# Comparison of the health and lifestyle of general practitioners and teachers

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SUMMARY. A total of 704 general practitioners and 588 teachers responded to a questionnaire about their health and lifestyle in 1991 (response rates 82% and 87%, respectively). The results for lifestyle measures were compared with those of a similar questionnaire completed by about half of each group two years before — there were no changes in the answers of either occupational group in the intervening two years. In 1991, 9% of general practitioners and 15% of teachers drank 22 units of alcohol per week or more; 13% of general practitioners and 23% of teachers reported troublesome depression and 31% of doctors and 37% of teachers excessive anxiety in the preceding 12 months. Teachers had more sickness absence, and significantly more experienced a need for daily alcohol and binge eating, and reported sleep difficulties, depression and anxiety than general practitioners. Self-medication among general practitioners was common and overall accounted for 83% of the medication taken by doctors. A follow-up survey of non-respondents found that only 11% of general practitioners and 11% of teachers indicated they had a health problem they wished to conceal or that they felt the questions were too intimate.

General practitioners' lifestyle habits are better then those of teachers and published figures for the general population. The frequency of reported mental health problems in both professions gives cause for concern.

Keywords: doctors' health; lifestyle; attitude to health; general practitioners; teachers.

#### Introduction

THE new contract regulations for general practitioners (National Health Service and community care act, 1990) and the introduction of the national curriculum for teachers (Education reform act, 1988) have caused widespread dissatisfaction, both with the speed of the changes and the lack of consultation with ordinary members of both professions. 1.2 The effects of these changes in working practices on the health of doctors and teachers have not so far been investigated and reported.

A preliminary study of the health and lifestyle of general practitioners and teachers in 1989 showed that teachers experienced depression and anxiety significantly more often, took more sickness absence from work and practised less preventive medicine than doctors.<sup>3</sup> The same survey showed that self-medication was common among general practitioners. An associated survey looking at where general practitioners had obtained their health care from in the preceding 10 years<sup>4</sup> found that 84% of medication was self-prescribed and one third of medical investigations were self-initiated. Over half of the general practitioners studied

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Submitted: 24 April 1992; accepted: 25 November 1992.

© British Journal of General Practice, 1993, 43, 378-382.

had seen a specialist and of these, 51% had referred themselves. Allibone examined doctors' health and lifestyle in the 1970s<sup>5</sup> and found that a high proportion smoked, drank alcohol excessively and were overweight.

Mortality statistics from the early 1980s show that the suicide rate for women doctors was high, with the predicted mortality rate being 391 and a corresponding standardized mortality rate for suicide for men doctors being 181.<sup>6</sup> Figures for mortality from cirrhosis of the liver in men doctors may be decreasing but are still higher than those for the general male population.<sup>6</sup>

This study compared the results of the preliminary study in 1989<sup>3</sup> with those obtained in 1991, 12 months after the new contract regulations for general practitioners came into force. The aim of the study was to see if there were any differences in lifestyle measures before and after the new contract, how aspects of health and lifestyle in a group of general practitioners compared with those of teachers, and what coping methods both occupational groups had used.

#### Method

In 1989 408 out of the 850 general practitioners (48.0%) registered with Staffordshire Family Practitioner Committee completed a questionnaire about their health and lifestyle; 385 secondary school teachers out of a group of 850 (45.3%) matched for age and sex responded to the same questionnaire. All the men teachers from the 26 secondary schools in north Staffordshire were included in this study population together with a one in six sample of women teachers, selected by a computer generated random number process. Teachers were chosen as a comparative group being the only other professional group in the locality with enough women and men to match the general practitioners. A separate questionnaire was included for the spouse or domestic partner of the doctor or teacher asking about the health and lifestyle of the subject. The results from this study are reported elsewhere.<sup>3</sup>

Two years later a follow-up questionnaire was sent to the original 850 subjects in both occupational groups and the 99 general practitioners who had been appointed as principals in the preceding two years (it was not possible to recruit a group of newly appointed teachers). The questionnaires were sent out in April, as was the original, and were returned over the following four months. The questionnaire asked about current lifestyle, hobbies, amount of sickness absence, health problems and medication taken in the preceding year, coping methods and any comments received about his or her health. It also enquired whether the respondent remembered completing a similar questionnaire in 1989.

