

# Stress, personal and educational problems in vocational training

## A prospective cohort study

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**INTRODUCTION** Australian general practitioners suffer from high levels of stress, but the incidence among GP registrars during vocational training is less well described.

**METHODS** All 400 new Australian GP registrars in 1999 were invited to participate in the study. Consenting registrars completed an annual questionnaire and initial psychometric scales. Medical educators also provided information annually about known registrar problems.

**RESULTS** Participating numbers were 213 (year 1), 226 (year 2), 203 (year 3), and 98 (year 4). More than half reported at least one problem in years 2, 3 and 4. Those reporting problems scored significantly higher on initial psychometric scales, and reported lower enthusiasm for training ( $p < 0.01$ ). Problems reported included unsatisfactory work conditions, administrative concerns and issues with rural terms. These problems were often not detected by their training providers. Recommendations are presented to minimise the frequency and impact of training problems.

**CONCLUSION** Registrars in vocational training for Australian general practice commonly experience problems. Structural changes in the provision of general practice training provide an opportune time to consider ways to ameliorate some of these problems.

Doctors, including Australian general practitioners, have poor psychological health.<sup>1,2</sup> Stress affecting GPs has physical and psychological sequelae and impacts on the entire family unit.<sup>3</sup> General practitioners are also often reluctant to seek appropriate professional assistance.<sup>4</sup> Sources of stress for GP registrars in the United Kingdom include conflicts between home and work, studying for the qualifying examination, unrealistic expectations from patients, and disruption to social life.<sup>5</sup> Psychological problems among

registrars enrolled in the Royal Australian College of General Practitioners Training Program, undoubtedly present, have not been studied previously. We aimed to assess problems as perceived by registrars, and determine any predictors of developing problems.

### Methods

All 400 registrars commencing training in 1999 were invited to participate. Registrars could opt out of the study at any stage. A stringent confidentiality pro-

cedure was developed in consultation with the national registrar representative body. All participants were initially asked to complete the Depression Anxiety Stress Scales,<sup>6</sup> and the General Health Questionnaire 30 item form<sup>7</sup> to assess symptoms of stress, anxiety or depression. They are relatively quick, easy to complete, and well validated.<sup>8,9</sup>

Consenting registrars provided demographic details, enthusiasm for general practice training, satisfaction with training location, family circumstances, and per-

ceived level of support from family, friends and professional colleagues (using five-point Likert-type scales).

Every year registrars were asked about any problems during the previous 12 months of training, actions taken, and feelings about what might help. They were also given advice on how to access confidential assistance for personal or training problems.

Medical educators in each state were asked to provide information about registrars in the 1999 cohort, including their training terms, perceptions of their enthusiasm, participation and academic progress, and any personal or training problems.

We coded qualitative information by themes. Two researchers independently coded all the year 1 responses and achieved 77% agreement. Data were entered into SPSS version 10<sup>00</sup> and were analysed using chi-square tests, confidence intervals, and unpaired Wilcoxon rank sum tests as appropriate.<sup>11</sup>

We established a process to manage registrars who reported potentially serious problems, or scored highly on psychometric scales. An acknowledgment letter was sent with advice to consider seeking help where appropriate. Had we identified a potentially serious risk, we were prepared to directly refer a registrar for confidential expert advice. This was not necessary. Ethics approval was obtained.

## Results

Registrar participation in year 1 (1999) was 213/395 (54%), year 2, 226/353 (64%), year 3, 203/234 (87%), and in year 4, 98/115 (85%). Falling denominators resulted from the exclusion of registrars who opted out of the study or did not respond to six mailings, and to many registrars completing training (year 4). The equivalent responses from medical educators were 371/400 (93%) for year 1, 300/335 (90%) year 2, 293/323 (91%) year 3, and 103/117 (88%) for year 4 (2002). Participating registrars were

**Table 1. Proportions of registrars and medical educators reporting problems**

	n [%] (95% confidence interval)			
	Year 1	Year 2	Year 3	Year 4
Registrars reporting problems	74/212 [35] (29, 41)	125/217 [58] (51, 64)	100/197 [51] (44, 58)	54/98 [55] (45, 65)
Training program reporting problems	15/191 [8] (4, 12)	39/185 [21] (15, 27)	54/178 [30] (24, 37)	10/85 [12] (5, 19)

