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***Job satisfaction in UK general practice: do salaried contracts
make a difference?***

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Summary

Job satisfaction is a predictor of quit behaviour in labour markets. Salaried contracts for General Practitioners (GPs) are being piloted within Personal Medical Pilot (PMS) sites in the UK as a possible solution to improving the recruitment and retention of GPs in deprived areas. We surveyed salaried and standard contract GPs within PMS sites and compared their job satisfaction with a national sample of standard contract GPs. We also describe the balance of incentives and disincentives within PMS salaried contracts. We found that salaried GPs are equally as satisfied as standard contract GPs. After controlling for possible confounding factors our results suggest that salaried GPs are more satisfied than standard contract GPs in deprived areas. Salaried contracts offer lower net income compared with that of the average standard contract GP, but this is probably outweighed by extra non-pecuniary contractual benefits. Salaried contracts used within first wave PMS sites have the potential to be more effective than standard contracts in retaining GPs in these posts.

Introduction

Relatively few economists have studied job satisfaction.¹ This may be due to a professional suspicion of what economists may regard as a *subjective* variable and therefore an unreliable indicator of actual behaviour.² Economists may also be weary of what purports to be measures of individual utility, which may also depend heavily on the psychological state of the subject.³ However, research has shown that job satisfaction is a predictor of quit behaviour in labour markets.¹

Research in the health care field suggests that the job satisfaction of doctors is also an important predictor of job turnover,⁴ and may have an influence on patient health outcomes.⁵ The government in the UK is presently concerned with the cost effectiveness of salaried contracts for General Practitioners (GPs). The 1997 NHS (Primary Care) Act offers GP principals on standard contracts, as well as other suitably qualified GPs, the opportunity to become salaried employees within Personal Medical Services (PMS) pilot sites. This new type of contract provides an alternative to the standard contract that most GPs have held with the NHS since 1948. The terms and conditions of the standard contract are set at the national level and it is considered too rigid to address particular service quality and recruitment and retention issues in deprived areas.⁶⁻⁸ One of the aims of the PMS policy, arguably, is to improve recruitment and retention of GPs in under-doctored and deprived areas, so as to improve the health of patients in these areas. Therefore, studying the job satisfaction of salaried GPs could indicate whether this policy has the potential to be effective.

This paper aims to explore the impact of salaried status on job satisfaction. In the first section we develop a model from the theoretical and empirical literature to generate predictions to be tested. Next we outline the methods used to extract information from PMS salaried contracts to provide a description of the balance of incentives, and to carry out a cross sectional survey of all GPs within first wave salaried GP PMS pilot sites. Using additional data from a survey of a national sample of standard contract GPs carried out in 1998⁹ we estimate a model of job satisfaction.

Background

Salaried contracts form part of the strategic aim of PMS pilots to tackle recruitment and retention difficulties in under-doctored areas. Many of the disincentives to working in under-doctored areas are unlikely to be affected by salaried status (eg poor amenities for GPs and their families; needy patients and the resulting high workload; risk of violence) while others might be ameliorated (eg flexible working hours; increased and/or secure remuneration; freedom from administrative responsibilities). The ability of salaried contracts to effect a more favourable balance between such "modifiable" and "unmodifiable" disincentives will be key to determining GP job satisfaction.

The theories that have been developed by economists of the impact of payment systems tend to focus on clinical behaviour such as referral rates rather than job satisfaction.¹⁰ We adopt the standard approach^{11,12} to an individual's utility from working for GPs as:

$$S = S(y,x),$$

where S is utility or satisfaction, y the level of income, and x a vector of personal, practice and job characteristics that affect job satisfaction.

If the labour market for GP jobs offering salaried and standard contracts were competitive with free entry and exit, then GPs would choose contracts where the advantages outweigh the disadvantages.¹³ There would be competition for those contracts with the greatest net advantages and practices offering contracts with the lowest or no net advantages would have to increase income or other desirable factors to attract GPs. In equilibrium all contracts would be taken up and would yield the same level of utility or satisfaction.

