

A survey of job satisfaction, sources of stress and psychological symptoms among general practitioners in Leeds

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SUMMARY

Background. The past seven years have seen rapid changes in general practice in the United Kingdom (UK), commencing with the 1990 contract. During the same period, concern about the health and morale of general practitioners (GPs) has increased and a recruitment crisis has developed. **Aim.** To determine levels of psychological symptoms, job satisfaction, and subjective ill health in GPs and their relationship to practice characteristics, and to compare levels of job satisfaction since the introduction of the 1990 GP contract with those found before 1990.

Method. Postal questionnaire survey of all GP principals on the Leeds Health Authority list. The main outcome measures included quantitative measures of practice characteristics, job satisfaction, mental health (General Health Questionnaire), and general physical health. Qualitative statements about work conditions, job satisfaction, and mental health were collected.

Results. A total of 285/406 GPs (70%) returned the questionnaires. One hundred and forty-eight (52%) scored 3 or more on the General Health Questionnaire (GHQ-12), which indicates a high level of psychological symptoms. One hundred and sixty GPs (56%) felt that work had affected their recent physical health. Significant associations were found between GHQ-12 scores, total job satisfaction scores, and GPs' perceptions that work had affected their physical health. Problems with physical and mental health were associated with several aspects of workload, including list size, number of sessions worked per week, amount of time spent on call, and use of deputizing services. In the qualitative part of the survey, GPs reported overwork and excessive hours, paperwork and administration, recent National Health Service (NHS) changes, and the 1990 GP contract as the most stressful aspects of their work.

Conclusions. Fifty-two per cent of GPs in Leeds who responded showed high levels of psychological symptoms. Job satisfaction was lower than in a national survey conducted in 1987, and GPs expressed the least satisfaction with their hours, recognition for their work, and rates of pay. Nearly 60% felt that their physical health had been affected by their work. These results point to a need to improve working conditions in primary care and for further research to determine the effect of any such changes.

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Introduction

REPORTS of low morale¹ and difficulties of recruitment into general practice² have produced an active debate about sources of stress and low job satisfaction experienced by general practitioners (GPs).

There have been many changes in the workload and conditions of service of GPs in recent years. They have accompanied the introduction of the 1990 contract³ and the fundholding initiative, as well as the broader National Health Service (NHS) changes and a market-style health system. Changes have included greater dependence on task-oriented payments, increased administration, greater pressures from patients for services (especially out of hours), and increased risk of complaint or litigation.

Although GPs have previously been found to have high levels of job satisfaction and relatively good mental health,⁴ more recent studies suggest that this has changed.⁵⁻⁷ However, previous studies have assessed global measures of GPs' job satisfaction and mental health,^{4,7} and few studies have examined inter-relatedness, i.e. the relationship between these variables and their association with possible sources of stress.

This study sought to identify the demographic and practice characteristics that are associated with job satisfaction and physical and mental health in GPs.

Methods

All full- or part-time principals in general practice on the Leeds Health Authority list in 1993 were surveyed. General practitioners on retainer schemes or in locum posts were excluded. A single postal reminder was sent to non-responders.

A self-report questionnaire was designed and included questions on age, sex, years in practice, GP list size, fundholding status, number of partners in the practice, number of sessions (defined as a half-day) worked per week, and time routinely allowed for appointments. Out-of-hours commitment and use of deputizing services both before and after midnight were estimated for an average month.

Job satisfaction was measured using a self-report questionnaire devised by Warr *et al.*⁸ This was used previously in a similar survey by Cooper *et al.*⁴ Five-point Likert scales were used to rate dimensions of job satisfaction. These were also used to rate subjects' physical and psychological health. Subjects indicated by a simple yes/no response whether they felt that their work had recently affected their physical health.

Psychological symptoms were measured using the GHQ-12.⁹ In addition to using total GHQ scores as a measure of distress, GHQ scores were used to divide responders into cases and non-cases. We used the cut-off score 2/3 to define probable cases of psychiatric morbidity. Validation studies in the general population have shown this to yield the highest sensitivity and specificity.¹⁰

In addition to the structured part of the questionnaire, GPs

were invited to give further comment. This identified sources of stress additional to those found by questionnaire.

We used the Statistical Package for Social Sciences for data analysis, *t*-tests (parametric data), Mann-Whitney tests, and the Spearman correlation coefficient (non-parametric data).

Results

There were 406 GP principals in 132 practices within the jurisdiction of Leeds Health Authority at the time of this survey. Two hundred and sixty-eight (66%) GPs were men and 138 (34%) were women. One hundred and fifteen (40%) of the GPs who responded were in fundholding practices.

