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Informing Policy with Evidence

Exploring gender differences in uptake of GP partnership roles

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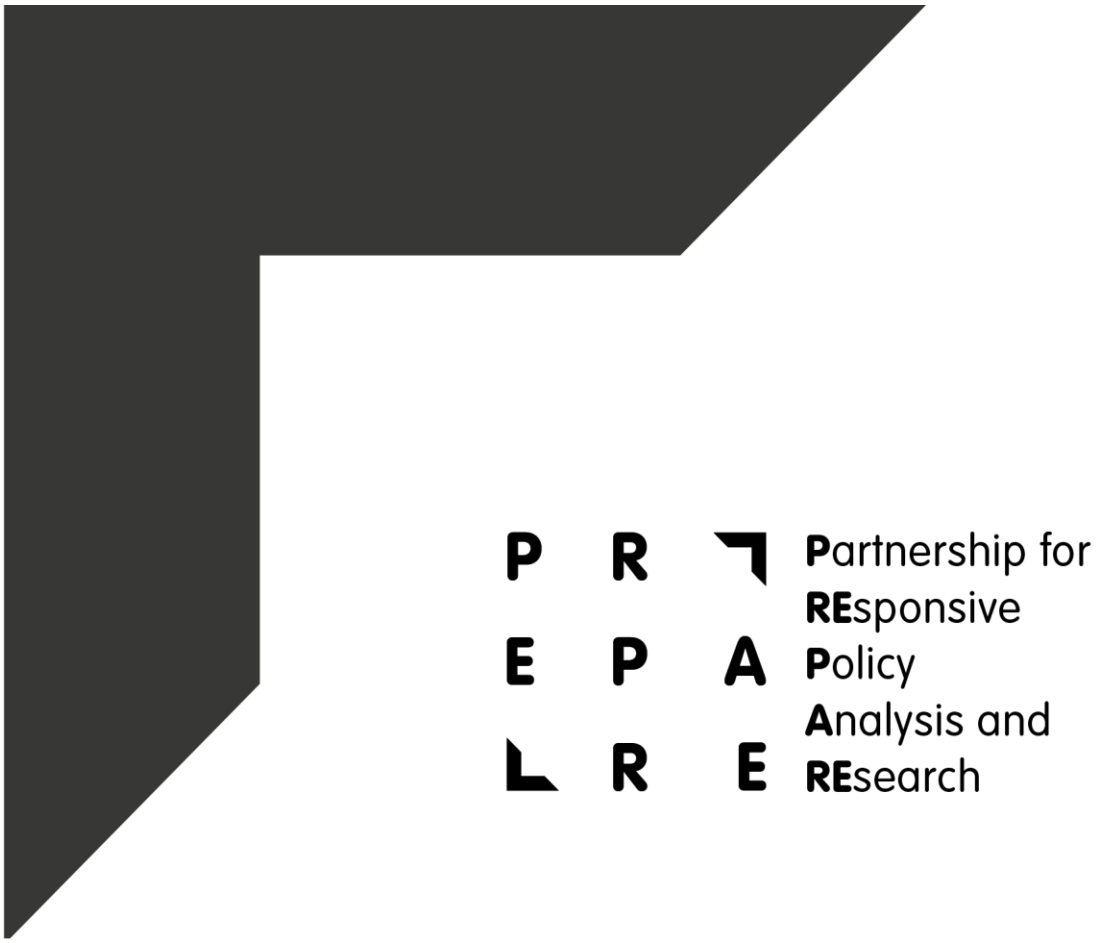

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Author contributions

Literature review database searching was undertaken by SG, with screening completed by SG, LJ and HE. Data extraction was undertaken by KB, NG and LJ, with synthesis of literature findings by LJ. SG undertook the social media analysis and LJ undertook the secondary data analysis. Online focus groups were designed and implemented by KB and LJ, with support from HE. LJ conducted the qualitative analysis of focus group data, integrating this with findings from other datasets. PS designed and analysed the discrete choice experiment for the study. LJ wrote the first draft of the report, to which all authors commented. All authors have read and agreed the final version.

Ethical Approval

This study was approved by the Health Sciences Research Governance Committee, University of York in March 2022. No HRA approval was required for this study.