The physician labour market in the US has some of the characteristics of a competitive market. A survey of general practitioners and paediatricians in the early 1970s found that salaried and FFS physicians were equally satisfied overall. However, salaried physicians were more satisfied than FFS physicians with the amount of working and leisure time they had, but less satisfied with the time they had with patients¹⁴ Mechanic's explanation of these findings was that FFS doctors had the incentive to work longer hours because they could see more patients, and therefore earn more money. Salaried doctors, on the other hand, had no incentive to work longer hours, and may shorten consultation times if demand increased.

The labour market for GP jobs in the UK is not perfectly competitive. The wages of standard contract GPs (made up of capitation, fee-for-service, target payments and allowances) are not determined by the interaction of supply and demand, but are set by the Review Body on Doctors' and Dentists' Remuneration in consultation with the

government, and the General Practitioner Committee of the British Medical Association. There is, however, considerable variation in GP income.¹⁵ Individual practices can change their income by reducing their expenses, increasing item of service or target payment activities, or re-distributing income within the practice.

The salaries of GPs employed in PMS sites are set locally, and financed from within the pilot budget, which consists of funds transferred from cash-limited and non-cash-limited General Medical Services (GMS) budgets held nationally and at health authority level. If pilots provide non-GMS in addition (PMS plus), then funds from the hospital and community services budgets would also be included in the contract for the pilot. Pilots also receive development monies from health authorities, but these are to finance their set up and management costs. It is not clear, however, how much scope PMS sites have for modifying GPs' pay and conditions.

Entry and exit is unlikely to be free in the GP labour market since the number of places in medical schools is limited, and the Medical Practices Committee (MPC) has to agree whether GPs can be recruited to fill a vacancy, or to increase the number of GPs in an area. Furthermore standard contract GPs, who want to leave their practice partnership, may be deterred by the legal costs that may be incurred in negotiating the release of their financial stake in the capital of the practice. Therefore, some standard contract GPs may be stuck in their jobs and dissatisfied.

If a GP accepts a salaried contract in preference to a standard contract then this implies that the utility or satisfaction associated with salaried contracts must be higher than that of the standard contract, otherwise they would not have chosen the post. We

assume that GPs choose between contracts on the basis of objective factors that can be observed in advance of accepting the contract, and that affect their utility, such as hours of work and salary. If salaried contracts were a realistic contractual alternative for every GP, then we can predict that salaried contracts must yield higher levels of utility than standard contracts. However, salaried contracts are only offered in under-doctored areas, and it is not clear what alternative choice of contract these GPs had.

MPC entry controls mean that GPs do not have free entry into areas with practices offering high utility contracts; those with high levels of income, and other desirable characteristics. GPs in under-doctored areas, or new entrants to the labour market (including GP locums), may therefore be restricted to choosing either standard or salaried contracts, offered by practices in under-doctored areas. Since we know GPs have accepted salaried contracts then this implies that, for these GPs, utility or satisfaction is higher under salaried compared with standard contracts in under-doctored areas. But it is unclear whether salaried contract GPs in under-doctored areas will be more satisfied than standard contract GPs in over-doctored areas. This would only be the case if salaried contracts offer higher pecuniary or non-pecuniary advantages compared with the standard contract.

Little is known about the characteristics of salaried contracts of employment in the UK. In the empirical section of this paper we describe the balance of incentives and disincentives in salaried contracts used within PMS pilot sites. We also examine the association between type of GP contract and self-reported job satisfaction using data from two surveys of GPs in the UK.

Methods

Salaried GP contracts

Contracts of employment and job descriptions were requested from each of the 46 PMS salaried GP sites identified as having gone 'live' in April 1998 (the 'first wave'). Contracts were allocated to pairs of reviewers and a purpose designed data extraction form completed independently by each reviewer. The following information was extracted from these documents: salary and details of other payments; type of employer; management and out of hours responsibilities; performance appraisal and monitoring/training arrangements; contract length; employment benefits; hours of working; whether patient sub-groups or clinical services were to be targeted. Areas of disagreement were resolved, if necessary by referral to a third reviewer, and the final data were coded and entered into SPSS for analysis.

Job satisfaction survey

Sample selection

Postal surveys of GPs were carried out in 1998 (between June and September) and 1999 (June). It was thought unlikely that there would have been any significant changes in the year between the surveys to confound the comparison of salaried versus standard contract GPs.

