Preferences for general practice jobs: a survey of principals and sessional GPs

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SUMMARY

Background: *Many countries are experiencing recruitment and retention problems in general practice, particularly in rural areas. In the United Kingdom (UK), recent contractual changes aim to address general practitioner (GP) recruitment and retention difficulties. However, the evidence base for their impact is limited, and preference differences between principals and sessional GPs (previously called non-principals) are insufficiently explored.*

Aim: *To elicit GP principals' and sessional GPs' preferences for alternative jobs in general practice, and to identify the most important work attributes.*

Design of study: *A discrete choice experiment.*

Setting: *National Health Service (NHS) general practices throughout Scotland.*

Method: *A postal questionnaire was sent to 1862 principals and 712 sessional GPs. The questionnaire contained a discrete choice experiment to quantify GPs' preferences for different job attributes.*

Results: *A response rate of 49% (904/1862) was achieved for principals and 54% (388/712) for sessional GPs. Of responders, most principals were male (60%), and sessional GPs female (75%), with the average age being 42 years. All GPs preferred a job with longer consultations, no increase in working hours, but an increase in earnings. A job with outside commitments (for example, a health board or hospital) was preferable; one with additional out-of-hours work was less preferable. Sessional GPs placed a lower value on consultation length, were less worried about hours of work, and a job offering sufficient continuing professional development was less important.*

Conclusion: *The differences in preferences between principals and sessional GPs, and also between different personal characteristics, suggests that a general contract could fail to cater for all GPs. Recruitment and retention of GPs may improve if the least preferred aspects of their jobs are changed. However, the long-term success of contractual reform will require enhancement of the positive aspects of working, such as patient contact.*

Keywords: *experiment; general practitioners; job attributes; preferences.*

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Introduction

THROUGHOUT developing and developed countries, there are concerns about the recruitment and retention of doctors.[1] Shortages in medical personnel exist in many areas of medicine, particularly in primary care, and in remote and rural areas.[2-4] A minority of countries, such as Spain, actually have a surplus of doctors, whose skills are actively sought by the health services of the United Kingdom (UK) and other countries.[5] However, for most countries across Europe, factors such as the active implementation of the European Working Time Directive[6] (in countries where general practitioners [GPs] are employees), an ageing GP workforce, and the increase in the demand for more flexible careers and part-time working, have all combined to exacerbate GP shortages.

In the UK new contractual options and flexibilities have been introduced to try and improve this situation:

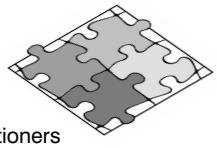
- The Doctors' Retainer Scheme (General Practice) was designed specifically to support those GPs with childcare responsibilities.[7]
- The Flexible Careers Scheme in England and Wales (2002) aims to provide opportunities for GPs to work less than full time, albeit for a maximum of 4 years.[8]
- The new general practice contract, recently accepted by GPs throughout the UK, is primed to promote even more flexible working, especially given that it offers the option to decline out-of-hours care and employ a variety of skill mixes.[9]

However, despite such contractual arrangements, the evidence base for their potential impact on recruitment and retention is currently limited.

At the centre of the recruitment and retention concerns is the relative attractiveness of different jobs and careers available to both current and future GPs. Therefore, it is essential to explore which job attributes (characteristics) are considered the most important by GPs. Such information could then be used to consider whether these attributes could be altered in some way to improve recruitment into general practice, and to encourage current GPs to remain in post or, at least, to move to another job within general practice.

Traditionally, GPs have been divided into two main groups: principals and sessional GPs (previously called non-principals). Both are similarly qualified, but work under different contractual arrangements. Principals are characterised as self-employed business partners in the practice, and for many years were predominantly male and working full time. The term 'sessional GPs' is used to describe those GPs who are not principals and includes freelance GPs (locums), retainees, associates, and assistants. Freelance GPs are self-employed and the remainder are

HOW THIS FITS IN



What do we know?

New contractual options and flexibilities have been introduced for general practitioners (GPs) in the United Kingdom to address recruitment and retention difficulties. However, valuable information on the relative importance of different job attributes (characteristics) was still required.

What does this paper add?

