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Gender differences in stress, satisfaction and mental wellbeing among general practitioners in England

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Abstract *This paper attempts to compare job stress, job satisfaction and mental wellbeing of male and female general practitioners (GPs) from a questionnaire study. Female GPs showed positive signs of mental wellbeing in contrast with a normative group. Conversely, male doctors showed significantly higher anxiety and depression scores than the norm. Although there was no significant difference between male and female GPs in the job satisfaction scale both genders were unhappy about their rate of pay, hours of work and amount of work they do. Multivariate analysis disclosed three job stressors that were predictive of high levels of job dissatisfaction for both male and female GPs; these were: time pressure/interruptions, working environment/communication, career and goal achievement. This finding suggests that specific stress management programmes for both male and female doctors need to be initiated and evaluated. There may be substantial benefit in providing a counselling service for male and female doctors who suffer psychological pressure from their work.*

Introduction

In recent years there has been a growing number of studies focused on the sources of stress and satisfaction among GPs (Appleton *et al.*, 1998; Howie *et al.*, 1989; Rout & Rout, 1993; 1994). The main sources of stress for GPs are: time pressure, interruptions, practice administration, dealing with problem patients and work/home conflict (Porter *et al.*, 1985; Rout & Rout, 1993; 1994). Studies that have investigated stress and job satisfaction have found inverse relationships between different work stressors and job satisfaction (Richardson & Burke, 1991). For example, a study revealed that four work stressors (i.e. demands of the job and patients' expectations, interruptions at home and work, practice administration and interference with family life) were predictive of job dissatisfaction and lack of mental wellbeing (Cooper *et al.*, 1989). The aim of many of these studies has been to identify occupational sources of stress and to indicate how job stress affects levels of job satisfaction.

There are few empirical studies that have focused on gender differences in job stress, job satisfaction and mental wellbeing among GPs. One study found that female GPs have greater job satisfaction than their male colleagues (Cooper *et al.*, 1989). Women GPs tend to be

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more satisfied with their hours of work, recognition for good work and freedom to choose their method of working than their male counterparts (Rout & Rout, 1994; Sutherland & Cooper, 1993); whereas male doctors found to be more satisfied with the organizational aspects of their work (Branthwaite & Ross, 1988). However, other studies have focused on job stress among female consultants and GPs (e.g. Swanson *et al.*, 1996). These have mainly focused on gender related issues, such as role strain, prejudice against women in the profession and lack of role models for support (Cartwright, 1987). Evidence suggests that male and female doctors carry out different roles within their job, e.g. 'psychological' versus the 'clinical' role (Branthwaite & Ross, 1988; Simpson & Grant, 1991). Chambers and Campbell (1996) compared male and female GPs' job satisfaction and professional commitments and found that female GPs derive more satisfaction from relations with patients than their male counterparts.

A number of studies of doctors in the USA found that due to professional socialization, male and female doctors have similar values and behaviour (Gross, 1992; Maheux *et al.*, 1988). On the other hand, it was found that sex-role socialization affected physicians' work lives and their experience of stress (Gross, 1992). Gross (1992) indicated that although male and female doctors felt pressured by the amount of time demanded by their profession, females had the additional pressure of family obligations.

Very little attention has been given to gender differences in the experiences of specific stressors, wellbeing and coping. However, there seem to be some individual differences among doctors in the response to occupational stressors and how they cope with the job. Schreiber (1987) found that both personality and stress factors are predictive of leaving residency training.

Given the relationship between type A behaviour and several health outcomes (Kasl & Cooper, 1987) and the extent to which type A behaviour has been used in occupational stress research as a measure of personality predisposition to stress, a measure of type A was included in the study.

A coping questionnaire was included because males and females may be socialized to cope with stressful situations in different ways. The socialization hypothesis states that males are socialized to deal with stress instrumentally, while females are socialized to express emotion and seek social support (Ptacek *et al.*, 1994).