1998 survey

The 1998 survey selected GPs from the Department of Health's list of principals for England in 1996. The sample for this survey consisted of a random national sample of

400 GPs, stratified by age and sex and a sample consisting of all GPs (n=3334) in 12 Health Authority areas.

1999 survey

The June 1999 sample comprised all 149 GPs (both salaried and standard contract) practising in all first wave PMS pilot sites identified as containing salaried GPs (n=46).

Survey instrument

Each survey used slightly modified versions of the same questionnaire. All three surveys requested information about the GPs' personal details (e.g. age, gender, ethnicity), medical background (e.g. hours of work, employment history), the characteristics of their job and practice (e.g. type of contract, level of deprivation).

The 10 item Warr-Cook-Wall job satisfaction scale was used to measure job satisfaction (see box 1). Each item on this scale is rated on a seven-point scale where a high score represents high satisfaction. This scale has been used to assess the job satisfaction of GPs in a number of surveys^{9,16,17} and it has been shown to be reliable and valid.¹⁸

In order to minimise the burden on GPs only 2064 of the GPs surveyed in 1998 were sent the Warr-Cook-Wall job satisfaction scale. All of the GPs in the 1999 survey were sent a modified questionnaire containing this scale. Two postal reminders were used in both surveys to boost response rates.

Estimation

Student t-tests were used to detect differences between salaried and standard contract GPs and between PMS and GMS GPs in mean scores for the ten dimensions of job satisfaction.

We chose a multivariate approach to examine the association between type of contract and job satisfaction whilst controlling for possible confounding factors. An ordered probit equation is estimated for GPs on salaried and standard contracts in order to assess whether salaried contracts are associated with higher levels of job satisfaction.

We model a discrete dependent variable that takes ordered multinomial outcomes. The econometric model we estimate can be expressed as,

$$s_i^* = \sum_{k=1}^7 b_k(X_k) + \mathbf{e}_i$$

where s_i^* is an unobservable continuous measure of satisfaction and \mathbf{e}_i are $N(0,1)$ error terms.

The observed dependent variable, s_i , is an ordinal variable adopting the discrete values of 1-7 ranging from 1 ("very dissatisfied") to 7 ("very satisfied"). The observations are therefore, ordered categories based on the underlying latent variable, job satisfaction (s_i^*), and threshold values, which are estimated:

$$\begin{aligned}
S_i = 1 & \quad s_i^* \leq k^1 \\
S_i = 2 & \quad k^1 < s_i^* \leq k^2 \\
S_i = 3 & \quad k^2 < s_i^* \leq k^3 \\
S_i = 4 & \quad k^3 < s_i^* \leq k^4 \\
S_i = 5 & \quad k^4 < s_i^* \leq k^5 \\
S_i = 6 & \quad k^5 < s_i^* \leq k^6 \\
S_i = 7 & \quad k^6 < s_i^*
\end{aligned}$$

The X variables are the characteristics of the GP (age, gender, marital status, number of dependants), job (contract type, hours of work) and practice (service type, level of deprivation, size of primary health care team (PHCT)). We assume that satisfaction is increasing in income, PHCT size and decreasing in factors such as hours of work and level of deprivation in the practice population. However, it is likely that hours of work and income are correlated with the type of contract since one of the motivations for becoming salaried is reduced working hours. Therefore, we use the type of contract variable as a proxy for income, hours of work and other factors associated with salaried employment that could have an impact on job satisfaction, such as autonomy.

The probability of being salaried and in a PMS site are highly correlated and including both of these variables in the same model would give rise to multi-collinearity. Therefore, we estimated two models with the type of service (PMS or GMS) variable omitted from one and contract type from the other. All models were estimated using Statistics Data Analysis (STATA) version 6.0.

Results

The nature of salaried GP contracts

Forty-six employment contracts were received from 41 of the 46 PMS sites with a salaried GP post. Thirty-one job descriptions were received from 31 of these sites.

In 22 (48%) of the contracts the stated employer was a trust and in 13 (28%) a GP practice. In the remaining three (7%) which stated the employer, these were described as a nurse, a limited company and a multi-agency pilot. Seventeen contracts were for between two and three years duration.