Strenuous efforts were made to trace and question the 87 general practitioners and 168 teachers who had retired from their posts since the 1989 study and to identify the seven general practitioners and three teachers who had died. A total of 855 general practitioners and 679 teachers who were still working received the follow-up questionnaire.

The questionnaires bore a code number used solely for identifying and chasing up non-respondents. Completed questionnaires were returned in freepost envelopes, those of doctors bearing the postcode of the practice to allow the Jarman index<sup>7</sup> to be calculated. Respondents were free to remove either code mark so that their questionnaire was anonymous. All non-respondents and anonymous respondents received two written reminders. Those

subjects who still did not respond were then sent a coloured card on which they were simply required to tick one or more reasons why they had failed to respond to the full questionnaire. A total of 151 general practitioner and 91 teacher non-respondents were sent this card (the anonymous respondents sent cards were excluded from the analysis when they returned the card indicating they had responded).

The results of the questionnaires from both occupational groups for 1991 were compared. Answers from the 1989 and 1991 questionnaires were compared for each occupational group where possible, but some of the questions in the 1991 questionnaire referred to events that occurred in the previous 12 months whereas questions in 1989 had asked about the preceding three to five years. Body mass index was calculated as weight in kilograms divided by height (in metres) squared. The categories used in this study were those adopted in a recent study of the dietary and nutritional habits of British adults, to enable comparison with the latest figures for the general population: for both women and men, underweight was a body mass index of less than 20, average 20.1 to 25, overweight 25.1 to 30 and obese over 30.

Categorical values were analysed using a chi square test. Other continuous values were analysed using a non-parametric test, the Mann Whitney U test. The Armitage test on proportions was used to identify significant trends. The hypothesis test for proportions from two independent groups was used to compare two such proportions. A microstat statistical package was used to calculate these significance tests. For clarity, percentages have been stated to describe differences between the sexes and between retired and working doctors, with the corresponding statistical significance values derived from original results.

#### Results

Seven hundred and four of 855 working general practitioners (82.3%) and 588 of 679 working teachers (86.6%) completed and returned questionnaires in 1991. Some respondents did not answer all of the questions. There were no significant differences between respondents in the two occupational groups as regards age or sex — the mean age of the doctors was 43.5 years (standard deviation (SD) 11.0 years, range 29-70 years) while the mean age of the teachers was 42.3 years (SD 9.6 years, range 24-63 years); 81.2% of the doctors were men as were 79.9% of the teachers. Of the 246 doctors in the 25-39 years age group 23.6% were women compared with 17.6% of the 233 40-49 year olds and 15.6% of the 205 in the 50 years and over age bracket (percentages of women teachers in each age group are not reported because of the study pre-selection process which excluded five sixths of women teachers). Of the general practitioners 89.9% were married compared with 80.1% of the teachers. Of the subgroup of 99 general practitioners who had been appointed as principals since the original study in 1989 84 responded to the questionnaire (84.8%) — mean age 35.8 years (SD 6.8 years, range 29-59 years).

A total of 319 out of a possible 408 general practitioners and 353 out of a possible 385 teachers reported returning a questionnaire in 1989. There were no significant differences between those subjects who had responded to both questionnaires and those who responded only in 1991, for all subject characteristics and all but three questions. Teachers who answered both questionnaires were more likely to report sleep difficulties in 1991 than those who only responded in 1991 (38.8% versus 46.0%;  $\chi^2$  with continuity correction factor (ccf) = 4.08, P<0.05), and doctors who answered both times were more likely to report sexual difficulties (15.4% versus 8.8%;  $\chi^2$  with ccf = 6.21, P<0.05) and taking sleeping pills (15.2% versus 9.1%;  $\chi^2$  with ccf = 4.93, P<0.05) than those who only answered in 1991.