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Competing interests

None declared.

Contents

Summary

An independent review of earnings in medicine (Dacre and Woodmans 2020) revealed a substantial gender pay gap in medicine, wider than other NHS staff groups and other professions. The basic gender pay gap (the difference between men's and women's pay, not accounting for differences in hours, age, grade or experience) is 24.4% for hospital doctors and 33.5% for GPs. Adjusting this to full-time equivalent pay, women GPs earn on average 15.3% less than men.

GPs can choose to pursue a career as salaried GPs, locums or partners. GP partners own a share in their business, as 'independent contractors' to the NHS, and they generally earn more, through profit sharing and to reflect additional responsibility. The lower rate at which women become GP partners may partly explain the gender pay gap. The independent review found that 80% of male GPs were partners, compared to less than 50% of female GPs, and while a gender pay gap still exists amongst partners, Dacre and Woodmans (2020) estimate a 65% reduction to the pay gap if men and women took up partner roles in equal proportion . In this report we explore possible reasons for the differences between men and women in their decision to take up partnership roles or not.

We have used a range of methods to explore the factors affecting this decision, focusing particularly on issues which may affect men and women differently. Our rapid review highlighted a lack of recent research evidence on this topic and no evaluations of interventions to support women GPs in senior roles. We used interviews, social media analysis, focus groups and a discrete choice experiment with GPs in England to explore what might be the key barriers to taking on partnership roles, and how men and women might view the roles differently.

A range of factors at individual, organisational and national levels influence the decisions of both men and women GPs around taking on a partnership role. The most commonly reported barriers were the desire for work-family balance (particularly relating to childcare responsibilities), workload pressures, greater level of responsibility associated with partnership roles, financial investment and risk. Some GPs described partnership roles as problematic due to wider workforce pressures, alongside negative reporting about GPs in the media and uncertainty around future changes in the overall general practice model of delivery.

Gender differences included women GP's stronger feelings around childcare pressures and balancing work and family life, and negative experiences of working conditions including maternity and sickness pay. Some women described discriminatory practices and an 'old boy's network' in medicine, favouring men and full time GPs.

GPs also described positive experiences, including the importance of good teams, role models and feeling supported to work in partnership roles.

Key points

- The gender pay gap for general practitioners (reported to be around 35%, unadjusted) is one of the highest of any UK profession. While partly explained by differences in working hours, age and experience, women's lower probability of taking up partnership positions is estimated to account for a large proportion of this difference.

- We found little recent research evidence exploring gender differences in barriers to career progression in general practice and no studies evaluating interventions to support women in general practice or partnership uptake.

- Using a variety of methods (social media analysis, interviews, asynchronous online focus groups and a discrete choice experiment) studying GPs in England, we revealed broad insights into individual, organisational and national level factors that appear to influence the uptake of partnership roles.

    - Work-family balance and perceived inflexibility of partnerships alongside childcare or other responsibilities was one of the greatest perceived barriers. This was voiced by both men and women (though more frequently by women than men).

    - Other barriers included workload and the greater level of responsibility associated with partnership roles, financial investment and risk.

    - Partnerships were of questionable appeal amidst wider workforce pressures and low morale in general practice, alongside uncertainty created by policy debate around potential changes to the partnership model.

- Decisions to take up partnership roles are affected by the relative attractiveness of other roles (e.g. greater opportunity for work-life balance in salaried and other roles).

- Our findings revealed a sense of emerging conflict between the partners and non-partners - a *"them and us"* culture was described.

- While some similar attitudes and factors affecting decisions were reported by both men and women in our samples, there were also some gender differences. These included women's stronger feelings about childcare pressures and balancing work and family life, working conditions including maternity and sickness pay, and reports of discriminatory practices. In our social media analysis, male GPs were more likely to express support for the partnership model than women.

- Further research could design and evaluate interventions to support women's career progression in general practice and uptake of partnership roles, identifying areas of good practice. The importance of *'finding the right practice'* was reported as key to encouraging participation (amongst men and women) as well as supporting current partners to remain in the role.

