 am	7	7	8	Surgery	Enjoyed technical aspects of work; put coil in old friend
11 am	4	6	4	Surgery	Telephone interruptions; too many extras
Noon	6	7	5	Surgery	Finished surgery; sun shining
1 pm	4	6	4	Lunch	Expecting lots of visits
2 pm	8	8	6	Visits	Calls going smoothly; case of appendicitis
3 pm	5	5	5	Visits	Expecting visit to dying patient
4 pm	2	4	2	Visits	"Bolshy" patient, unnecessary call
5 pm	6	6	5	Home	Unexpected free time and cup of tea
6 pm	4	5	5	Surgery	Arrived back at work; tired
7 pm	3	4	3	Surgery	40 Minute consultation with depressed inconsolable patient; bureaucratic demandingness
8 pm	2	3	2	Surgery; drive home	Extras; home late; hassle from spouse

Typical chart recording activity for each hour and rating mood and emotions on scale 1-10.

Discussion

The research reported here suggested that this particular group of general practitioners were able to monitor their daily routines and the effect they had on their psychological state. The feedback from the subjects at the meeting suggested that they had performed this exercise accurately and reliably.

It is important to remember that the factors being assessed were those responsible for the initial change in mood rather than the maintenance of mood. None the less, certain interesting implications emerged from the data. The main cause of dissatisfaction was the uncertain nature of the work. The factors of hassle and lack of time together accounted for 54% of the reasons given for a drop in mood, as opposed to patients' health and response to treatment, which accounted for only 7%, and domestic problems (18%). In contrast, domestic happiness was the chief single cause of improvement of mood (34%); work satisfaction and being up to time were important and when taken together accounted for 37%, while pleasure over improvement in patients' health represented only 6%.

This is somewhat surprising, but may be because doctors are trained to accept changes in patients' health as a professional matter and therefore experience few emotional reactions. Death and suffering are usually acceptable while more trivial matters, such as being behind with work, create problems with which they are not trained to cope; they may even attribute the change of mood to other more important factors. Provided a doctor knows that he has dealt with serious or fatal illness effectively his mood may be uplifted rather than depressed.

The implication of these tentative findings is that skill in practice management should make a major impact on a family doctor's emotional state. In cognitive and behavioural therapy it is often small changes in behaviour and thinking that bring the best results. Before these changes are made it is essential to pinpoint the correct target, and in general practice the self monitoring diary is a simple and effective way of doing this. It might be argued that planning in general practice is largely ineffective because of the unpredictable nature of the work, but this unpredictability is the very thing that must be allowed for. Extra demands should be seen as normal and planned for in a realistic manner, with sufficient time being allowed for "extras."

The scores in the table suggest that family doctors get most pleasure from doing work that came into their training as medical students. There is less pleasure in dealing with social problems, which may take a long time and have unsatisfactory outcomes. Well baby clinics were rated low. This was the only example of preventive medicine included, except possibly antenatal care, and suggests that doctors may not enjoy routine work, which lacks the stimulus of diagnosis and treatment.

Work satisfaction seemed to be a goal in itself; for it also has a bonus in that people who enjoy their work do it more efficiently, although this is difficult to prove. Most general practitioners say that they have more to give to their patients when they feel good themselves, and this is in keeping with Balint's concept of "The drug doctor."[3] Mechanic found a correlation between frustration and poor performance, especially in the tendency to take unacceptable short cuts.[6] Melville compared prescribing habits with answers to a 12 point questionnaire and found an association between low job satisfaction and dysfunctional prescribing.[7] Cartwright found that satisfied doctors were more tolerant towards their patients, had more free time, and were more interested in postgraduate education.[1] Our survey showed an association but did not indicate cause and effect. Do family doctors work well because they are happy or are they happy because they work well? The two are inseparable, but we contend that circumstances that are only indirectly related to work have a considerable effect on doctors' mood and efficiency.