The research reported here investigated levels of job stress, job satisfaction and mental wellbeing with respect to gender in a sample of male and female GPs in the north west region. Type A behaviour, smoking and drinking behaviour was also investigated.

Method

Sample

Anonymous and confidential questionnaires were distributed to a randomly selected sample of 900 GPs and other primary care professionals in the north west region through medical practices. The practices were asked to return the questionnaires in a prepaid envelope. We were unable to check any differences between responders and non-responders and to assess test-retest reliability of the job stress questionnaire. Anonymity, however, was considered essential to protect the identity of the GPs, to ensure honesty in responding and to obtain a reasonable response rate. A total of 587 (65.22%) questionnaires were returned. The response rate is comparable with other studies in GPs (Rout & Rout, 1994; 1996) and considered above average (Kasl & Cooper, 1987). Of the 587 questionnaires, 205 were GPs, practitioners, of which 130 (63.4%) were male and 75 (36.59%) were female. This pro-

portion of females is close to the percentage of all GPs in England and Wales in 1993 (i.e. 26% of unrestricted principals were women and 40.9% were restricted principals) (Wilson & Allen, 1994).

Measures

Demographic variables. The questionnaire included details of age, sex, marital status, practice type (group versus solo practice), full-time versus part-time work, practice location (rural, urban, semi-rural, etc.), number of years experience and country of qualification.

Job stress questionnaire. The job stress inventory was developed on the basis of indepth interviews with 42 GPs in 1987 and 49 GPs in 1992 (Rout *et al.*, 1996). The final questionnaire consisted of 42 items accompanied by a five-point Likert-type rating scale (1 = no stress, 5 = sources of extreme stress). This self-reporting instrument for measuring stress has strong content validity. Cronbach's alpha for this scale was $r = 0.94$.

Job satisfaction. Job satisfaction was measured using the Warr *et al.* (1979) job satisfaction scale. Each item is rated on a seven-point Likert-type rating scale (high score = high satisfaction). Test-retest reliability and validity data have been reported (Warr *et al.*, 1979). Cronbach's alpha for this scale was $r = 0.82$.

Mental wellbeing. Psychological wellbeing was measured with a shortened version of the Crown–Crisp experiential index (Crown & Crisp, 1979). Three of the most reliable sub-scales were used: free-floating anxiety, depression and somatic anxiety. Each of the sub-scales is composed of eight items (scored 0, 1 or 2), giving a total of 24. A low score is indicative of good mental health. Reliability and validity data for this measure are available (Crown & Crisp, 1979). Cronbach's alpha for this scale was $r = 0.82$.

Type A behaviour. An adapted version of the Bortner type A questionnaire was used as an indicator of stress-prone personality (Bortner, 1969). Type A pattern of behaviour has emerged as a good predictor of cardiovascular disease, and other stress-related illnesses (Rosenman *et al.*, 1975). Type A behaviour is recognizable in individuals who display aggressiveness, feelings of being under the challenge of responsibility, haste, extreme competitiveness, impatience, restlessness, hyperalertness, excessive drive and a distinct sense of time urgency. The Bortner type A questionnaire consists of 14 bipolar adjectival scales, with 11-point Likert-type rating continua scored from 1 to 11. This inventory yields scores ranging from 14 to 154; the higher scores being indicative of more type A behaviour. Reliability and validity data have been described (Bortner, 1969). Cronbach's alpha for this scale was $r = 0.71$.

Health behaviours. Two items measuring alcohol consumption and cigarette smoking were included in the questionnaire. For each, a six-point Likert-type item assessing the degree of daily consumption was included. Drinking habit categorization ranged from teetotal to regularly drinking more than six drinks a day. Concerning smoking, GPs were asked about their average daily consumption of cigarettes. This categorization ranged from none to 40 plus a day.

Ways of coping checklist. A shortened version of Folkman and Lazarus's (1980) ways of coping checklist, previously used by Rout *et al.* (1996), was included. In this checklist, respondents were asked to recall a recent stressful situation at work and to indicate on a scale of 0–3 whether they used each of 12 particular strategies (such as 'blamed myself', 'talked to someone about how I was feeling', etc.) to help them cope. Cronbach's alpha for this scale was $r = 0.72$.