Two hundred and eighty-five GPs (70%) completed and returned the questionnaire. One hundred and seventy-five (61%) of the responders were male. The mean age of responders was 42.2 years (SD = 9.21 years, range = 28–68 years). The mean number of years in practice was 12.8 (SD = 9.0, range = 0.5–41 years).

The mean number of partners in a practice was 4.1 (SD = 1.95, range = 1–10). The mean total practice list size was 8398 (SD = 4380, range = 600–23 500). The mean number of patients per partner was 2012 (SD = 370, range = 600–3300).

Responders worked a mean number of 9.1 sessions per week (SD = 6.23, range = 3–10). The mean duration of routine appointments was 7.1 minutes (SD = 1.68, range = 5.0–10.0).

The mean number of nights spent on call after midnight was 4.3 nights per month (SD = 3.59, range = 0–31 nights). The mean number of nights on which deputizing services were used before midnight was 8.6 nights per month (SD = 11.4, range = 0–31 nights), and those used after midnight was 10.5 nights per month (SD = 12, range = 0–31).

Table 1 shows mean scores for the nine items in the job satisfaction scale and the total score for all items. The results from this study (1994) are compared with those from two previous studies conducted in 1987 and 1990, which used the same measure of job satisfaction. Both used postal questionnaires on large random samples of GPs selected from a variety of rural and urban areas. They are likely to be comparable with this study, which surveyed all GPs in Leeds from urban and more rural practices.

When the present study was compared with the 1987 study, significantly lower satisfaction scores were found for hours of work, recognition for good work, rate of pay, freedom to choose methods of working, and amount of responsibility given. There were no significant increases in satisfaction scores on any of the scales. Compared with the 1990 study, satisfaction scores increased significantly for four of the scales (recognition for good work, freedom to choose methods of working, physical working conditions, and job variety), whereas scores fell for three scales (hours, pay, and opportunity to use abilities).

Job satisfaction showed no association with practice characteristics such as number of years in practice, GP personal list size, number of sessions per week, duration of routine appointments, number of nights on call per month, or use of deputizing services before or after midnight. No association was found between job satisfaction and fundholding status.

Job satisfaction showed a significant association with GHQ-12 scores ($r_s = 0.36$, $n = 275$, $P < 0.0001$). The relationships between individual components of job satisfaction and GHQ-12 scores are shown in Table 2. Job satisfaction was strongly associated with GPs' perceptions that their work had recently affected their physical health (Table 3).

Mean total job satisfaction scores were significantly higher among women (mean = 44.2, SD = 8.5) than among men

(mean = 41.3, SD = 9.4; $t = -2.52$, $P = 0.01$, difference in means = 2.9, 95% confidence interval -5.0 to -0.62), although there was no difference in the GHQ-12 scores of men and women (Mann-Whitney test, $u = 887.5$, $P = 0.56$). Women were on call significantly fewer nights per month (Mann-Whitney test, $u = 5370.5$, $P < 0.0001$) and used deputizing services more often (Mann-Whitney test, $u = 6160.5$, $P = 0.005$). Women worked fewer daytime sessions (mean = 7.1, SD = 2.0) than men (mean = 9.1, SD = 1.3; Mann-Whitney test, $u = 5335.0$, $P < 0.0001$).

There was no association between GHQ-12 scores and any of the variables, including number of years in practice, duration of routine appointments, sex, or fundholding status.

Associations were found between high GHQ-12 scores and GP personal list size ($r_s = -0.12$, $n = 277$, $P = 0.04$), nights on call per month ($r_s = 0.14$, $n = 268$, $P = 0.02$), number of sessions worked per week ($r_s = 0.13$, $n = 272$, $P = 0.03$) and use of deputizing services before midnight ($r_s = -0.14$, $n = 251$, $P = 0.03$).

There was a strong association between GHQ-12 scores and the perception that work had affected GPs' physical health (Mann-Whitney test, $u = 4815.5$, $P < 0.0001$). One hundred and sixty (56%) GPs who completed this subsection felt that work had recently affected their physical health. Those who felt that their work had affected their physical health spent more nights on call each month (Mann-Whitney test, $u = 6634.5$, $P = 0.0005$) and made less use of deputizing services before midnight (Mann-Whitney test, $u = 6509.5$, $P = 0.003$) than those who did not feel that their physical health had been affected. There was no association between time spent on call or the use of deputizing services and of job satisfaction.