Table 1 summarises the main characteristics of contracts and job descriptions. Salary levels were generally below target GP remuneration of £52,600 for 1999.¹⁹ The mean full-time equivalent salary was £43,674, based on the 27 contracts that provided this information. Few contracts offered financial rewards or bonuses (n=5), or specified financial penalties (n=2).

Salaried contracts generally offered a range of employment benefits. Employers tended to assume responsibility for expenses such as vehicle mileage and out-of-hours cover. Many offered maternity leave and paid sickness leave. Forty-two contracts specified annual leave, which ranged from 25 to 41 days. Thirty contracts specified leave for education, training and personal development that ranged from two to 10 days. Only nine arranged mentorship for personal training and development.

In nine job descriptions, salaried GPs were responsible for providing personal medical services (PMS) equivalent to the full range of general medical services (GMS), and in 10 they were responsible for providing additional services (referred to as PMS plus).

Five job descriptions specified clinical services to be targeted and seven mentioned particular patient groups to be targeted. Most contracts offered full time posts with only seven offering part time work. The median hours contracted per week was 37.5. (Where time commitment was stated in sessions per week we assumed that each session was 3.5 hours long.) Eight contracts freed GPs from out-of-hours responsibility. Staff management was the most common administrative responsibility specified in job descriptions and this was required in only five sites.

Job satisfaction

Usable responses were received from 1941 GPs in total, with response rates of 48 per cent (1986/4133) and 77 per cent (113/149: 61 salaried GPs; 52 standard contract GPs) in the two surveys. Responders to the 1998 sample have been shown to be representative of all English general practitioners in terms of age, gender, approved trainer status, and full-time/part-time NHS contract but not ethnic minorities, who were under-represented.⁹ Table 2 shows that the salaried PMS GPs are younger than both samples of standard contract GPs but there were no statistically significant differences in terms of gender.

Table 3 shows the mean scores for each dimension on the Warr-Cook-Wall job satisfaction scale. There were no differences in overall job satisfaction, but salaried GPs were more satisfied with their remuneration, and hours of work compared with standard contract GPs. Salaried GPs were significantly less satisfied with their colleagues and fellow workers.

The ranking of satisfaction scores shows how satisfied with each dimension GPs were compared with others. The most marked differences are in satisfaction with physical working conditions and their colleagues and fellow workers, although the differences in scores were not statistically significant. Satisfaction with physical working conditions and their colleagues and fellow workers was considerably lower amongst salaried compared with standard contract GPs, relative to the other dimensions of satisfaction.

Regression analysis

Table 4 shows the results of the ordered probit regression. The signs of the coefficients are as expected. The RESET tests show that none of the models are misspecified. The adjusted pseudo r-squared for each model shows that the independent variables do not explain more than 1 per cent of the variation. This is similar to that obtained in other studies of job satisfaction.¹²

The regression results show that when controlling for practice, job and personal characteristics GPs on salaried contracts are more likely to be satisfied with their jobs compared with those on standard contracts. The models also show that the probability of being satisfied is higher if the GP is female, in a PMS site, and if they have dependants. These results contrast with those in table 3 so we attempted to ascertain whether t-tests were appropriate for ordered categorical data by estimating the ordered probit regression model with just the contract and (independently) service type variables. The regression results were consistent with the t-tests as in neither of the two models was the independent variable statistically significant.

Discussion

The results of the job satisfaction survey indicate that there are no differences between the overall job satisfaction of salaried and standard contract GPs. Although the lines of causality in cross sectional studies is open to debate this provides some evidence that salaried contracts in under-doctored areas yield as much utility as the average standard contract. Salaried GPs were more satisfied with the recognition they get for good work, their remuneration and their hours of work compared with (PMS and non-PMS) standard contract GPs. This suggests that the condition needed for salaried GPs to be more satisfied than standard contract GPs, that the net pecuniary and non-pecuniary advantages of salaried contracts would have to outweigh those of the average standard contract GP, does not hold.