Results

Characteristics of the sample

Table 1 shows the distribution of age, practice type, marital status and practice location of male and female GPs. A higher percentage of respondents were in the 25–34 age group for the female sample (29.3% versus 12.3%). For the male sample, a higher percentage of respondents were in the 35–64 age group. There were more overseas qualified male GPs than women (18.5% versus 13.3%). More women were working part-time (29.3% versus 4.6%). Marital status of both men and women were similar, i.e. most of the doctors were married (79.2% versus 77.3%). Most doctors were practising in groups irrespective of their gender and a high percentage of both male and female doctors were practising in urban areas. Experience in general practice reflects the younger age group of female doctors (i.e. 34.7% versus 17.7% had up to five years of experience in general practice).

Sources of stress

To identify whether there was any underlying pattern of responses to this questionnaire, factor analysis was carried out on the responses to the 42 stressors using principal component analysis. A varimax rotation was carried out to ensure that as far as possible each variable loaded on only one factor. The analysis revealed that six factors, covering 39 items, accounted for 59.4% of the variance. (This can be available from the author.) Factor scores were calculated for each individual GP for each factor and were later used in multiple regression analyses.

Table 2 shows the factor scores and *t*-test results for stress factors. There was no significant difference with regard to time pressure/interruptions, working environment/communication, career and goal achievement, demands of the job and others and home/work conflict. Only one factor was significant where women GPs felt more stressed due to problems with patients—for example, sexual harassment, language problems and racial prejudice from patients. The six most important stressors (out of all the items) for both male and female GPs were time pressure, increased demands from patients, having too much work to do, having to work unsociable hours, interruptions and dividing time between home and work. The results indicated a great deal of similarity in what both male and female GPs find stressful in general practice.

Job satisfaction

The results of sources of satisfaction with general practice show similarities between the two groups, with the most important sources of satisfaction being identical for male and female GPs (e.g. job security ($M = 5.64$ versus 5.68), fellow workers ($M = 4.84$ versus 4.75),

Table 1. *Characteristics of the sample population*

	All GPs ($n = 205$) n(%)	Male GPs ($n = 130$) n(%)	Female GPs ($n = 75$) n(%)
Age			
< 25	1 (0.5)	1 (0.8)	–
25–34	38 (18.5)	16 (12.3)	22 (29.3)
35–44	78 (38.0)	51 (39.2)	27 (36.0)
45–54	63 (30.7)	41 (31.5)	22 (29.3)
55–64	24 (11.7)	20 (15.4)	4 (5.3)
Over 65	1 (0.5)	1 (0.8)	–
Qualification			
UK	170 (82.9)	106 (81.5)	64 (85.3)
Elsewhere	34 (16.6)	24 (18.5)	10 (13.3)
Part-time versus full-time			
Part-time	28 (13.7)	6 (4.6)	22 (29.3)
Full-time	173 (84.4)	124 (95.4)	49 (65.3)
Martial Status			
Married	161 (78.5)	103 (79.2)	58 (77.3)
Remarried	10 (4.9)	6 (4.6)	4 (5.3)
Living together	3 (1.5)	1 (0.8)	2 (2.7)
Single	15 (7.3)	8 (6.2)	7 (9.3)
Divorced	9 (4.4)	8 (6.2)	1 (1.3)
Separated	2 (1.0)	1 (0.8)	1 (1.3)
Widowed	3 (1.5)	2 (1.5)	1 (1.3)
Practice type			
Solo	22 (10.7)	16 (12.3)	6 (8.0)
Group	177 (86.3)	112 (86.2)	65 (86.7)
Years spent			
Up to 5	49 (23.9)	23 (17.7)	26 (34.7)
6–10	28 (13.7)	19 (14.6)	9 (12.0)
11–15	44 (21.5)	30 (23.1)	14 (18.7)
16–20	35 (17.1)	18 (13.8)	17 (22.7)
21–25	21 (10.2)	15 (11.5)	6 (8.0)
26–30	17 (8.3)	15 (11.5)	2 (2.7)
Over 30	10 (4.9)	9 (6.9)	1 (1.3)
Practice location			
Rural	2 (1.0)	2 (1.5)	–
Urban	128 (62.4)	83 (63.8)	45 (60.0)
Semi-rural	31 (15.1)	19 (14.6)	12 (16.0)
Inner city	26 (12.7)	15 (11.5)	11 (14.7)
Outer city	16 (7.8)	10 (7.7)	6 (8.0)