This study adds to the debate surrounding the recruitment and retention difficulties in general practice and to the implementation of the recent general practice contract. The paper also adds to the study of doctors' preferences more generally. Specifically, the study identifies which areas of the GP contract could be targeted to help recruit new doctors into general practice and to retain existing GPs.

largely employees of general practices or National Health Service (NHS) boards (in Scotland). Sessional GPs have been regarded as part-time employees, who are mainly young females, with childcare responsibilities. However, there is a lack of comprehensive information on the differences between principals and sessional GPs in terms of their preferences for specific job attributes. Therefore, to inform the debate on which job attributes are considered the most important to the majority of GPs, it is essential to elicit information on the preferences of both of these groups of doctors.

This article presents the results of a study designed to elicit GP principals' and sessional GPs' preferences for alternative jobs in general practice, and to identify the most important attributes of work. The study formed part of a larger project examining attitudes to flexible working among career grade doctors in both primary and secondary care throughout the NHS in Scotland.

Method

A discrete choice experiment was carried out to quantify GPs' preferences for different attributes of their work. A discrete choice experiment is a quantitative survey method, administered usually via questionnaire. The technique is based on the premise that any product or service can be described by its attributes, and that a numerical value can be placed on the preference for one attribute over another. Discrete choice experiments are increasingly used within health economics.[10] They have previously been applied to examine the preferences of hospital consultants for different types of jobs[11] and to several areas in primary care, including GPs' preferences for out-of-hours work and patients' preferences for GP ultrasound scanning.[12-13]

A discrete choice experiment presents responders with a number of hypothetical scenarios; they are then asked to choose their preferred option. Each scenario comprises several attributes, each of which has corresponding levels that are varied across scenarios. Factorial experimental designs are used to construct the scenarios, with each presenting a different combination of attribute levels.

To establish those attributes that were likely to be important for inclusion in our questionnaire, 12 interviews (with eight principals and four sessional GPs) were conducted, and two focus groups were employed. Group 1 had one sessional GP and three principals; group 2 had 10 sessional GPs. Although principals were randomly selected, sessional GPs were purposely selected to reflect the different job types (for example, associates or freelance). For both principals and sessional GPs, the selection also covered a mix of urban and rural practices. The resulting data, together with the findings of a literature review, informed the content of the questionnaire. The seven chosen job attributes, along with the rationale for their inclusion, are shown below:

- *Consultation time.* To act as a measure of quality of care, with the hypothesis being that longer consultations could be regarded as an indicator of greater quality.
- *Change in total hours worked per week.* As an indication of workload.
- *Change in annual personal income.* To reflect changes in earnings.
- *Outside commitments.* To reflect, primarily, work with non-general medical services (for example, a health board, hospital, Royal College of General Practitioners, or the British Medical Association).
- *Out-of-hours work.* To examine the extent to which this remained important when compared to other attributes.
- *Involvement in practice decisions.* To explore the level of decision making GPs preferred to have.
- *Participation in continuing professional development (CPD).* To capture whether GPs felt this was important.

Realistic levels were then assigned to each attribute, as presented in Table 1.[14] These levels were decided upon according to what would be realistic; for instance, waiting times included a national average figure and then a range either side of this. These combined attributes and levels produced 972 hypothetical jobs (scenarios). Pairing was undertaken to ensure that the statistical properties were satisfied such that the results did not depend on the way jobs were paired.[15] These were then reduced to a more manageable level of 15 scenarios using an experimental design.[16] These were placed into pairs by having the same hypothetical job in each pair (constant scenario), and pairing this with every other job. These paired scenarios then formed a choice (job A or job B).

To avoid overloading GPs with numerous choices, the choices were then divided across three versions of the questionnaire, hence reducing the burden placed on each individual GP, ensuring that all attribute levels occurred with approximate equal frequency in each version. An additional choice was added to each questionnaire to examine internal consistency, that is, responders' understanding of the questionnaire. The three questionnaires therefore contained six choices and responders chose job A or job B from each. The choices in each questionnaire differed slightly and an example is shown in Figure 1. Copies of other choices in the questionnaire are available from the authors on request.

Table 1. Attributes and levels.

Attributes	Levels
Consultation length	5,10,15 minutes
Change in total hours worked per week	-5 hours, no change, +5 hours
Change in annual personal income	no change, +10%, +20%
Outside commitments (hospital/health board/management/college/BMA)	none, some
Out-of-hours work — frequency of on-call night and weekend work	low: no nights or weekends medium: 1 night per week and 1 weekend in 6 high: 1 night per week and 1 weekend in 3
Involvement in practice decisions	none, some, extensive
Participation in CPD and training	enough, not enough

BMA = British Medical Association. CPD = continuing professional development.