1. Background

The gender composition of the medical workforce has changed over recent decades around the world. In the UK, women currently make up 53% of the UK general practitioner workforce (based on full time equivalents) (NHS Digital 2022). Despite this parity in numbers, research has highlighted gender differences in medical work, for example differences in working hours (e.g. (Lachish, Svirko et al. 2016), specialty choice (e.g. (Jefferson, Bloor et al. 2015, Rodriguez Santana and Chalkley 2017) and gendered barriers facing women in medicine (e.g. (Reed and Buddeberg-Fischer 2001). Studies show that women still experience different treatment by colleagues, patients and senior doctors, with the 'old boys' club' still apparent in some settings (Cassell 1998, Davies 2003, Jefferson, Bloor et al. 2015). Meanwhile, wider societal gender expectations mean that women doctors continue to take on the majority of caring responsibilities in the home (Davidson, Lambert et al. 1998, Miller and Clark 2008), even in dual doctor marriages (Soares, Thakker et al. 2021). Miller and Clark (2008) outline how this creates a role conflict for female doctors, inhibiting their career progress. Recent evidence from international primary care settings suggests this societal expectation places additional pressure on women GPs' life transitions (Shiner, Watson et al. 2020).

The presence of a 'glass ceiling' has been widely described, referring to women's lower ability to progress in their careers and worse reported pay and conditions (Kvaerner, Aasland et al. 1999, BMA 2004, Levinson and Lurie 2004, Carnes, Morrissey et al. 2008, Edmunds, Ovseiko et al. 2016). A recent independent review into gender pay gaps in medicine (Dacre and Woodmans 2020) aimed to identify disparities in pay across health settings and specialties. The gender pay gap for general practitioners was one of the highest of any UK profession, reported to be around 35% (unadjusted). This is partly explained by women choosing to work fewer hours, and by age and experience, but a substantial gender pay gap remains. Adjusting to full-time equivalent, women GPs earn 15.3% less than men (Dacre and Woodmans 2020).

On completion of their training, GPs can work as either partners, salaried GPs or locums. One factor potentially driving the gender pay gap in general practice is the lower rate at which women become partners, since this is a more senior position historically associated with higher remuneration as a result of profit-shares. While women now represent just over half of the GP workforce, only 41% of partners are female (NHS Digital 2022). The review estimated that if men and women were spread across partnership roles in equal proportion, the observable gender pay gap would reduce by 65% (Dacre and Woodmans 2020).

Studies exploring experiences and perceptions of partnership have shown that partnership is associated with higher work pressure (Evans, Lambert et al. 2002, Lloyd and Leese 2006, Mori 2015, Merrett, Jones et al. 2017, Spooner, Laverty et al. 2019). For early career or trainee doctors in particular, the perceived greater management responsibilities can be prohibitive (Evans, Lambert et al. 2002, Merrett, Jones et al. 2017, Spooner, Laverty et al. 2019) and they may prefer the flexibility of a salaried role (Evans, Lambert et al. 2002). Through interviews with GP partners in Scotland, Watson and colleagues (2021) describe concerns around the long-term sustainability of the GP practice model, as GPs become less interested in taking on the financial risk of a partnership whilst facing increasing complexity and quantity of GP workload. Conversely, potential benefits of the partner role were also highlighted, with newly qualified doctors being attracted by greater remuneration, decision making ability and potential for increased job satisfaction (Lloyd and Leese 2006, Merrett, Jones et al. 2017). NHS England has recently introduced the 'New to Partnership

Payment' scheme (N2PP) to increase the number of partners in general practice, as part of a range of interventions to recruit and retain GPs brought about by the 2020 GP contract change (NHSE 2020). The scheme offers £20,000 (pro-rata), a contribution towards on-costs up to £4,000 (pro rata) to support the establishment as a partner, and up to £3,000 training costs for non-clinical skills.

Evidence is needed to explore the perceived value and knowledge around the N2PP scheme, and while existing studies highlight the barriers to partnership perceived across all GPs, they do not explore gender differences in experience.

2. Aims and objectives

This research aims to explore factors affecting decisions to take up partnership roles in GPs in England, focusing particularly on issues which may be deterring women from becoming GP partners.