# Lifestyle

Table 1 compares the results of questions concerning lifestyle for both occupational groups in 1989 and 1991. There were no significant differences between 1989 and 1991 for either occupational group. In 1991, significantly more teachers smoked than doctors, consumed more alcohol and took more exercise.

Table 2 compares the body mass indices of general practitioners and teachers in 1991 by sex with published data for the general population of the United Kingdom.<sup>8</sup> Body mass indices of men and women general practitioners were significantly lower than those of the general population while the body mass indices of teachers were no different from the general population.

## Health problems and medication

Table 3 compares the two occupational groups for problems experienced in the 12 months before they responded in 1991. There was no significant difference in the percentage of doctors and teachers reporting sexual difficulties but significantly more teachers reported the other problems than doctors. The frequency of reported depression, anxiety and stress or exhaustion was not related to marital status for teachers or doctors.

Table 3 also shows how many doctors and teachers reported taking medication in the previous 12 months. There were no significant differences between the groups. For those general practitioners reporting taking medication, self-medication varied from 92.1% of reports for hypnotics (70/76) to 53.8% for antidepressant drugs (7/13). Overall, of the six drug groups enquired about, self-medication comprised 83.1% of the reports for general practitioners. This compares with 85.0% for 1989;<sup>3</sup> there was no significant difference between the two years.

Older doctors and teachers showed a significantly increasing

Table 1. Comparison of lifestyle of general practitioners and teachers in 1989 and 1991.

	% of GPs		% of teachers		
	1989	1991	1989	1991	
Body mass index	(n = 403)	(n = 685)	(n = 377)	(n = 574)	
≤20.0	6.5	3.8	4.0	3.3	
20.1-25.0	60.8	57.1	<i>55.7</i>	<i>52.4</i>	
25.1-30.0	29.8	<i>35.6</i>	36.6	<i>39.2</i>	
30.1+	3.0	3.5	<i>3.7</i>	5.1	
Smoking status	(n = 404)	(n = 700)	(n = 381)	(n = 587)	
Never	60.6	63.3	62.5	64.6	
Sometime	29.0	28.3	24.1	20.8	
Current	10.4	8.4	13.4	14.7 ***	
Alcohol consumption					
(units per week)	(n = 402)	(n = 693)	(n = 384)	(n = 581)	
0	14.7	19.3	12.2	14.5	
1-7	45.0	42.6	45.3	39.9	
8-14	21.1	19.2	21.1	20.8	
15-21	10.7	10.0	7.3	9.6	
22+	8.5	8.9	14.1	15.1*	
No. of times exercised in					
last month	(n = 402)	(n = 690)	(n = 379)	(n = 577)	
0	24.6	30.3	20.3	23.6	
1–4	38.1	37.1	28.0	27.0	
5-8	15.2	15.8	17.9	19.1	
9-12	9.2	7.4	14.0	13.0	
13+	12.9	9.4	19.8	17.3***	

n = total number of respondents. \*P<0.05; \*\*\*\*P<0.001, for teachers versus doctors in 1991.

Table 2. Comparison of body mass indices of general practitioners and teachers in 1991 with a sample of adults aged 25–64 years from the UK general population.<sup>8</sup>

	% of respondents				
Body mass index	General population	GPs	Teachers		
Men	(n = 936)	(n = 558)**	(n = 461)		
≤20.0	<i>3.8</i>	3.0	2.0		
20.1-25.0	45.5	<i>54.5</i>	51.0		
25.1-30.0	41.5	<i>38.9</i>	42.1		
30.1+	9.2	3.6	5.0		
Women	(n = 968)	(n = 127)**	(n = 113)		
<b>≤20.0</b>	9.4	7.1	8.8		
20.1-25.0	<i>52.1</i>	68.5	58.4		
25.1–30.0	25.4	21.3	27.4		
30.1+	13.1	<i>3.1</i>	<i>5.3</i>		

n = total number of respondents. \*\*P<0.01, for doctors versus general population ( $\leq$  20.0 and 20.1–25.0 versus 25.1–30.0 and 30.1+).