Imagine you are looking for a new post and have been offered two jobs, A and B. You have negotiated terms and conditions. In each of the six questions, you are asked to choose which job you prefer. The two jobs differ according to the characteristics outlined below. Please take a moment to read through these before answering the questions.

When answering:

- assume all other characteristics are the same between jobs
- answer all choices — assume that these are the only options available to you
- be aware that there is no right or wrong answer
- be aware that job A is the same for all six questions, and job B is not the same for all six questions

	Job A	**Job B**
Consultation length	10 minutes	5 minutes
Total hours worked per week	No change	No change
Change in earnings	No change	No change
Outside commitments (for example, hospital, health board, management, college/BMA)	Some	Some
Out-of-hours work	1 night per week and 1 weekend in 6	1 night per week and 1 weekend in 3
Involvement in practice decisions	Some	Extensive
Participation in further professional development and training	Enough	Not enough
	Prefer job A	Prefer job B
	☐	☐

(tick one box only)

Figure 1. Example of a GP choice in the discrete choice experiment questionnaire.

Both principals and sessional GPs were presented with the same choices to allow a direct comparison of their preferences. Each GP was given one of the three questionnaire versions to complete, and asked to choose between different types of jobs. The questionnaires also contained additional questions on GP characteristics including contractual details, income, family circumstances, and standard demographic information, such as age and sex.

GPs from the focus groups completed a pilot survey; content (face) validity tested whether the questionnaire was understood, and construct validity tested whether results performed according to prior expectations. We hypothesised that GPs would prefer to work fewer hours, less out-of-hours care, and longer consultation times. No *a priori* hypotheses were made about the remaining attributes.

Descriptive statistics were analysed using the statistical package SPSS. Preference data from the questionnaire were analysed in a regression model (probit regression analysis with prefer A [0] or prefer B [1] as the dependent variable), which estimated an indirect utility (satisfaction) function based on the attributes defined in the choices. A random effects probit regression model was used for the analysis; this was carried out using the statistical package LIMDEP. This type of model was required because multiple observations per GP could mean that responses for individuals are correlated. To examine potential differences in preferences for job attributes between the different GP types and across personal characteristics, interaction terms were included in the model. Interaction terms included sex, age, marital status, and whether the GPs had children. These interactions can identify subgroups within the sample and can indicate where these subgroups have any additional strengths or weaknesses of preferences for particular job attributes.

The Information and Statistics Division (ISD) of the Scottish Executive Health Department provided a list of all practices and principals in Scotland, which included 1058 practices and 3765 principals. Sessional GPs were identified from various sources including the ISD, the associate advisers for the Doctors' Retainer Scheme, practice managers, and sessional GP groups. A total of 967 sessional GPs were identified, although some replied saying that they were principals; also many were unknown at the mailing address, and therefore the total used for the survey was 712. Difficulties with Data Protection Act restrictions meant that the final list, although not complete, was the most comprehensive in Scotland at the time. Salaried GPs were classed as sessional GPs; those who

had completed the pilot, together with those who were known to have died or retired, were excluded.

One of the three questionnaire types, plus a covering letter and prepaid envelope, was mailed to a total of 2574 GPs, comprising 712 sessional GPs and 1862 principals (a random sample of 68% from 3765) on 1 March 2002. A reminder was sent 4 weeks later, and the last completed questionnaire was received back on 4 June 2002.

Results

A response rate of 50% (1292/2574) was achieved for the GP discrete choice experiment survey, comprising 48% (895/1862) for principals and 56% (397/712) for sessional GPs. Twenty-four GPs had inconsistent responses (as described earlier) and were excluded, leaving 1268 responses for further analysis. Three responders did not state their sex. Of all male GPs (n = 640), 543 (85%) were principals and 97 (15%) were sessional GPs. For females, there were 352 principals (54%) and 297 sessional GPs (46%). Overall the average age of responders was 42.3 years. Information on GP characteristics and the variables used in the analysis are presented in Table 2.