Note: Number of cases vary due to missing values.

physical working conditions (M = 4.76 versus 4.48), way practice is managed (M = 4.74 versus 4.73), attention paid to suggestions made by respondents (M = 4.56 versus 4.51) respectively). The least important sources of satisfaction were hours of work (M = 2.87 versus 3.21), rate of pay (M = 3.05 versus 3.49) and amount of work given (M = 3.23 versus 3.57). Overall job satisfaction was somewhat above the mid-point of the scale for both male and female GPs. The differences among male and female GPs on job satisfaction variables were investigated through a series of *t*-tests. No significant difference was found for these variables.

Table 2. *Mean (SD) on stress factor scores for men and women GPs*

Dimension	Women GPs ($n = 75$) Mean (SD)	Men GPs ($n = 130$) Mean (SD)	t	95% CI
Time pressure/interruptions	−0.006 (.97)	0.003 (1.02)	0.06	−0.283,0.301
Working environment/communication	0.134 (1.11)	0.076 (0.93)	1.43	−0.501,0.079
Problems with patients	−0.22 (.85)	0.13 (1.06)	2.38	0.060,0.635
Career and goal achievement	−0.07 (1.04)	0.04 (.98)	0.72	−0.186,0.387
Demands of the job and others	−0.03 (1.01)	0.02 (.99)	0.30	−0.247,0.336
Home/work conflict	−0.06 (.97)	0.03 (1.02)	0.58	0.205,0.378

Predictors of job satisfaction

Stepwise multiple regression analysis was calculated, with job satisfaction as the dependent variable against demographic factors, type A, and job stressors as the independent variable. The separate regression yielded the same three job stressors as significant predictors of high level of job dissatisfaction for both male and female GPs. Table 3 shows that time pressure/interruptions—for example, time pressure, working unsocial hours, keeping up with changes, interruptions and demands from patients; working environment/communication—for example, lack of communication with staff and colleagues, communication with patients, conflict at work, staff problems, lack of support at work, and no appreciation by people at work; career and goal achievement—for example, career development, achieving goal and facors not under control—together contributed 46% of the variance for male and 47% for female GPs.

Mental wellbeing

Table 4 compares the mental wellbeing scores from the present study with those of the 1993 study and the normative population (Crown & Crisp, 1979). Male GPs had significantly higher scores on the free-floating anxiety, somatic anxiety and depression scales in 1997 than in 1993. Female GPs had higher score on the somatic anxiety scale in 1997 than in 1993. There was no significant difference between 1997 and 1993 on the free-floating anxiety and depression scales for female GPs. Male GPs exhibited higher levels of free-floating anxiety

Table 3. *Multiple regression analysis of sources of stress, demographics and type A behaviour on overall job satisfaction for female and male GPs*

Job satisfaction variables	β	SE	R^2	Multiple R
Female				
Time pressure/interruption	−5.26	1.21	0.22	0.46
Career and goal achievement	−5.45	1.46	0.38	0.61
Working environment communication	−4.65	1.34	0.47	0.69
$F = 18.69$	df = 3,61	$p = 0.0001$		
Male				
Time pressure/interruption	−5.64	0.95	0.21	0.46
Working environment/communication	−5.24	0.92	0.37	0.61
Career and goal achievement	−4.29	1.05	0.46	0.68
$F = 28.67$	df = 3,100	$p = 0.0001$		