Table 3. Health problems occurring and medication reported to be taken in previous 12 months reported by general practitioners and teachers in 1991.

	% of respondents (total no. of respondents)			
	GP	s	Teachers	
Health problem				
Need for daily alcohol	14.3	(666)	21.6**	(528)
'Binge' eating	18.0	(665)	26.9***	(528)
Difficulties with sleeping	47.6	(678)	<i>58.5</i> ***	(554)
Troublesome depression	13.4	(663)	22.6***	(532)
Excessive anxiety	31.1	(671)	<i>37.5</i> *	(539)
Sexual difficulty	11.9	(664)	13.0	(515)
Medication				
Antibiotics	35.5	(667)	<i>36.8</i>	(544)
Hypnotics	11.9	(637)	4.7	(512)
Tranquillizers	2.5	(634)	<i>3.7</i>	(508)
Antidepressants	2.1	(631)	3.5	(511)
Prescription only analgesics	12.3	(642)	20.1	(528)
Peptic ulcer-healing drugs	10.8	(638)	2.6	(506)

<sup>\*</sup>P<0.05; \*\*P<0.01; \*\*\*P<0.001, for teachers versus doctors.

trend to report exhaustion or stress (more detailed results for exhaustion or stress are reported elsewhere<sup>11</sup>) (Table 4). There was no such trend for problems of depression or excessive alcohol consumption. The respondents in the 40–49 years age groups were most likely to report anxiety. Older doctors, but not teachers, were significantly more likely to report sleep difficulties. Being overweight was significantly more common in older doctors and teachers. Taking 15 or more days of sickness absence was significantly more frequent in older teachers but not doctors. Doctors aged 40 years and over were significantly more likely to take antibiotic, hypnotic, tranquillizer and peptic ulcer-healing medication but not anti-depressant or prescription-only analgesic drugs. Older teachers were significantly more likely to take hypnotic, tranquillizer and peptic ulcer-healing drugs.

# Coping methods

The coping methods employed by general practitioners and teachers in the preceding 12 months are shown in Table 5. Of the 704 doctors, 16.8% indicated that they did not use any coping method compared with 36.6% who had one method, 32.0% two and 14.6% three or more. Of the 588 teachers, 16.7% used no

coping method, 37.9% had one method, 27.7% two and 17.5% three or more. The only significant differences between the two occupational groups were that teachers were more likely to increase outside interests and doctors were more likely to reduce their hobbies.

#### **Comments**

Respondents were asked whether anyone had made unsolicited comments on their behaviour in the previous year. Of 688 doctors responding 20.6% had been told they looked anxious, or were irritable or moody as had 21.3% of 572 teachers responding; 4.5% of general practitioners and 4.4% of teachers were told the hours they worked were too long and 1.0% of doctors and 3.0% of teachers were told they looked relaxed or happy.

Respondents were invited to make comments about their health or matters arising from the questionnaire. The following comments were made by at least 3% of respondents: 3.7% of the 704 doctors and 2.4% of the 588 teachers wished to retire early, 15.5% of doctors and 11.2% of teachers commented that their new terms of service or their management responsibilities were creating job dissatisfaction, and 6.5% of teachers felt that their work was affecting their health.

## Differences between women and men

Women and men general practitioners gave significantly different answers for several questions. Significantly fewer women doctors had a need for daily alcohol (10.6% of 123 versus 14.8% of 532;  $\chi^2 = 87.42$ , 3 degrees of freedom, P < 0.001) and women drank significantly less alcohol (4.7% of women doctors drank more than 14 units of alcohol per week compared with 10.5% of men doctors who consumed more than 21 units of alcohol per week;  $\chi^2 = 41.71$ , 2 df, P < 0.001). Significantly more women doctors reported binge eating than men (29.0% of 124 versus 15.7% of 530;  $\chi^2$  with ccf = 11.19, P < 0.001). Reported sickness absence in the previous 12 months was the same for both sexes of doctors.