Preferences for general practice jobs

Table 3 presents the results of the model that allows for

Table 2. Characteristics of responders to the GP discrete choice experiment survey.[a]

Characteristic	Principal	Non-principal	Total
Male (*n*)	543	97	640[b]
Female (*n*)	352	297	649[b]
Mean age in years (standard error)	44.1 (7.8)	38.1 (8.5)	1271
Mean net income (£) (standard error)	49 448 (17 595)	25 949 (15 412)	1258
Active in out-of-hours work	742	164	906
Inactive in out-of-hours work	140	229	369
High number of clinical hours (>40 hours/week)	113	9	122
Low to medium number of clinical hours (<40 hours/week)	767	368	1135
Married/cohabiting	800	323	1123
Single	83	61	144
Dependent children	574	210	784
No dependent children	321	187	508
Total responders	895	397	1292

[a] Additional information on the variables and samples used in the analysis can be obtained from: d.skatun@abdn.ac.uk; [b]Three responders did not state their sex.

Table 3. Preferences for different job attributes: GP principal and sessional GP interactions.

	Interaction model	
Explanatory variable	Regression coefficient	Standard error
Consultation length	0.289[a]	0.011
Consultation length x sessional GP	-0.344[b]	0.172
Change in hours of work per week	-0.100[a]	0.007
Change in hours per week x sessional GP	0.028[b]	0.121
Change in annual earnings	0.039[a]	0.004
Change in annual earnings x sessional GP	-0.006	0.006
Some outside commitments[c]	0.279[a]	0.066
Some outside commitments[c] x sessional GP	-0.222[b]	0.113
Out-of-hours work (medium intensity)[d]	-1.772[a]	0.080
Out-of-hours work (medium intensity)[d] x sessional GP	0.057	0.120
Out-of-hours work (high intensity)[d]	-3.239[a]	0.129
Out-of-hours work (high intensity)[d] x sessional GP	0.056	0.206
Some involvement in practice decisions[e]	-0.380[a]	0.077
Some involvement[e] x sessional GP	0.200	0.124
Extensive involvement in practice decisions[e]	0.445[a]	0.074
Extensive involvement[e] x sessional GP	-0.298[b]	0.141
Continuing professional development/training[f]	0.681[a]	0.064
Continuing development/training[f] x sessional GP	-0.232[b]	0.037
Constant	-1.126[a]	0.076
ρ	0.193	0.025
Log likelihood	-2732.2	
Number of individuals	1268	
Number of observations	7568	
Wald χ^2 (18)	1428.4[a]	

[a] = P-values ≤0.01; [b] = 0.01<P values ≤0.05; [c]relative to no outside commitments; [d]relative to no out-of-hours on-call commitments; [e]relative to no involvement in practice decisions; [f]relative to not enough continuing professional development/training.

Table 4. Personal characteristics and preferences: comparing principals with sessional GPs.

	Principals		Sessional GPs	
Explanatory variables	Regression coefficient	Standard error	Regression coefficient	Standard error
Consultation length	0.490[a]	0.049	0.270[a]	0.017
Consultation length x female	0.081[a]	0.023	-	-
Consultation length x age	-0.005[a]	0.001	-	-
Change in hours of work per week	-0.307[a]	0.046	-0.235[a]	0.048
Change in hours per week x female	-0.044[b]	0.018	-	-
Change in hours per week x age	0.004[a]	0.001	0.003[b]	0.001
Change in hours per week x married	0.055[a]	0.021	0.047[c]	0.026
Change in annual earnings	0.048[a]	0.005	0.044[a]	0.007
Change in annual earnings x female	-0.039[a]	0.008	-	-
Some outside commitments[d]	0.221[a]	0.083	-0.057	0.096
Some outside commitments[d] x female	0.370[a]	0.139	-	-
Out-of-hours work (medium intensity)[e]	-3.031[a]	0.363	-1.756[a]	0.122
Out-of-hours work (medium intensity)[e] x female	-0.744[a]	0.188	-	-
Out-of-hours work (medium intensity)[e] x age	0.024[a]	0.007	-	-
Out-of-hours work (medium intensity)[e] x out-of-hours work	0.363[a]	0.122	-	-
Out-of-hours work (high intensity)[e]	-5.99[a]	0.602	-3.820[a]	0.594
Out-of-hours work (high intensity)[e] x female	-0.479[b]	0.200	-0.689[a]	0.232
Out-of-hours work (high intensity)[e] x age	0.053[a]	0.011	0.023[c]	0.012
Out-of-hours work (high intensity)[e] x out-of-hours work	0.488[b]	0.200	-	-
Some involvement in practice decisions[f]	-0.387[a]	0.082	-0.402[a]	0.140
Extensive involvement in practice decisions[f]	0.322[a]	0.088	-0.109	0.142-
Extensive involvement[f] x female	0.562[a]	0.156	-	-
Further professional development/training[g]	0.722[a]	0.068	0.510[a]	0.102
Constant	-1.090[a]	0.094	-1.377[a]	0.153
ρ	0.216[a]	0.030	0.161[a]	0.050
Log likelihood	-1804.3		-742.8	
Number of individuals	855		356	
Number of observations	5098		2128	
Wald χ^2 (23)	951.0[a]		-	
Wald χ^2 (13)			390.2[a]	