Table 4. *Mental wellbeing (CCEI) sub-scale scores for male and female GPs and normative comparison (M and SD; high score = poor mental wellbeing)*

	GPs 1997			Normative data				GPs 1993			
	N	Mean	(SD)	*N*	Mean	(SD)	t[a]	*N*	Mean	(SD)	*t*[b]
Free-floating anxiety											
Males	130	5.40	(3.67)	340	2.80	(2.80)	7.31**	260	3.93	(3.49)	9.77**
Females	75	5.48	(3.37)	415	5.40	(3.50)	0.19	117	5.45	(3.53)	0.17
Somatic anxiety											
Males	130	3.69	(2.78)	340	4.30	(3.00)	2.08*	260	2.71	(2.56)	11.58**
Females	75	3.74	(2.72)	415	5.70	(3.30)	5.55**	117	3.14	(2.33)	4.13**
Depression											
Males	130	4.02	(2.74)	340	3.20	(2.30)	11.19**	260	3.46	(2.91)	6.20**
Females	75	3.91	(2.48)	415	4.40	(2.50)	5.05**	117	4.20	(2.85)	1.92

Note: [a]Comparison of GPs' scores in 1997 and normative population.
[b]Comparison of GPs' scores in 1997 and 1993. *$p < 0.05$. **$p < 0.01$.

and depression and lower levels of somatic anxiety than the normative population. Scores for female GPs on somatic anxiety and depression were lower than the norm. There was no significant difference on free-floating anxiety and depression between 1997 and the normative population for female GPs.

Coping strategies, type A, drinking and smoking behaviour

Factor analysis was carried out on the coping questionnaire but no clear factors emerged. We carried out *t*-tests on these items and found that both male and female GPs used similar coping strategies. However, women prefer to talk to someone about their feelings more than men ($p < 0.001$). Men avoided being with people more than women ($p < 0.05$). Another significant variable was 'let my feelings out in some way' which women used more than men ($p < 0.01$). There was no significant difference between men and women on total type A score, drinking and smoking behaviour.

Discussion

The results of this study showed some differences between male and female GPs in terms of job stress, mental wellbeing and coping. However, there are more similarities between male and female GPs in the overall findings for job stress, job satisfaction, type A behaviour, drinking and smoking behaviour than differences. Some caution must be used in interpreting the findings as the sample size in this study was small and limited to the north west region. The analysis of gender differences were mainly based on means and the range of variation was limited. Despite these shortcomings, the following explanations are given about the findings from the present study.

In general, both male and female GPs in this study were moderately satisfied with their job, i.e. their job security, their fellow workers, the physical working condition and the attention paid to suggestions made by them. On the other hand, they were moderately dissatisfied with the hours of work, rate of pay and the amount of work they do. Both male and female GPs obtain most satisfaction from inherent characteristics of the job, while putting up with poor pay, hours of work and amount of work. Multivariate analysis disclosed three job stressors that were predictive of high levels of job dissatisfaction for both male and

female GPs; these were: time pressure/interruptions, working environment/communication and career/goal achievement.

There were no significant differences between the sexes on most stressors. This supports the findings of Notman *et al.* (1984) that there was no difference between the genders on amount of stress and numbers of perceived stressors in medical students from Harvard and Tufts. However, female GPs found it more stressful to deal with certain problems with patients, for example, racial prejudice from patients, language problems and sexual harassment.

Both male and female GPs found the 'time pressures' of medical practice to be stressful. The demands and expectations put on doctors by patients seem to create pressures that are experienced as stressful by both male and female doctors. This replicates the findings from other studies (Richardson & Burke, 1991; Rout & Rout, 1993; 1994). Time pressure may be a reason for patients' reporting that GPs do not listen and explain to them properly (Myerson, 1991).

