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# Work stress and health in primary health care physicians and hospital physicians

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## ABSTRACT

**Objective:** In order to understand the reasons for the low priority given to work in primary health care among physicians, we studied differences in work stress, health and health related lifestyles between general practitioners (GPs) and hospital physicians.

**Method:** A cohort of 226 GPs and 523 consultants from Finland responded to a questionnaire survey. The responses were linked to data on registered sickness absence.

**Results:** Compared with consultants, GPs reported higher job strain (OR 1.76, 95% CI 1.23 to 2.53) and perceived work overload (OR 2.29, 95% CI 1.65 to 3.16) but were less likely to report poor team climate (OR 0.65, 95% CI 0.46 to 0.91), procedural injustice (OR 0.49, 95% CI 0.34 to 0.72) and interactional injustice (OR 0.62, 95% CI 0.44 to 0.88). There were only small differences in lifestyle, perceived health, psychological distress and long sick leaves between GPs and consultants. Short sick leaves were more common among GPs, but this difference disappeared after controlling for work characteristics.

**Conclusion:** In relation to the current recruitment crisis in primary health care and the studied working conditions, job strain and heavy workload outweigh the attractiveness of a good working climate and low organisational injustice. The non-significant differences in health may indicate that there are no differences in total work stress between GPs and consultants. In tackling the recruitment problems in the field of health care, it is of particular importance to be aware of the sector specific difficulties in working conditions.

Physicians chiefly work in primary health care, mainly in outpatient settings, and in secondary care, mainly in specialised hospitals. Physicians' work and the required core competencies in these fields are increasingly divergent. The competencies needed in primary care include primary care management, person-centred care, specific problem solving skills, a comprehensive approach, community orientation and holistic modelling.<sup>1</sup> Hospitals physicians' work, by contrast, is divided into subspecialties utilising complex medical technologies and requiring more and more specific knowledge and skills. Physicians' preferences are also diverging, and it seems that work in primary care is largely perceived as less attractive than work in a hospital. As a consequence, there are recruitment and retention problems in primary health care in many countries. In Finland, for example, 15% of general practitioner (GP) positions in health centres are vacant,<sup>2</sup> while 7% of positions for hospital physicians remain unfilled.<sup>3</sup> Similar findings have been reported in other countries including the UK,<sup>4</sup> Australia,<sup>5</sup> Lithuania<sup>6</sup> and Sweden.<sup>7</sup>

The shortage of physicians in primary care has prompted a considerable number of studies on job dissatisfaction.<sup>8</sup> Reasons for dissatisfaction among GPs have been found to relate mainly to lack of time to concentrate on individual patients, too many working hours and a heavy workload,<sup>8</sup> which conditions are related directly to resources and contracts in primary health care. Low job satisfaction and poor working conditions, in turn, are associated with poor mental and physical health and sickness absence. However, only a few studies have compared job satisfaction between GPs and consultants. A Norwegian study<sup>9</sup> found significantly higher satisfaction scores among GPs. However, a study from the UK found no significant differences in satisfaction, although GPs reported higher levels of occupational stress.<sup>10</sup>

The lack of studies combined with previous mixed findings emphasises the need for more comprehensive comparisons between GPs and consultants of psychosocial working conditions, work related stress and their influence on health. The present study, using data from the Finnish Public Sector Study, aims to address this need and seeks to understand the reasons for the shortage of physicians in primary health care.

## METHODS

A total of 32 299 employees in 10 local governments (response rate 65%) and 16 299 employees in 21 hospitals (response rate 69%) responded during the period 2000–2002 to a postal survey administered as part of the Finnish Public Sector Study.<sup>11</sup> We selected GPs and consultants from the 1904 physicians who responded, and excluded those employed short term (<6 months during the 2 years following the survey). Thus, the final cohort comprised 749 physicians: 226 GPs (78 men, 148 women, mean age 43.9 years, 79% married or cohabiting) working in primary health care in municipal health centres and 523 consultants (237 men, 286 women, mean age 43.6 years, 85% married or cohabiting) working as specialists on wards and in associated units of public secondary care hospitals.