Notes: Interaction terms indicate how the valuation of each attribute differs according to age, female relative to male, married relative to single and currently active in out-of-hours service relative to currently inactive in out-of-hours service. [a] = *P* values ≤0.01; [b] = 0.01 <*P* values ≤0.05; [c] = 0.05 <*P* ≤0.10; [d]relative to no outside commitments; [e]relative to no out-of-hours on-call commitments; [f]relative to no involvement in practice decisions; [g]relative to not enough continuing professional development/training.

differences in preferences for job attributes across doctor type. The interaction terms for sessional GPs allows variation in their responses relative to principals. The table first reports the coefficient for the reference group, in this case principals, followed by any additional effect for sessional GPs. The reported coefficients for sessional GPs indicates whether these GPs have a significantly higher or significantly lower preference for that particular job attribute, compared with principals. The significant value of *P* indicates that the responses of individual GPs were correlated, hence a random effect probit was the appropriate model.

Principals

The signs highlighting the coefficients on the attributes relating to income, hours worked and consultation time are what we would expect *a priori*. As the results show, principals prefer a job with longer consultation lengths, no increase in total hours of work, but with an increase in earnings. A job allowing for outside commitments was preferred, but one with high intensity out-of-hours care was less preferable.

In terms of involvement in practice decisions, extensive involvement was ranked the highest; with no involvement second, and some involvement the lowest. This suggests that the two extremes of involvement in practice decisions are preferred to the 'halfway house' of some involvement.

GP principals regarded continuing professional development (CPD) as a significantly positive attribute in a job.

Sessional GPs

Although there were some similarities with the principals, the sessional GP interaction terms indicated that this group demonstrated differences to principals in several areas. Sessional GPs had no significant difference in their valuation of a change in earnings compared with principals, but they had a significantly lower value (at the 5% level) attached to consultation length, were significantly less worried about their hours of work, and a job offering enough CPD was significantly less important. As with GP principals, the two extremes of practice involvement were preferred to having some or limited involvement in practice decisions, and extensive involvement in practice decisions was significantly less valuable to sessional GPs compared with principals. Sessional GPs also placed a significantly lower valuation on outside commitments compared with principals.

The log likelihood test, significant at the 1% level, suggests that the responses from principals and sessional GPs were sufficiently different in their attitudes to job choices offered to them. This indicates that in a further analysis principal and sessional GPs should be treated as two separate groups.

Personal characteristics and preferences

Table 4 reports the results of the influence of personal characteristics over preferences for different general practice jobs. For principals, the personal characteristic causing the most frequent statistically significant effect was sex. Compared with male principals, female principals placed significantly different valuations on all job attributes except for CPD. For instance, female GPs had a higher dislike of out-of-hours work than their male counterparts.

Age also features as an important determinant of variation within the principal sample. The younger the principals, the less likely they were to appear to prefer a job with longer hours. Similarly, younger principals indicated a higher dislike of out-of-hours work compared with older principals. Principals who undertook out-of-hours work indicated less dislike for this attribute. This suggests some selection effects, that is, individuals more likely to dislike out-of-hours care were less likely to be those actually participating in it.

In contrast, there is much less evidence regarding differences in preferences within the sessional GP sample, indicating that sessional GPs' preferences are more homogenous than those of principals. Sex only appeared to influence the valuation placed on the out-of-hours attribute, and sessional GP age seemed to affect only the attribute regarding hours of work.