There were 148 (52%) probable cases of psychiatric morbidity among the responders. Mean GHQ scores for the whole population were 3.86 (SD = 3.6, range = 0–12).

Summary of free text

Eighty-seven of the 285 subjects who responded included additional comments. Table 4 shows the topics covered in these comments. Major themes identified were overwork and excessive hours, paperwork and administration, excessive stress, government changes, and the 1990 contract.

Discussion

In this study, we used a well-established self-report questionnaire, the GHQ-12, to measure psychological symptoms in GPs. Fifty-two per cent of responders scored above the cut-off usually used to detect probable cases of psychiatric morbidity in general population surveys.⁹ This level is much higher than in the general population (20–30%)¹¹ and similar to that found in junior house officers (50%).¹² It is in contrast to findings of a similar survey undertaken a decade ago.⁴

We did not conduct a second-phase psychiatric interview and cannot conclude that all the probable 'cases' were suffering from a diagnosable psychiatric disorder. Nevertheless, our result suggests worrying levels of symptoms of distress among GPs. Similarly, job satisfaction was significantly lower than in 1987, before the introduction of the 1990 GP contract, in five of the nine dimensions measured while none had improved. There have been improvements in four of the scales since 1990, and, in a second survey carried out in 1990, satisfaction with hours, pay, and opportunity to use abilities were shown to have deteriorated further. Fifty-six per cent of GPs felt that their work had recently affected their physical health.

Women were more satisfied with their work than men, but no less stressed, as judged by GHQ scores. The finding of greater

Table 1. Mean scores on Warr *et al* job satisfaction scale in November 1987, August 1990, and December 1994.

Dimensions of job satisfaction	1987 ^a	1990 ^b	1994 ^c	Difference in means (95% CI) 1987 vs 1994	Difference in means (95% CI) 1990 vs 1994
	(n = 1768) Mean (SD)	(n = 917) Mean (SD)	(n = 285) Mean (SD)		
Hours of work	4.25 (1.57)	4.69 (2.23)	3.48 (1.79)	0.77 (0.45 to 1.09)	1.21 (0.91 to 1.51)
Recognition for good work	4.76 (1.18)	3.5 (2.06)	3.65 (1.60)	1.11 (0.98 to 1.23)	-0.51 (-0.45 to 0.15)
Rate of pay	4.77 (1.56)	5.28 (1.52)	4.15 (2.39)	0.62 (0.41 to 0.83)	1.13 (0.89 to 1.36)
Freedom to choose method of working	5.4 (1.26)	4.77(1.94)	4.86 (1.64)	0.54 (0.38 to 0.70)	-0.09 (-1.14 to -0.65)
Physical working conditions	5.11 (1.41)	4.44 (2.06)	5.05 (1.75)	0.06 (-0.13 to 0.25)	-0.61 (-0.87 to -0.34)
Opportunity to use abilities	5.04 (1.35)	5.44 (1.6)	5.21 (1.43)	-0.17 (-1.2 to 0.87)	0.23 (0.023 to 0.437)
Colleagues and fellow workers	5.24 (1.25)	5.31 (1.56)	5.33 (1.41)	-0.07 (-0.12 to 0.20)	-0.02 (-0.223 to 0.183)
Amount of variety in job	5.38 (1.20)	4.58 (2.02)	5.34 (1.51)	0.04 (-0.16 to 0.21)	-0.76 (-1.02 to -0.5)
Amount of responsibility given	5.68 (1.09)	4.8 (1.98)	5.42 (1.61)	0.26 (0.11 to 0.41)	-0.62 (-0.87 to -0.37)
Total score	45.63	42.31	42.42		

1 = low job satisfaction; 7 = high satisfaction. ^aFigures from 1987; Cooper *et al* (1989). ^bFigures from 1990; Sutherland and Cooper (1992). ^cFigures from 1994; present study. Results in bold are significantly different mean scores. If the difference in means is positive, scores have fallen since the first survey. If the difference in means is negative, scores have increased since the first survey.

Table 2. Relation between job satisfaction and General Health Questionnaire (GHQ-12) scores using Spearman correlation coefficient.