Women and men teachers had similar lifestyles except that more women took sickness leave (43.8% of 457 men took no sickness leave compared with 31.0% of 116 women;  $\chi^2 = 8.04$ , 3 df, P < 0.05) and women consumed significantly less alcohol (5.2% of women teachers consumed more than 14 units of alcohol per week compared with 18.3% of men teachers who drank more than 21 units of alcohol weekly;  $\chi^2 = 41.87$ , 3 df, P < 0.001). Both sexes had similar health problems except that more women than men suffered from depression (30.0% of 100 versus 20.6% of 432;  $\chi^2$  with ccf = 4.45, P < 0.05) and binge eating (50.5% of 105 versus 21.0% of 423;  $\chi^2$  with ccf = 35.59, P < 0.001).

# Jarman index

No relation was found between the Jarman index and general practitioners' sickness absence rate, alcohol consumption, need for alcohol and reported anxiety or depression.

# Retired doctors and teachers

Fifty eight of the 87 retired general practitioners returned their completed questionnaire (66.7%) compared with 41 of the 120 retired teachers whose address was known (34.2%). Six of the 58 general practitioners (10.3%) and 22 of the 41 teachers (53.7%) were still working, although not necessarily in their old occupation. Of the doctors 8.6% had retired before the age of 60 years for reasons of ill health as had 19.5% of the teachers. There were no significant differences between retired and working respondents in either occupational group for the lifestyle questions about body mass index, smoking, exercise habits and alcohol intake or coping methods except that more retired doctors had increased their hobbies in the last 12 months than working gener-

Table 4. Percentage of general practitioners and teachers experiencing health problems and taking medication in previous 12 months, by age group in 1991.

	% of respondents (total number of respondents)					
	GPs aged:			Teachers aged:		
	25-39 years	40-49 years	50+ years	25-39 years	40-49 years	50+ years
Anxiety	<i>25.7</i> (241)	<i>37.9</i> (219)	<i>30.5</i> * (200)	<i>28.5</i> (172)	44.0 (248)	<i>38.5</i> ** (109)
Exhaustion/stress on	(= ,	(2.0)	(200)	(,	(2.0)	(1.00)
3+ days per week	<i>52.0</i> (244)	<i>68.7</i> (230)	<i>61.2</i> ** (201)	<i>62.4</i> (189)	<i>78.7</i> (263)	<i>67.0</i> **- (112)
Sleep difficulties	42.6	54.5	43.8**	54.7	64.4	51.8
Overweight <sup>b</sup>	(242) <i>32.9</i> (242)	(224) <i>34.8</i> (227)	(210) <i>50.2</i> **	(181) <i>31.4</i> (185)	(253) 48.7 (261)	(110) <i>55.9</i> ***
Sickness absence (days)	(243)	(227)	(205)	(185)	(261)	(118)
1–7	18.7	18.3	11.1	50.8	39.0	33.9
8–14	2.4	3.9	4.3	12.3	9.5	10.7
15+	4.1 (246)	<i>5.2</i> (230)	3.4 (207)	<i>1.6</i> (187)	9.1 (264)	<i>9.8</i> ** (112)
Medication taken	(240)	(250)	(207)	(107)	(204)	(112)
Antibiotics	<i>37.6</i> (237)	<i>39.9</i> (223)	<i>27.9</i> ** (197)	<i>38.5</i> (182)	<i>34.8</i> (244)	<i>38.9</i> (108)
Hypnotics	7.1 (224)	15.6 (211)	13.5** (192)	2.3 (174)	5.7 (228)	6.9** (101)
Tranquillizers	0.4	3.3	4.2*a	2.3	3.5	7.1*a
Peptic ulcer-healing drugs	(224) 7. <i>1</i> (226)	(209) <i>12.0</i> (209)	(191) <i>14.0</i> ** (193)	(176) <i>1.7</i> (175)	(226) 1.3 (223)	(99) <i>7.1</i> ** (98)

<sup>\*</sup>P<0.05; \*\*P<0.01; \*\*\*P<0.001. \*Armitage test for increasing trend. \*Body mass index 25.1+.