Objectives are to:

1) Identify existing evidence exploring the barriers to and facilitators of women taking up GP partnership roles
2) Identify interventions that may encourage female participation in these roles, and synthesise any available research evidence of their effectiveness and costs.
3) Explore GPs' decisions around taking on partnership roles, hours of work and future plans; considering any apparent gender differences in views.
4) Identify GPs' level of knowledge around the 'new to partnership' scheme,
5) Canvass views on this scheme and other potential policy approaches to encourage greater female participation and take up of partnership roles

3. Methods

We employed a mixed methods research design, including a rapid literature review to identify existing evidence in this field, followed by a secondary analysis of two existing datasets: a qualitative interview dataset on GP wellbeing (Jefferson, Heathcote et al. 2022) and a social media dataset of UK GPs' Twitter commentaries since COVID-19. Building on these analyses, we designed and conducted asynchronous online focus groups with GPs in England, incorporating a pilot discrete choice experiment. We combine the findings using methodological triangulation, strengthening the validity of each of our studies.

3.1 Rapid review

To synthesise research evidence exploring barriers and facilitators in women's uptake of partnership roles in general practice and interventions to support women GPs taking on more senior positions, including partnership, we undertook a rapid literature review.

Search strategy

We searched MEDLINE, Embase, HMIC and (owing to the potential for reports in non-academic journals) Google Scholar, based on the following parameters:

Population: UK general practitioners, searched using the UK geographical filters for Medline and Embase developed and validated by NICE. We excluded studies of doctors not working in primary care. We excluded studies including numerous health professionals if they did not provide subgroup analyses or data specifically for the GP group. We used search terms for general practitioner and those relating to general practice, excluding international studies, where payment and other systems differ markedly.

Intervention / type of exposure: Barriers and facilitators experienced by women, which may include studies of gender differences.

Comparator: Since any study design was eligible for inclusion, this may have included randomised controlled trials exploring workplace interventions to support women GP's participation in senior positions, including partnership.

Outcome measures: Women's experiences and perceptions of participating in senior practice roles and GP partnerships.

Study Design: Studies were not limited by design, but editorials and case reports were excluded. No language or date restrictions will be applied.

Study selection

We downloaded all records to Endnote, removing any duplicates. In the first screen, two of three reviewers independently screened studies for inclusion, classifying all titles and abstracts as eligible,

excluded or uncertain about eligibility. Each reviewer was blind to the other's assessment. We retrieved full texts for all eligible or potentially eligible papers and one primary reviewer screened these for inclusion. We recorded all excluded articles, with the reasons for exclusion used to generate a flow diagram as recommended by the PRISMA statement (Moher, Liberati et al. 2009).

Data extraction

We used a data extraction form to extract information about study design, sample size, sample characteristics, primary and secondary outcomes. One of two reviewers performed data extraction, which was checked for consistency and content by a third reviewer.

3.2. Secondary analysis of existing qualitative datasets

We used an existing qualitative dataset from a recent project exploring the impact of COVID-19 on GP wellbeing to conduct secondary analysis. The dataset comprised 40 GP interviews, coded using NVIVO 12 (QSR International Pty Ltd. Version 12, 2020). Searching for the terms 'salaried' and 'partner' and coding the surrounding text iteratively, we drew out commentary relating to barriers, facilitators and interventions around partnership roles, comparing the views of men and women (objectives 3 and 4). This was used to inform the conduct and design of the later focus groups.

3.3. Social Media Analysis

Preparing the dataset

A cohort of practising UK NHS GPs using Twitter was identified in our previous GP wellbeing study (Golder, Jefferson et al. 2021); we used this collection of 273,562 tweets by GPs in the NHS to search for the following terms:

> GP AND Partner (245 tweets), GP AND Partnership (95 tweets), GP AND Principal (8 tweets), Partner AND locum (27), Salaried (202)

To obtain more recent tweets and expand our cohort of GPs, we searched for further Twitter accounts of UK NHS GPs. The following set of searches were conducted on Twitter user descriptions using Mozdeh (a big data text analysis software http://mozdeh.wlv.ac.uk/) to identify further GPs:

> GP|G.P.|general practitioner|General Practitioner| MD

This generated 33,276 twitter users; restricting these to the UK as a location reduced this to 5,539 and using manual sifting for NHS GPs yielded 1,543 UK NHS GPs on twitter. The usernames of these GPs were then used to search for up to a maximum of the most recent 3,200 tweets from each user with the assistance of Mozdeh software.

