

The effect of 1-year rotations on stress in preregistration house officers

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A comparison of stress levels in preregistration house officers demonstrated lower levels in those completing 1-year rotations compared with those completing 6-month posts in two different hospitals. One-year rotations provide a more stable environment, allow new doctors to become familiar with the workings of an organization from several viewpoints and permit a better sense of working within a multiprofessional team than the traditional arrangements.

INTRODUCTION

The first year as a doctor is associated with high levels of stress and depression (Reuben, 1985). A study of UK preregistration house officers demonstrated above threshold levels of emotional distress in 36% (Birch et al, 1998) compared with 28% found in preregistration house officers in 1987 (Firth-Cozens, 1987) and 18% in the general employed population found in the last British Household Panel Survey (Wall et al, 1997).

Many of the factors that make the first postgraduate medical year stressful are likely to be the result of organizational arrangements in hospitals (Moss and Miller, 1998). Organizational interventions have been shown to reduce stress for health staff as a whole, including trainee doctors (Moss and Paice, 1999). An organizational factor which may contribute to stress in the preregistration year is that it usually consists of 6-month posts (medicine and surgery) in two different hospitals. This arrangement limits the trainees' opportunity to become familiar with and influence the working environment (Dowling and Barrett, 1998). If they could spend a year in one place, perhaps they

might feel and be treated more like valued staff and be better able to mobilize the support they need to fulfil their new responsibilities.

Following recommendations by the General Medical Council (GMC, 1998), funding was made available by the NHS Executive to develop postings in general practice as part of 1-year rotations. This provided the stimulus for postgraduate deans to set up rotations including other non-traditional specialties.

In North Thames, 19 innovative preregistration rotations were set up. These included 4 months each of medicine and surgery and 4 months of general practice, child health, women's health, anaesthetics or intensive care. They were based in a single hospital and its community, offering a year in one place. Great care was taken in developing the new placements.

The consultant or GP trainers had several discussions with the associate dean to agree the educational programme, tasks and level of supervision that would be required. It was ensured that they offered protected sleep time, structured experience, graduated responsibility and good supervision with regular feedback.

To evaluate the impact of these new rotations we commissioned an independent researcher (J F-C) to compare stress levels, towards the beginning and at the end of the year, in trainees undertaking these rotations and those in traditional posts. A small pilot study suggested that stress levels were lower in those completing the rotations than in previously stud-

ied house officers. We therefore decided to carry out a prospective controlled study.

PARTICIPANTS AND METHOD

The study was carried out in 13 general hospitals in North Thames. There were 57 preregistration house officers in rotations and 230 in traditional posts, who changed after 6 months. Questionnaires were delivered to the house officers via the postgraduate centre managers.

The 12-item General Health Questionnaire (GHQ) (Goldberg, 1972) was used which allows Likert scoring (0-3; maximum score of 36) and GHQ scoring (0-1; maximum score of 12), using a threshold of >3 to indicate potential psychiatric caseness. Questionnaires were sent out at 1 week, 4 months and 11 months. At 1 week 193 out of 287 questionnaires were returned (67% response rate) and at both 4 and 11 months 143 out of 287 (50%). At 1 week 42 (74%) of respondents were in the new rotations, at 4 months 32 (56%) and at 11 months 29 (51%). At all three stages the gender distribution was 46% male and 54% female.

RESULTS

There were no significant differences in stress levels between those on 12-month rotations and traditional posts in week one (means of 11.40 and 11.67 respectively) or at 4 months (means of 10.9 and 11.55 respectively). However, by the end of the year the rotation group was significantly less stressed (mean=9.55; standard devia-

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tion (sd)=5.72) than those completing their second 6-month post (mean=11.24, sd=5.57; U=1324.5, $P<0.05$). At this time only 10.3% ($n=3$) on rotations scored above the caseness threshold compared to 25.4% ($n=29$) of those in the 6-month posts.

There were no significant gender differences throughout the study with the exception of stress levels in the first rotation in November. Female house officers scored significantly higher on the GHQ than their male counterparts (12.26 and 10.66 respectively, $t=-2.126$, degrees of freedom=140, $P<0.05$) at that point.

DISCUSSION

The study was small and the response rate, as so often with studies of junior doctors, somewhat disappointing. However, these results confirm the pilot study of the previous year (J Firth-Cozens et al, unpublished data,

1999) and suggest that reorganizing the preregistration year may make the experience less stressful. The groups were evenly matched in terms of psychological state on entering the post-graduate year, indicating that there was no reason to believe that the new rotations had been selected by a particularly robust group of young doctors.

There were two aspects to the intervention — geographical stability and a non-traditional placement — and it was not clear which was the more important. The lower stress levels in those completing the new rotations may have related to their spending a year in one place, where they got to know the staff and could develop a social life, both inside and outside the workplace.

The tailored educational experience and time for reflection offered by the non-traditional placement, or the greater interest shown by trainers who

had not previously trained a house officer, may have played a part. Or maybe 4 months away from the heavy demands of medical and surgical posts was enough make a difficult year bearable. Whatever the explanation, these findings suggest that stress is not an inevitable feature of the preregistration year, and that organizational interventions can reduce it. Whether the benefit will be sustained should be the subject of further study. **HM**

Conflict of interest: none.

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KEY POINTS

- A pilot scheme compared stress levels in preregistration house officers who were in traditional 6-month posts with those in an innovative 3x4-monthly rotations.
- The groups were equally stressed at the start and after the first 4 months.
- By the end of the year, stress levels were significantly lower in the rotation group.
- The possible explanations include geographical stability, opportunity to develop relationships with colleagues, better understanding of the hospital and its workings, better educational supervision, reduced work intensity.
- Further studies are needed to see if the benefits of the new rotations are sustained.