Table 5. Reported coping methods employed by general practitioners and teachers in 1991 during previous 12 months (all other coping methods reported occurred less frequently).

	% of respondents*			
Coping method	GPs (n = 704)	Teachers (n = 588)		
Increased exercise	37.6	41.8		
Reduced exercise	<i>6.8</i>	5. <i>6</i>		
Increased hobbies	17.3	15.8		
Reduced hobbies	<i>6.8</i>	4.3*		
Increased outside interests	20.5	26.0***		
Reduced outside interests	7.5	5.4		
Relaxation	13.6	11.1		
Increased alcohol	15.8	13.9		
Reduced alcohol	3.1	<b>3</b> .7		
Increased smoking	3.7	6.0		

n = total number of respondents. \*Some respondents reported more than one coping method. \*P<0.05; \*\*\*P<0.001, both by hypothesis test for two proportions from independent groups of teachers versus doc-

al practitioners (29.3% of 58 versus 17.3% of 41;  $\chi^2 = 10.04$ , 3 df, P < 0.05). Numbers were too small for comparison for other questions. None of the retired general practitioners or retired teachers had taken tranquillizers or antidepressants in the previous 12 months. Of the 58 retired doctors, 8.6% had been told in the previous year that they looked more relaxed or happy as had 24.4% of the 41 retired teachers.

# Non-respondents to full questionnaire

Of 151 working general practitioners who did not respond to the full follow-up questionnaire 75 (49.7%) returned a card that indicated their reason(s) for not responding, as did 37 out of 91 working teachers (40.7%). The majority of both groups indicated

that they had not had enough spare time to complete the health questionnaire — 64.0% and 67.6%, respectively. Only four doctors (5.3%) and one teacher (2.7%) indicated that they had a health problem to conceal, while a further 5.3% of doctors and 8.1% of teachers regarded the questions as too intimate.

The total number of respondents to the study including the full follow-up questionnaire and the card circulated to non-respondents was thus 779 out of 855 working general practitioners (91.1%) and 625 out of 679 working teachers (92.0%).

### Discussion

The excellent response rates from both general practitioners and teachers in 1991 might indicate that their replies are likely to be representative of both professions. Non-respondents to a questionnaire about health are thought to be an interesting group to study as they may well have medical problems they wish to conceal which deter them from returning the questionnaire. It was reassuring to find that only 11% of non-respondents in both groups indicated that a health problem or intimate matter had been the reason for their non-response.

The response rates in 1989 were poor. Reasons for this may include the fact that the questionnaire was much longer than that of 1991 (six rather than two sides of A4 paper); that in 1989 a separate questionnaire was included for the subject's spouse which necessitated taking the documents home where they might have been mislaid or ignored; that the 1989 questionnaire did not bear a code number and postcode on the return envelope to enable effective chasing of individual non-respondents; and that the main investigator (R C) was not as well known by other doctors in 1989 as she was in 1991 when her established interest in doctors' and teachers' health may have increased cooperation. Although the response rates were poor in 1989 the subjects' replies were well verified by their spouses and it was felt that comparison of the answers to questions on lifestyle in 1991 and 1989 was valid.

General practitioners and teachers were thought to be appro-

priate groups for comparison as both are subject to similar stressors: that is both professions involve dealing directly with the public, have a caring function and have had considerable recent changes in working practices.

General practitioners who were appointed as principals between 1989 and 1991 were included in the survey in order to investigate the health of all general practitioners in 1991. The mean age of all the doctor respondents in 1991 was slightly higher than that of the teachers despite the newly appointed principals' mean age being lower. During the two year period many teachers in their fifties had retired and few new teachers had been recruited owing to re-appointment of many redundant teachers. School records of newly appointed and retired teachers were not forthcoming and it was not practicable to identify a group of new teachers to match against the new principals.