The study reveals that male GPs exhibit a poorer level of mental health, in terms of anxiety and depression, than a British male population. Female GPs, on the other hand, reported remarkable mental wellbeing, mental health scores being significantly below the normative population. There was no significant difference between the female GPs and the normative population on the free-floating anxiety scale. In addition, our results show an increase in free-floating anxiety, depression and somatic anxiety in the present study compared to 1993 for male GPs. Female GPs had higher scores on somatic anxiety in the present study than in 1993. The findings for mental health are of some concern for some GPs. Other studies have also found that GPs reported depression and anxiety frequently as problem areas (Chambers & Belcher, 1993).

There has been little work on the effects of this drop in mental health (especially for male GPs) in relation to patient care and its ultimate consequences on doctors. In one study, Myerson (1990) found that 75% of GPs remained at work when they felt ill or exhausted. Doctors are often unwilling to admit their illness and reluctant to accept advice for their psychotic illness and depression (A'Brook, 1990). It is likely that many cases of depression may be masked by drug and alcohol dependence.

The mental wellbeing of the female sample in this study was remarkable. This may reflect the fact that women GPs are more likely to work part-time than their male colleagues (29.3% versus 4.3% in our sample). Our results contradict previous researchers' findings that both in the USA and in industrial European countries women are more likely to be diagnosed as depressed (Cartwright, 1987). However, the issue of what constitutes an adequate comparison group for female doctors could be raised. On the other hand, the results of the present study are consistent with some other studies. For example, in a sample of Canadian women doctors, Brown (1992) found that women doctors had lower depression scores than other populations and their self-esteem was similar to that of other populations. Another recent study revealed that working mothers were less depressed than non-working mothers (Rout *et al.*, 1997). This shows that the effects of employment on women's mental health are positive. The findings of our study substantiate the argument of Bolger *et al.* (1990) that, 'alternate resources provided by multiple roles outweigh the stresses and help dampen their emotional effects'.

There is a need to examine the methods of coping, in detail, used by male and female GPs. Myerson (1992) described avoidance and evasion techniques of coping which are detrimental to both male and female doctors. Our sample of male GPs used avoidance coping (i.e. avoided being with people) more than female GPs. This is an area worthy of further investigation, as avoidance is detrimental to the doctor and the patient. Female GPs, on the

other hand, talked to someone about their problems and opened up about these. Other studies found that female doctors are more likely to use social support as a stress coping strategy and exhibit a better level of psychological wellbeing and satisfaction than male doctors (Sutherland & Cooper, 1993). Our results do not provide support for the hypothesis that females use more emotion-focused coping (Ptacek *et al.*, 1994) and males use more problem-focused coping (Folkman & Lazarus, 1980; Ptacek *et al.*, 1994). However, the methodological problems in the assessment of coping must not be ignored (i.e. applicability of coping items for different contents of problems).

In summary, while previous studies had found few significant differences in levels of occupational stress between male and female doctors (Cooper *et al.*, 1989; Simpson & Grant, 1991), the present study found very little significant differences between male and female GPs in terms of job stress. Many previous studies of stress in GPs have failed to differentiate between men and women; perhaps in the past there were small numbers of women in medicine. Since women medical students now average just over 50% of the annual intake in UK medical schools (Wilson & Allen, 1994) it is important that future research on stress in doctors should take account of gender differences. Also future research may consider taking a larger sample and combining qualitative with quantitative data.

Research on stress and satisfaction experienced by male and female doctors in different specialities in the NHS would increase our understanding of doctors' stress and satisfaction. The present study did not include data on doctors' family situations and conflict between work and home roles. Role conflict has been recognized as one of the important stressors for women doctors (Cartwright, 1987). Perhaps role conflict and other family variables could be included in stress research of male and female doctors in the future.

Despite some methodological shortcomings, the present study provides some general findings of occupational stress, job satisfaction and mental wellbeing of male and female GPs at a specific point in time. Occupational stress is not static and it varies over time. The results might be invalid if there are changes in the NHS in the near future. For example, the recent introduction of primary health care groups in April 1999 might alter the work pattern of GPs and might affect the level of job satisfaction and stress. Ongoing research is needed to track changes that occur in the NHS and within the wider society in terms of gender role expectations.

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