How can a family doctor improve his wellbeing, work satisfaction, and overall performance? This pilot survey suggests that much of the dissatisfaction is self inflicted because it is related to unrealistic expectations. Surgeries are consistently overbooked, paper work is a drudgery because no time is allowed for it, and extra calls and interruptions are an irritation. All these irritations, however, are predictable and part of the normal working day. The doctors undertaking this survey learnt which of their expectations were unrealistic and had the opportunity to plan their work day more effectively. Family doctors, it has been suggested, are not so short of time as they like to think and might improve their efficiency by spacing their work better.[8] The traditional rushed morning and evening surgeries may be an anomaly, especially if the doctor is underworked the rest of the day. Much of the conflict between work and family life may also be caused by poor management, faulty timing, and unrealistic expectations. If, for example, a doctor is likely to finish his evening surgery at 6 30 pm he should tell his family to expect him back about 7 pm rather than 6 pm. Similarly, if he expects to find his desk piled high with paperwork he should arrive in time to deal with it before surgery rather than get cross and start his surgery late. These are two common examples, but when a general practitioner gets into the habit of allowing himself plenty of time for reorganising his schedule more efficiently he will generally find that time is on his side. If he is genuinely overworked he should, for his own sake and for that of his patients, do something about it.

This study did not set out to evaluate the improvement in general mood after action taken as a result of self monitoring. Considerable anecdotal feedback, however, suggested that such a study would prove fruitful. The high rate of response to the questionnaire suggests that it would be fairly easy to carry out.

We suggest that the managerial skills that are required to tackle the problems indicated by this study could be given a more prominent role in the training of all doctors, not just general practitioners. The benefits could be enormous. After the course one of the participants wrote, "I found simply making the chart highlighted for me many of the reasons I get irritable in a day's work. I used to think it was just pressure, unreasonable patients and lack of time. I can now see that many frustrating problems are readily solvable and the results of artificial time barriers I have created."[9]

We thank all those doctors attending the New College course; Jean Cox, Marilyn Woolfson, and Christine Kinnersly for secretarial help; David Rogers and Anne Skinner, librarians, who helped with research; and Dr Tim Kidger and George South for their valuable help.

References

1 Cartwright A. *Patients and their doctors; a study of general practice*. London: Routledge and Kegan Paul, 1967:39-62.
2 Cartwright A, Anderson R. *General practice revisited*. London: Tavistock Publications, 1981:1-13.
3 Balint M. *The doctor, his patient and the illness*. Tunbridge Wells: Pitman Medical, 1968.
4 Porter AMD, Howie JGR, Levison A. Measurement of stress as it affects the work of the general practitioner. *Family Practice* 1985;2:136-46.
5 Beck AT, Rush A, Shaw B, Emery G. *Cognitive therapy of depression*. Chichester: John Wiley, 1980.
6 Mechanic D. *Politics, medicine and social science*. New York: Wiley-Interscience, 1974.
7 Melville A. Job satisfaction in general practice: implications for prescribing. *Soc Sci Med* 1980;**14A**:495-9.
8 Wilkin D, Metcalfe D. List size and patient contact in general medical practice. *Br Med J* 1984;**289**:1501-5.
9 Haslam D. Positive thinking. *General Practitioner* 1985;28 June:40.

(Accepted 22 December 1986)

100 YEARS AGO

At the Herts Summer Assizes, August 3rd, a labourer was indicted before Mr. Justice Hawkins for setting fire to a certain stack of wheat straw. The act was admitted, but the plea of insanity was set up. Dr. Lipscombe, the medical officer of St. Alban's Prison, stated that for six weeks he had frequently examined him. He had arrived at the conclusion that the prisoner was an imbecile. He could not talk coherently, there was no sequence in his ideas, and his gait was unsteady. He did not know what he was about. He suspected that the man had been weak-minded all his life. The prisoner had said in reply to a question as to his age, that it was 3 years. A veterinary surgeon, Mr. Herbert Matthews, of Stevenage, said he had known the prisoner for nearly thirty years, and during the whole of that time he was looked upon as a sort of imbecile, and went by the name of "Silly Billy." The prisoner's brother said that he (the witness) managed the little property he had because he could not manage his own affairs. He believed he knew the difference between right and wrong. Mr. Justice Hawkins said, as in duty bound, that a man could not be exonerated unless he was absolutely incapable of knowing right from wrong. The jury found him guilty, but strongly recommended him to mercy. The prisoner was sentenced to imprisonment for twelve calendar months with hard labour. This case is another instance of the injustice of the legal test of responsibility, which the judge simply applied in all its naked absurdity, the result being the punishment of an imbecile with hard labour. Such a sentence may have its use in opening people's eyes to the unsatisfactory state of the law, but that the unfortunate man should have to suffer as a victim is rather hard lines. We should have thought that this was pre-eminently a case in which the "Crown referee, in cases of supposed insanity," would have been consulted, but there is no reason to suppose this has been done. (*British Medical Journal* 1887;ii:477.)