Salaried GPs receive lower net incomes compared with the average net remuneration of GPs on standard contracts but they have fewer management responsibilities, more employment benefits and lower working hours. This comparison of income is only descriptive since we were unable to compare salaries with actual standard contract incomes or to take into account type of area variations that exist.¹⁵ Standard contract GPs seem to work longer hours suggesting that there are incentives perhaps provided by their fee for service element of their income to substituting leisure for work. There is also evidence that some salaried contracts contain performance monitoring arrangements which may lower professional and clinical autonomy. However, there were no differences between salaried and standard contract GPs in satisfaction with dimensions that may be associated with autonomy, such as "freedom to choose your own working method" and "amount of responsibility you are given".

The differences between PMS and GMS GPs in satisfaction with remuneration and dissatisfaction with their colleagues and fellow workers may be confounded by the association of PMS with salaried status.

These results may be confounded as salaried contracts may attract different types of GPs and are offered in certain areas. Using regression analysis we found that after controlling for practice, job and personal characteristics salaried GPs are more satisfied than standard contract GPs. This finding supports our prediction that salaried GPs would be more satisfied than standard contract GPs in deprived areas.

Salaried employment, in contrast to standard contracts in deprived areas, may offer a more secure income, and either more flexibility, or reduced working hours. The salary offered by PMS sites may be lower than the national average but higher than the salaried GPs were receiving either as principals in a deprived area or as a locum. Surprisingly job satisfaction was not related to age, as the labour economics literature would suggest,²⁰ but the sign of the coefficient for gender was as expected.

Our results may suffer from an endogeneity problem in that the higher job satisfaction of salaried GPs may be explained by factors that we are unable to observe. That is, salaried GPs are more satisfied because they have chosen a salaried contract and would therefore expect to be happier. This may lead to biased estimates of the effect of salaried contracts. We will explore this issue in future work.

Strong opinions are voiced about the effect of different payment systems on GP morale and satisfaction, but there is little theoretical and empirical work in this area on which these can be based. Salaried GPs are more satisfied than standard contract GPs with their income, hours of work and recognition for their work but do not differ in overall satisfaction. When practice, job and personal characteristics are taken into account our results show that the salaried contracts, as specified and used within PMS sites, yield greater levels of utility compared with standard contracts for GPs in deprived areas. Therefore, we would expect the quit rate amongst salaried GPs to be lower than that of standard contract GPs in deprived areas. However, without information about the costs of providing these non-pecuniary benefits and the quality of the GPs employed, it is difficult to make conclusions about the cost effectiveness of these salaried contracts.

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Box 1: Warr-Cook-Wall Job satisfaction scale

Please indicate how satisfied or dissatisfied you are with each of the various aspects of your job

Please ring a response on the scale:

	1 - extreme dissatisfaction				7 - extreme satisfaction		
1. Physical working conditions	1	2	3	4	5	6	7
2. Freedom to choose your own method of working	1	2	3	4	5	6	7
3. Your colleagues and fellow workers	1	2	3	4	5	6	7
4. Recognition you get for good work	1	2	3	4	5	6	7
5. Amount of responsibility you are given	1	2	3	4	5	6	7
6. Your remuneration	1	2	3	4	5	6	7
7. Your opportunity to use your abilities	1	2	3	4	5	6	7
8. Your hours of work	1	2	3	4	5	6	7
9. Amount of variety in your job	1	2	3	4	5	6	7
10. Taking everything into consideration, how do you feel about your job?	1	2	3	4	5	6	7

Table 1: Summary of Job Characteristics**Job Characteristic****Salary**

Full time	Mean (Std Dev)	£43,674	(6943)
Part-time		£24,201	(8956)

Hours of work*

Full time (N=12)	Mean (Std Dev)	40.8	(6.8)
Part-time (N=7)		27.4	(11.2)
No out-of-hours work	No. (%)	8	(17)

Employment benefits*

Expenses paid:	No. (%)		
- Mileage		17	(37)
- Lease car		3	(7)
- Subsistence		4	(9)
- Telephone		7	(15)
Maternity leave		21	(46)
Paid sickness leave		38	(83)
Eligible for NHS pension		41	(89)
Mentorship		4	(9)

Job responsibilities**

PMS/PMS+ clinical services	No.(%)	19	(61)
Staff management		5	(16)
Patient groups to be targeted		7	(23)
Services to be targeted		5	(16)