This resulted in 939,640 tweets which were then searched for the following terms:

GP AND Partner (822 tweets), GP AND Partnership (356 tweets), GP AND Principal (30 tweets), Partner AND locum (110), Salaried (1363)

GP Demographics

The gender of each GP posting was automatically extracted using Mozdeh software which is based on first names as male, female or unclassified. For unclassified users we manually extract their gender based on self-declarations in the user's bio (such as the use of pronouns and statements such as 'Mum of 2 beautiful sons') and in some cases the user's profile picture.

The city or town was extracted for the majority of the GPs, with a few providing the location as simply the UK.

Identifying Tweets Related to GP Partnership Roles

We entered all the tweets from the searches into one Excel spreadsheet and removed duplicates, resulting in 1886 tweets posted from 1st January 2019 to 12th March 2022 for annotation. We annotated each tweet using pre-specified guidelines. Each tweet could be coded to more than one code. The number of retweets of each tweet was also available.

We first screened the 1,886 Tweets for potentially relevant posts related to GP partnership roles. At this stage we excluded 1,257 tweets that were:

- Advertisements for GP posts (partnered, salaried or locum)
- Statements regarding the difficulties of recruiting GPs (partnered, salaried or locum)
- Statements (often numerical) describing declining numbers of GPs (often in relation to different GP roles)
- Discussions about a relationship partner rather than a GP partner
- Statements for which we were unable to decipher the meaning of the post.

3.4. Asynchronous online focus groups

We chose to use asynchronous online focus groups (AOFGs) for primary data collection in this study as they offer an opportunity to explore the views of groups of geographically dispersed individuals remotely, connecting on a topic at a time of their convenience (Gordon, Calzo et al. 2021). This can be particularly beneficial for discussions with hard-to-reach groups, which include medical professionals (Biedermann 2018). AOFGs generally take place over the course of several days via online discussion boards, facilitated either through specific platforms or social media groups.

For the purposes of this research, online focus groups were designed to take place over 5 days using an online discussion board (Collabito), which was accessible via computer or mobile phone. Participants were able to contribute at multiple time points over this period at their convenience. Topics were posted on the discussion board each day, enabling participants to login and contribute to discussions at a time convenient to them.

Topics explored GPs' views of taking on partnership roles and relevant experiences during their working lives that may contribute to these decisions. Specifically, discussions across the five days centred on the following topics (details and questions can be found in Appendix D):

- Day One: Process of joining partnerships
- Day two: Attitudes to partnership roles
- Day three: Policy interventions
- Day four: Gender and culture in general practice
- Day five: Discrete choice experiment (see later section)

Initial questions were open and framed in a non-leading way, but if debate stalled the focus group facilitators provided prompt questions. Researchers facilitating sessions also answered queries and monitored discussions for appropriate content. Where meaning was unclear during focus group discussions and analysis, member checking was employed (clarifying meaning with participants). A pilot focus group with salaried women GPs was undertaken in order to test the processes prior to wider dissemination. Data for this pilot group was comparable to the wider discussions and was used in the analysis.

Sampling

We included men and women GPs enabling exploration of gender differences, but sampling was weighted towards women. The sampling framework captured experiences of different groups of GPs varying in role type and gender:

- Partners (two groups of women, one group of men)
- Non-partners (two groups of women, one group of men)
- Those that have left partnership roles (mixed gender group).

In total, there were 7 focus groups (four groups of women, two groups of men and one mixed group). We aimed to recruit 8-10 participants in each focus group (56-70 in total), with variation across various characteristics, theoretically informed by literature showing gender differences and wider practice characteristics that may influence choices:

- Age and time since qualified
- Working hours
- Current caring responsibilities (dependent children, elderly)
- Practice size
- Geographical location

Owing to the constrained resources and timescale of this work, it was not possible to obtain a spread in all characteristics (with multiple participants in each category), nor is it the purpose of qualitative research to seek to generalise across multiple groups. This sampling approach is developed to generate knowledge that may be transferable and generate hypotheses which could be tested in future research.