Measures of work stress included job strain, poor team climate, organisational injustice and long working hours ( $\geq 50$ /week) (for details, see Kivimäki *et al*<sup>11</sup>). Perceived overload was measured with the question: "Does your workload exceed your tolerance?". Except for long working hours, responses to all measures were given on a 5-point rating scale. High demands combined with low control (median split) indicated high job strain; the other measures were divided into tertiles and the

**Table 1** Health, lifestyle and work stress of general practitioners (GPs) (n = 226) and consultants (n = 523)

	GPs, n (%)	Consultants, n (%)	OR (95% CI) for GPs vs consultants*
<b>Health</b>			
Poor perceived health	35 (16)	53 (10)	1.57 (0.98 to 2.51)
Psychological distress	61 (27)	122 (23)	1.20 (0.84 to 1.72)
<b>Lifestyle</b>			
Current smoker	23 (10)	45 (9)	1.15 (0.67 to 1.98)
High alcohol intake ( $\geq 210$ g/week)	30 (13)	72 (14)	1.04 (0.65 to 1.68)
Sedentary lifestyle	62 (28)	125 (24)	1.21 (0.84 to 1.73)
Obesity (BMI $\geq 30$ kg/m <sup>2</sup> )	16 (7)	29 (6)	1.29 (0.68 to 2.46)
Short sleep length ( $\leq 6$ h/night)	21 (9)	33 (6)	1.52 (0.84 to 2.73)
<b>Work stress</b>			
High job strain	69 (31)	99 (19)	1.76 (1.23 to 2.53)
Procedural injustice	46 (21)	178 (35)	0.49 (0.34 to 0.72)
Interactional injustice	59 (27)	189 (36)	0.62 (0.44 to 0.88)
Poor team climate	63 (28)	197 (38)	0.65 (0.46 to 0.91)
Perception of overload at work	131 (58)	195 (38)	2.29 (1.65 to 3.16)
Long working hours ( $> 50$ h/week)	25 (12)	92 (18)	0.65 (0.40 to 1.05)

\*Adjusted for age, sex and marital status.  
OR, odds ratio.

most adverse tertile was compared with the middle and least adverse tertiles combined.

Indicators of unhealthy lifestyle were current smoking, heavy alcohol consumption ( $\geq 210$  g/week), obesity (BMI  $\geq 30$  kg/m<sup>2</sup>), physical inactivity ( $< 2$  MET-hours a day) and short sleep duration ( $\leq 6$  h). In addition, we measured poor self-rated health (very poor, poor or average vs good or excellent) and psychological distress using the 12-item version of the General Health Questionnaire ( $\geq 4$  vs 0–3).

A total of 687 participants (92%) consented for their response data to be linked with the absence data extracted from employers' records. Sick leaves for the 2 years following the survey were analysed. The indices used were annual rates of short-term (1–3 days) and long-term ( $> 3$  days) absence periods.

The differences in work characteristics, health and lifestyle between GPs and consultants were examined with logistic regression analyses and the differences in sickness absence with Poisson regression models. The results were expressed as odds ratios and rate ratios and their 95% confidence intervals. Adjustments were made for demographics, and additionally either for lifestyle factors or for work characteristics. All the analyses were performed with SAS 9.1 software (SAS, Cary, NC, USA).

The ethics committee of the Finnish Institute of Occupational Health approved the study.

## RESULTS

The level of work stress differed between the two groups of physicians (table 1). The odds ratios of high job strain and perceived overload were 1.8 and 2.3 times higher for GPs compared with consultants. On the other hand, consultants were more likely to report procedural injustice, interactional injustice and poor team climate. Eighteen per cent of the consultants and 12% of the GPs reported working over 50 h weekly.

Differences in poor health, psychological distress and lifestyle (table 1) and long-term sickness absence (table 2) between GPs and consultants were small. Short sick leaves were more common in GPs, but this difference disappeared when work characteristics were added in the model (table 2).

## DISCUSSION

This study of 749 physicians revealed differences between GPs and consultants in work stress but not in health or lifestyle. In agreement with previous research,<sup>12</sup> we found that high job strain and work overload is common among GPs and that consultants report this kind of work stress less frequently. However, justice at work and team climate were more often rated positively by GPs compared with consultants. The sector difference in proportions of physicians with long weekly working hours was non-significant.