There were also some personal characteristics that appeared to have no influence on job attributes. For instance, there was no evidence to suggest that the number of children in a GP's household influenced the preferences of either principals or sessional GPs. In particular, having children did not influence preferences for the number of hours worked per week. Married principals and sessional GPs placed a smaller weight on total hours, but marital status appeared to make no difference to strength of preference for the other attributes.

There was no evidence that large current workload, measured by clinical hours of 40 hours per week or more, influences the valuation of attributes. In particular, a large clinical workload appeared not to influence GPs' preferences for consultation length compared with that of those GPs with a smaller clinical workload.

Discussion

Main study findings

This paper has presented the results of a study designed to elicit GP principals' and sessional GPs' preferences for different attributes of general practice jobs. All questionnaire attributes were seen as important to GPs when considering future jobs. There was similarity across the different types of GP for some attributes and not for others. For instance, with respect to out-of-hours care, all GPs, irrespective of contract status, were more likely to prefer a job with less out-of-hours care. This suggests that the ability to opt out of this specific activity may lead to large numbers of GPs doing so if remuneration is set too low. The importance placed on this attribute by GPs also confirms the government's concerns shown in recent policy changes.[8]

The CPD attribute was significantly less important to sessional GPs compared with principals. GP principals may value the opportunity to undertake CPD over and above the effect of spending time away from the practice, which is picked up by the 'outside commitments' attribute. Sessional GPs in the sample were more likely to be freelance GPs, in the retainer scheme, younger, and therefore more recently qualified. This may account for why sessional GPs were less concerned about CPD compared to principals. Freelance GPs may also value it less because CPD is generally completed in their own time.

Strengths and the limitations of this study

Discrete choice experiments have generally demonstrated high levels of reliability and validity, although this does depend on the context.[17] Although the finding that GPs tended to want more of certain attributes (such as income), but less of others (such as out-of-hours care) does seem obvious, it reflects the theoretical validity of discrete choice experiments. This result is exactly as we would expect, as most studies using this technique produce such a result for the 'best case' scenarios. However, a potential limitation of this study is that the job choices we presented to GPs were hypothetical; further research is needed to compare the results of this study with actual GP behaviour. A further potential limitation is the low response rate of 50%. However, this is in line with other discrete choice experiment studies, where responders are asked to complete fairly complex questionnaires.

Comparison with existing literature

Some of the results revealed in our study confirm those found in other studies examining the job satisfaction of GPs.[18-19] Two previous studies of the preferences of GP principals found similar results.[20-23] In particular, preferences for less out-of-hours care and fewer hours at work per week have been shown previously. Furthermore, the finding that GPs would prefer longer consultations sits well with earlier research that has linked longer consultations with a higher quality of care.[23]

One important difference with our study is that we were asking GPs to think about the decision of which job they would choose if they were faced with two new job offers, rather than improvements that they would like to see in their current practice. Asking responders to think about a new job implies that they are free to think beyond their current situation and imagine their 'ideal job'.

Implications for policy and future research

In terms of future policy implications, the difference in preferences between the two types of doctor suggests that the GP contract needs to be relatively flexible, rather than aimed at the 'average' GP, and should take account of the variation in preferences between different types of GP contracts.

In our study the variation in GP preferences is not only illustrated between principals and sessional GPs, but is also apparent within the principal sample. Although sessional GPs appear to be a more homogenous group, there are significant differences regarding personal characteristics in the sample of principals. Historically, sessional GPs were thought of as GPs seeking partnerships, but for many GPs, becoming a sessional GP is a positive career choice, allowing flexibility of hours and other job characteristics. Furthermore, the age dimension may also have an impact for the future, as cohorts of younger GPs progress through their careers — in this study their preferences were quite different to those of older GPs.

These differences could imply that a general national contract may fail to cater for all types of principal, and that there is likely to be significant variation in the uptake of services for the new GP contract.

The preference of all GPs for longer consultations could well reflect a desire for improved quality of care. Therefore, recruitment and retention of GPs may improve if the worst aspects of their jobs are changed (for example, out-of-hours work). However, it is also important to enhance the positive aspects of working as a GP, such as spending time with patients, if a long-term impact is to be made through contractual reform. This suggests that future research should explore the potential to alter the relevant components of the GP contract, in line with the findings of this study.

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