**Table 2. Year 1 participants reporting problems compared with year 1 participants not reporting problems**

Variable	Registrars reporting problems n=74	Registrars not reporting a problem n=134	p-value (Wilcoxon test)
Age	29.6	29.1	NS
Depression Anxiety Stress Scales (DASS) – Depression subscale	6.4	3.7	0.002
DASS – Anxiety subscale	4.1	2.4	0.004
DASS – Stress subscale	11.4	8.1	0.005
General Health Questionnaire (GHQ)	6.8	2.8	<0.0005
Chronicity scoring for GHQ	13.0	8.7	<0.0005
Ordinal categories	Percentage of registrars reporting problems	Percentage of registrars not reporting a problem	p-value chi-square test for trend
High enthusiasm	41%	46%	0.007
First location preference	81%	88%	NS
High spouse problems	21%	6%	0.00001
High children problems	11%	4%	0.043
Female gender	69%	63%	NS

slightly younger and more likely to be women than nonparticipants. There was no significant difference in problems reported by training programs in year 1 between participating and nonparticipating registrars, suggesting that there may not be a response bias on the grounds of problems experienced.

The proportion of registrars who

reported a problem rose after year 1. Registrars reported more problems than their medical educators (Table 1). Registrars were more likely to report a problem if they had abnormal scores on any psychometric subscale, lower enthusiasm for training, or were having trouble balancing training requirements with the needs of a partner or children (Table 2).

**Table 3. Problems reported by year compared with by grouping category**

Grouping category Problems related to:	% (95% confidence interval)			
	Year 1 n=162	Year 2 n=273	Year 3 n=254	Year 4 n=144
Training program *	52 (44, 60)	70 (65, 76)**	63 (57, 69)	59 (51, 67)
Other professional	6 (3, 10)	2 (0.2, 3)	1 (-0.1, 3)	4 (0.5, 7)
Personal and family	22 (16, 29)	15 (11, 19)	16 (12, 21)	15 (9, 21)
Health issues	15 (10, 21)	11 (8, 15)	18 (13, 22)	18 (12, 24)
Others	4 (1, 7)	2 (0.1, 3)	2 (0.5, 4)	4 (1, 8)

\* includes work conditions, administrative issues, rural terms

\*\* = significant difference at p=0.05 level between years 1 and 2

There was no significant association between age, gender or perceived support and reporting a problem. There was a significant inverse association between the registrar's self reported enthusiasm for general practice training and the likelihood of reporting a problem (except in year 4).

Most reported problems related to the organisation of training such as workplace conditions, administrative problems and rural terms (Table 3). More than 100 actions taken were described in each year of the study, most often involving a request for help from the training program, liaison with training supervisors, or changing terms. Suggestions for minimising problems included organisational change with increased flexibility, changes to their own circumstances, and practising self help strategies.

We analysed training program questionnaires when we could match them with registrar data. Age, poor academic progress, low enthusiasm for training, and graduating in 1990 or earlier were significantly associated with training program reports of problems. Gender and obtaining a degree overseas were not.

## Discussion

The proportion of registrars reporting a problem was high, peaking in year 2 when

registrars had most contact with the training program, and the additional pressure of meeting their rural commitment with its heavy workload and family disruption. A comparison group was impractical for this descriptive study, however, it is possible that trainees in other disciplines, especially those requiring relocations, may experience similar levels of problems.

The association of psychological distress with reporting problems is difficult to interpret in terms of causal direction. Nevertheless, psychometric screening may be a useful means of detecting registrars at risk in time for intervention, and warrants further work.

Medical educators reported fewer problems than registrars, although this might relate to confidentiality concerns, or suboptimal training supervision. The nature of problems reported by registrars was conventional.<sup>5</sup> However, personal stress symptoms and family problems were frequently attributed by registrars to training stressors. We found equal prevalence of problems in men and women, contrary to previous research.<sup>12</sup>

Literature studying doctors, their support structures and work problems often highlights lack of control.<sup>13,14</sup> Registrars clearly have a reduction in autonomy during training, and this lack of choice emerges as an important issue,

particularly in terms of the impact on other family members.

The current state of flux of general practice training in Australia is an opportunity to minimise the frequency and impact of training related stressors.

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Conflict of interest: Sarah Larkins was a GP registrar for the duration of this project.

## Implications of this study for general practice

- Over half of registrars experience personal or educational problems during their period of vocational training.
- Problems are significantly associated with initial psychological vulnerability, low enthusiasm for training, and training causing problems for a partner or children.
- Training providers may be unaware of these problems.
- Improved communication, clear guidelines and maximising training program flexibility may help minimise problems.

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