We found no differences in self-reported health between GPs and consultants, confirming earlier findings on this issue.<sup>13</sup> Job strain, workload, organisational injustice and poor team climate have been shown to be associated with increased stress related morbidity.<sup>14</sup> A possible explanation for the absence of differences is that among GPs the positive effects of low organisational injustice and good team climate counterbalance the negative effects of job strain and overload. As regards health related lifestyle, the studied physicians constituted a fairly homogeneous group with a relatively low prevalence of smoking and obesity and high prevalence of heavy alcohol consumption compared with other employees in hospitals and local governments.<sup>15</sup>

There was no difference in rates of long-term sickness absence, but there was a higher rate of short-term sickness absence among GPs. These results partly contradict both the British finding of lower short-term and higher long-term absence among physicians in primary care,<sup>10</sup> and the US study reporting no difference in absence between GPs and other physicians.<sup>16</sup> However, both studies were based on recall of sickness absence during the previous 1 or 2 years, whereas our data were prospective and based on employers' records. According to our study, the difference found in short-term absence was attributable to differences in work characteristics. However, interpretation of physicians' sickness absence figures is complex, as their threshold for taking sick leave is high and over 80% of them report working while ill.<sup>10 17</sup> The higher rate of

**Table 2** Sickness absence among general practitioners (GPs) (n = 206) and consultants (n = 481)

	Episode/person year		RR (95% CI) for GPs vs consultants		
	GPs	Consultants	Model 1*	Model 2†	Model 3‡
Short-term absence	0.79	0.61	1.30 (1.12 to 1.51)	1.33 (1.14 to 1.55)	1.19 (0.91 to 1.29)
Long-term absence	0.30	0.29	1.04 (0.83 to 1.31)	1.07 (0.85 to 1.36)	0.97 (0.74 to 1.26)

\*Adjusted for demographics (age, sex, marital status); †adjusted for demographics and lifestyle (smoking, alcohol intake, physical activity, BMI, sleep duration); ‡adjusted for demographics and working conditions (job strain, perception of overload, weekly working hours).  
RR, rate ratio.

## Short report

## Main messages

- ▶ GPs experience higher job strain and a heavier workload than their colleagues in hospitals.
- ▶ Hospital physicians report organisational injustice and a poor team climate more commonly than GPs.
- ▶ There are no major differences between GPs and consultants regarding health and health related lifestyles.

## Policy implications

- ▶ Awareness of the sector specific problems in physician working conditions is important so that targeted remedies can be developed.
- ▶ Physicians' low interest in working in primary health care may partly be explained by GPs' high job strain and heavy workload.
- ▶ Solutions for the recruitment crisis in primary health care may lie in reducing work stress but retaining the high levels of justice and good working climate.

short sick leaves in GPs in this study may indicate a lower threshold for taking sick leave and less actual sickness compared with consultants rather than more prevalent health problems. It is also possible that GPs use short sick leaves to recover from job strain. Despite profession specific practices, there is no reason to suspect that among physicians long-term sickness absence is a robust predictor of future disability pension and mortality.<sup>18 19</sup> The similarity in long-term absence may also reflect the similarity in health and lifestyles of the two groups of physicians.

A strength of this study was that the physicians studied had established clinical careers in primary care health centres or in secondary care hospitals. Thus, the results were not confounded by responses from GPs and consultants working elsewhere in the field of medicine (eg, administration, private sector, research or teaching). Another strength was the longitudinal register based sickness absence data. Lifestyle and health measures were based on self-report and therefore subject to reporting bias. Although we may assume that among physicians this bias exists, it is unlikely that it affects GPs differently from consultants. Taking into account the fact that the study was limited to urban areas where the shortage of GPs is less prominent than in rural areas,<sup>2</sup> it is possible that the results underestimate the overload and strain experienced among GPs working in primary health care in Finland.

The study revealed sector related variations in working conditions among physicians. Awareness of these issues is particularly important in those health centres suffering from a shortage of physicians, and also when negotiating work contracts and setting national policies. Moreover, information about sector specific problems may be useful when considering

how to lessen stressful aspects of work and thus improve the recruitment of physicians into primary health care and encourage GPs to remain in their current jobs.

Obviously, the poor attractiveness of general practice may result from factors other than the psychosocial working conditions addressed in this study, such as the inherent clinical basis of the work, salary, commuting distance and prospects for promotion. However, reports from Norway<sup>9 20 21</sup> indicate that it is possible to organise primary health care in such a way that GPs are at least as happy as their colleagues in hospitals.

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