Data extracted from - * 46 contracts of employment and ** 31 job descriptions

Table 2: Characteristics of respondents, their jobs and practices

Characteristic	Salaried GPs (n=61)	All PMS GPs (n=101)	GPs (n=828)	National Sample of standard contract GPs (n=128)	Differences	
					Salaried GP - national sample GPs	PMS GPs - national sample GPs
Gender:						
- No. of males (%)	37 (61)	92 (91)		124 (97)		$\chi^2_{0.05} = 0.299$
- No. of females (%)		77 (76)				
Mean (SE) age	40 (1.05)	49 (1.82)		45 (0.19)	p=0.000	p=0.000
Mean (SE) total working hours per week (including on-call)	40.88 (1.96)	46.47 (1.59)		61.24 (0.56)	p=0.000	p=0.000
Level of deprivation	61 (100)	113 (100)		404 (314)	$\chi^2_{0.05} = 0.000$	$\chi^2_{0.05} = 0.000$
-No. above average (%)						$\chi^2_{0.05} = 0.000$
Primary health care team:						
-No. of other health professionals						

Table 3: Mean (SE) scores for Warr, Cook and Wall job satisfaction scale for salaried and standard contract GPs

Dimension	Salaried GPs (n=60)	Rank	All PMS GPs (n=109)	Rank	Standard contract GPs (n=71)	Rank	Differences	
							Salaried GP sample GPs (t-ratio)	PMS GPs - national sample GPs (t- ratio)
Physical working conditions	4.57 (0.19)	8	4.76 (0.13)	5	4.97 (0.04)	3	-2.40	-1.64
Freedom to choose your own method of working	4.97 (0.15)	3	5.04 (0.11)	2	4.86 (0.03)	5	0.75	1.63
Your colleagues and fellow workers	4.83 (0.18)	4	4.94 (0.13)	3	5.31 (0.03)	1	-2.56	-3.30*
Recognition you get for good work	4.66 (0.19)	6	4.41 (0.14)	8	4.21 (0.04)	7	2.63*	1.56
Amount of responsibility you are given	5.19 (0.17)	1	5.12 (0.13)	1	4.98 (0.04)	2	1.18	1.06
Your remuneration	4.62 (0.20)	7	4.47 (0.15)	7	3.48 (0.05)	9	5.60*	6.43*
Your opportunity to use your abilities	4.78 (0.19)	5	4.65 (0.14)	6	4.64 (0.04)	6	0.86	0.06
Your hours of work	4.28 (0.20)	9	4.03 (0.14)	9	3.69 (0.05)	8	3.18*	2.37
Amount of variety in your job	4.98 (0.19)	2	4.81 (0.14)	4	4.94 (0.04)	4	0.27	-0.92
Overall satisfaction	4.77 (0.18)		4.70 (0.13)		4.63 (0.04)		0.81	0.57

* t-test, $p \leq 0.01$

Table 4: Ordered probit regression results

Dependent variable (Job satisfaction)	Model 1 Coefficient	P value	Model 2 Coefficient	P value
Independent variables:				
Contractual status of GP (0=standard, 1=salaried)	0.579	0.003	X	X
GMS/PMS (0=GMS, 1=PMS))	X	X	0.351	0.017
Deprivation (0=low, 1=high)	-0.182	0.028	-0.181	0.028
Primary health care team (number/type)	0.043	0.143	0.037	0.200
Gender (0=female, 1=male)	-0.266	0.000	-0.237	0.001
Age	0.003	0.571	0.027	0.555
Marital status (1=married, 0=single/divorced etc)	-0.234	0.263	-0.225	0.271
Dependants (1=yes, 0=no)	0.385	0.001	0.375	0.004
Working partner (1=yes, 0=no)	-0.078	0.405	-0.059	0.523
Cut points	-1.815 0.0000			
Number of observations	912		952	
Log likelihood	-1427.49		-1493.85	
Wald χ^2_8	32.91*		26.65*	
Pseudo R ²	0.011		0.0085	
Reset test	p=0.282		p=0.078	

* $p \leq 0.01$

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