Participant recruitment

Recruitment was achieved through the following channels:

- Snowballing through local and national networks of contacts in primary care
- Social media promotion (through the researchers' and wider contacts' Twitter accounts).

- Email circulation within key organisations such as RCGP.

Patel et al (2017) describe the challenges of recruiting GPs to qualitative research, and suggest using payments as a goodwill gesture to reimburse participants for their time. We provided a goodwill voucher payment of £75 to each participant to thank them for their time. This is consistent with the University of York's policy on the payment of individuals for involvement with and contribution to research, following the suggested rate for up to half a day's time.

Analysis

Transcripts from the AOFGs were immediately available following completion of each session, at which point they were entered into data sorting software, NVivo 12. We used the process of Framework Analysis (Ritchie and Spencer 2002) to analyse the data thematically, moving through the stages of data familiarisation, sorting the data into emerging themes and exploring relationships between themes. Findings were contextualised using quotations throughout. One researcher undertook coding, with consultation and discussion with the wider team when developing and refining the coding framework.

3.5. Pilot discrete choice experiment

Discrete choice experiments (DCEs) are used to quantify participants' preferences by asking them to make choices between two or more alternatives, with at least one component being varied through a series of tasks or questions (Wang, Wang et al. 2021). A pilot DCE was included in the AOFGs to ascertain GPs' priorities and reactions to different components of the partnership role.

The DCE methodology permits a simplified exploration of the key components of the partnership role, to find out what the biggest barriers are, and whether these are viewed differently by men and women. It allows us to arrive at quantitative estimates of how GPs in our sample make trade-offs between the attributes in the experiment. For example, what increase in expected earnings might compensate respondents for a given increase in the "buy-in" cost of a partnership? It can also allow us to predict the effect of changes in attributes on choices. For example, if GP partners are allowed a greater degree of flexibility of working hours, how much could this increase the proportion of respondents who would be willing to accept the downsides of taking on a GP partnership? The design and estimation of discrete choice experiments are informed by random utility theory, which is an economic theory of how individuals trade-off attributes of alternative choices to make decisions. Statistical models are estimated using the results from the choice scenarios to estimate preference parameters of the respondents and make behavioural predictions.

This DCE was conducted as a pilot study, with a simpler design and a smaller sample than would be expected in a typical larger scale research project. The predictions and inferences from this data are limited by the timing of the project, but as well as increasing information gleaned in this mixed method project, the pilot can could inform future research in this area.

We designed an unlabelled DCE (Career Choice A/B) with four attributes and two levels for each attribute, allowing the full-factorial of 16 choice alternatives to be included in 8 choice scenarios. The *dcreate* program (Hole 2017) within Stata/MP 17.0 software was used to create a D-efficient design to allocate the choice alternatives to the scenarios.

The choices of questions and attributes to be included in the pilot DCE design were informed by the rapid review and through initial discussions with stakeholders at DHSC and with GPs involved in the project. We focused on key work-life attributes for GPs' career choices and attributes which were particularly associated with the decision to take up a partnership. We also used documentary evidence and initial discussions with GPs involved in the project to inform the levels of the attributes. Our choice of four attributes were average annual earnings (£90,000/£140,000 per year), up-front investment (£0/£150,000), responsibility and influence over practice management and risks (little/lots of responsibility and influence), and flexibility of working hours (some/little choice over timing of working hours).

3.6. Ethical considerations

We obtained ethical approval from the Department of Health Sciences Research Ethics Committee. NHS Research Ethics Committee and/or Health Research Authority review were not required for this study as we did not recruit through NHS organisations.

Participants were not obliged to take part in the focus groups or discrete choice experiment and gave informed consent to do so. Participants were able to withdraw at any time. Participants were anonymised (including while participating in the AOFGs, where they were allocated an animal as a proxy identity) and were not identifiable in any quotations published. Identifiable information was stored securely, and retained within the research team at the University of York.

4. Findings

4.1. Overview of existing literature

Our rapid review of the UK literature revealed no studies specifically exploring barriers to women's uptake of partnership roles, and no studies of interventions to support women GPs taking on more senior positions. We included 15 studies in total which explored more general barriers to career progression (Figure 1).