Dimensions of job satisfaction	Correlation with GHQ scores		
	Spearman correlation coefficient (r_s)	Number of subjects (n)	Significance (P value)
Hours of work	-0.33	280	<0.0001
Recognition for good work	-0.26	279	<0.0001
Rate of pay	-0.20	279	0.001
Freedom to choose own method of working	-0.28	280	<0.0001
Physical working conditions	-0.12	279	0.045
Opportunity to use abilities	-0.31	280	<0.0001
Colleagues and fellow workers	-0.21	279	0.001
Amount of variety in job	-0.21	280	<0.0001
Amount of responsibility given	-0.24	278	<0.0001
Total score	-0.36	275	<0.0001

job satisfaction might be explained by the fact that women, on average, work fewer hours, spend less time on call, and use deputizing services more often. Further research on gender differences is needed to throw light on sources of stress in general practice and how they affect men and women differently.

This paper shows that the combination of low job satisfaction, poor mental health, and poor subjective physical health is a common experience for many GPs. Why does it happen?

Those who perceived that work had recently affected their physical health worked more nights on call and used deputizing services less often. More time spent on call and low use of deputizing services were also associated with high GHQ scores.

However, neither factor was associated with job satisfaction. The recent political debate over out-of-hours work and the rapid development of doctors' co-operative and deputizing services underlines the importance of on-call responsibilities to GPs. However, other workload factors associated with psychological symptoms included list size and the number of sessions worked each week. This indicates that it is not only out-of-hours work that causes stress.

In contrast, factors such as age, number of years in practice, and duration of appointments were not associated with psychological symptoms, job satisfaction, or recent physical health. In this survey, overwork and excessive hours, paperwork

Table 3. Relation between job satisfaction and perceived recent effect of work on physical health.

Dimensions of job satisfaction	Perceived recent effect of work on physical health				t-test	P value	Difference in means (95% confidence interval)
	Yes		No				
	Number	Mean	Number	Mean			
Amount of responsibility given	160	5.25	118	5.6	-1.88	0.061	-0.37 (-0.75 to -0.017)
Freedom to choose own methods of working	160	4.59	120	5.17	-3.01	0.003	-0.587 (-0.97 to -0.20)
Amount of variety in work	160	5.16	120	5.55	-2.14	0.033	-0.39 (-0.75 to -0.03)
Colleagues and fellow workers	160	5.2	120	5.5	-1.77	0.078	-0.30 (-0.63 to -0.01)
Physical working conditions	160	4.76	120	5.42	-3.19	0.002	-0.66 (-1.07 to -0.25)
Opportunity to use abilities	160	4.92	120	5.6	-3.97	<0.001	-0.67 (-1.0 to -0.34)
Rate of pay	160	3.94	119	4.46	-1.81	0.071	-0.52 (-1.1 to 0.05)
Recognition for good work	159	3.40	120	4.0	-3.03	0.003	-0.58 (-1.0 to -0.20)
Hours of work	160	2.8	120	4.3	-7.71	<0.001	-1.45 (-1.9 to -1.1)
Total score	159	40.0	117	45.5	-5.06	<0.001	-5.4 (-7.6 to -3.3)

Table 4. The most frequent concerns raised by GPs about the effects of work on health.

Concerns	Number of times raised
Overwork/excessive hours	17
Paperwork/administration	15
Excessive stress	14
Government changes/new GP contract	12
Physical/mental illness	9
Positive statements about part-time work	9
On-call work	8
Worry over complaints	7
Personal/family worries	6
Concerns over personal safety at work	3
Poor recruitment	2

and administration, government changes, and the 1990 contract were the factors most commonly reported by GPs as causing problems.

Interestingly, it was found that fundholding status had no beneficial effect on job satisfaction or the physical or mental health of GPs.

Response rates of GPs to questionnaire surveys are falling.¹³ The good response rate in this study might be an indication of the level of concern felt by GPs. Non-responders were more likely to be male and to be in non-fundholding practices. Previous similar surveys have found non-responders to be male, older, and less healthy. It has been suggested that non-responders may be more unwell than responders.¹⁴ Any positive findings in our study might underestimate the situation in the whole GP population.

This study has identified low job satisfaction and significant problems in the physical and mental well-being of GPs. All have

direct consequences for the quality of service for patients.¹⁵ Our study supports other recent work¹⁴ in highlighting current difficulties in general practice, which is experiencing falling recruitment and a rise in early retirements.

Although greater awareness of the problems now being experienced has resulted in the setting up of helplines and counselling services for GPs, these are not a long-term solution. It is too early to say whether recent changes in conditions, including the option of opting out of 24-hour responsibility, changes in the way night visits are remunerated, and the widespread introduction of co-operatives, will have any effect on the problems documented in this and other recent reports.

We join those in both academic and service general practice who are calling for further changes to reduce stress levels and psychological morbidity in GPs. Ongoing research is essential to monitor any effects on the well-being of GPs.

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