In 1989 Cooper and colleagues<sup>12</sup> reported that the mental health of women general practitioners was good in comparison with the normative population — women general practitioners had mental health scores significantly below the population norms on measures of anxiety, depression and somatic anxiety, while men general practitioners had significantly higher scores than the general population. Cooper's findings differ from the mental health symptoms found in this study, where there were no significant differences between men and women doctors in the frequency of mental health symptoms and significantly fewer doctors reported symptoms than teachers. This may be because Cooper used a questionnaire incorporating a series of in-depth mental health questions to detect free-floating anxiety, depression and somatic anxiety rather than a simple self-assessment of less well-defined terms (troublesome depression and excessive anxiety), or it may be because Cooper's survey was conducted four years before the study reported here.

The frequent reporting of depression and anxiety by both occupational groups in this study highlights mental health as a problem area for doctors and teachers. Doctors and teachers in their forties seemed particularly likely to report anxiety and exhaustion or stress and older respondents were significantly more likely to be taking tranquillizers or hypnotics. With depression and anxiety being reported by both professions so frequently, mental health problems may increase in the future unless appropriate coping mechanisms are adopted.

It is reassuring to find that so many doctors and teachers indicated that they used coping strategies; adaptive coping methods such as increased exercise or hobbies by far outweighed maladaptive practices such as increased smoking or alcohol. However, it is not known how accurately coping methods have been portrayed by the simple questioning of this study. For example, more than a third of all respondents claimed to have increased their level of exercise whereas actual amounts of exercise reported were similar to results from the 1989 survey. Retired doctors and teachers may have increased their hobbies as a result of extra leisure time.

General practitioners' lifestyle habits are better than those of teachers' and published figures for the general population. Only 8% of doctors were current smokers compared with 15% of teachers and an estimated third<sup>13</sup> of the adult population in the United Kingdom. Eleven per cent of men doctors reported drinking 22 or more units of alcohol per week compared with 18% of men teachers and 27% of adult British men. <sup>14</sup> Four per cent of doctors were obese, according to the classification used in this study, compared with 5% of teachers and 12% of adult women and 8% of adult men in the UK. <sup>8</sup> About one sixth of doctors and one third of teachers reported exercising two or more times per week which accords with the level of exercise recommended by the Health Education Authority. <sup>15</sup>

Accurate personal estimates of alcohol consumption are noto-

riously difficult to obtain but spouses in the preliminary study<sup>3</sup> did confirm the subject's estimate of alcohol intake as they did for the other lifestyle measures. Despite the rapid changes in working practices for both teachers and doctors alcohol consumption remained constant over the two years between questionnaires as did the other lifestyle activities.

There seemed to be no relation between general practitioners working in a deprived area as measured by the Jarman index and markers of mental ill health, namely reported depression, anxiety and alcohol consumption. The Jarman index could not be applied to the group of teachers as the index was designed as a method of identifying areas of high workload for general practitioners and it would not have been applicable for teachers' workload. Future research might include alternative indices of deprivation.

The much higher sickness absence rates of teachers than doctors may not simply be explained by their being employed rather than self-employed. It may reflect the widely held belief by doctors that they are indispensible and should carry on working even if they are ill, as has been noted by Richards. <sup>16</sup>

The high rates of self-medication among general practitioners confirmed the findings of other studies. 5.17 Numbers were small, but it must be wrong for any doctor to self-medicate with anti-depressants or tranquillizers under any circumstances. A code of conduct as regards self-medication, with more professional interest in the problem, might help to identify solutions. Accessibility to an easily available independent medical opinion will be necessary before doctors stop treating themselves. With the frequent reporting of mental health symptoms the issue of self-treatment is likely to become even more important. It will be interesting to see what trends develop over the next few years in the problem situations reported by general practitioners and teachers in this study.

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