The studies identified were not up-to-date (one was from the 1970s, two 1980s, six 1990s, three 2000s, three 2010s); the most recent study was undertaken in 2013. Studies were geographically dispersed across the UK, with eight regional, three across the UK, two in England and two in Scotland and one in Wales (see Characteristics of Included Studies table in Appendix A).

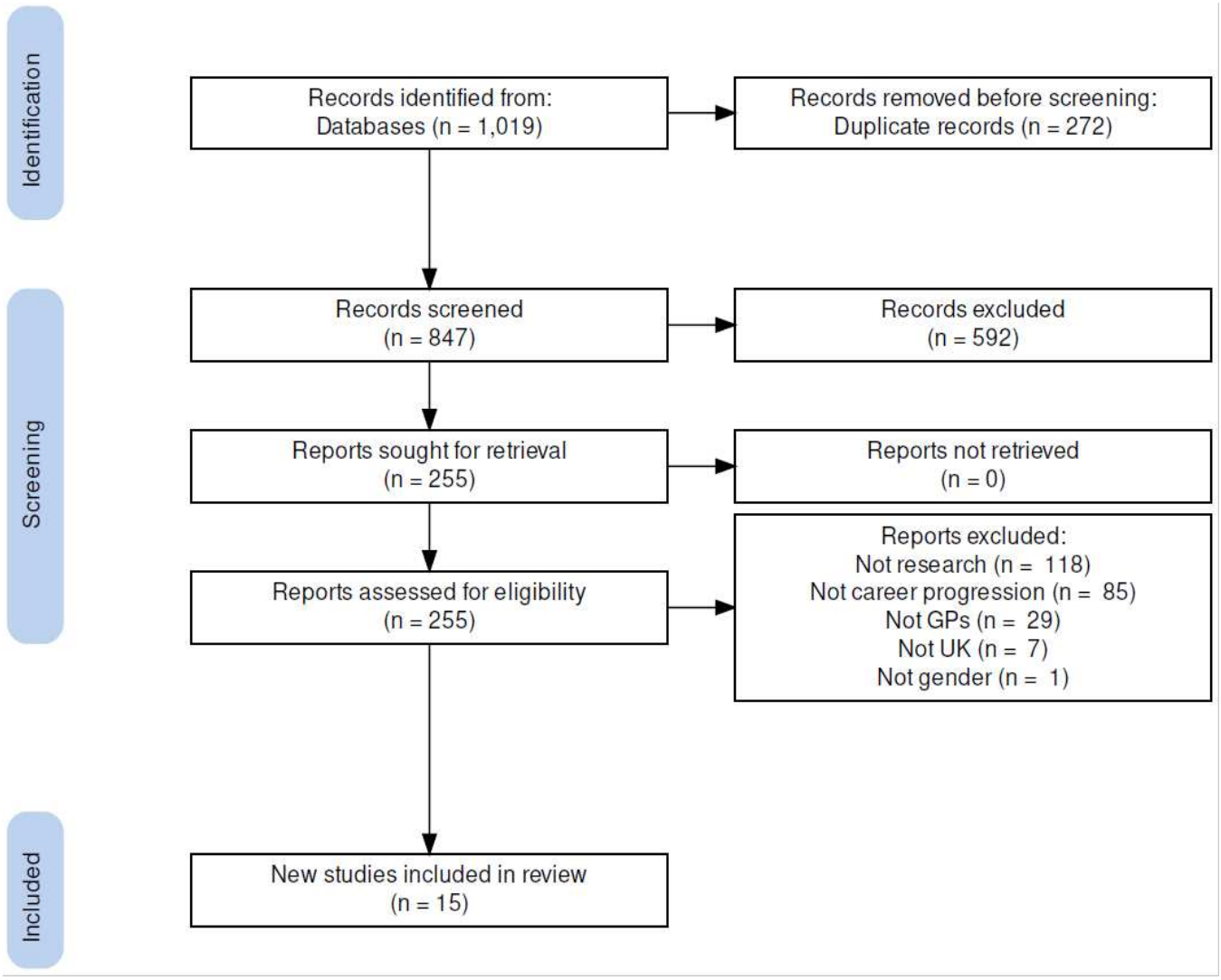
Cross-sectional survey designs were most commonly used (10), four studies adopted qualitative interview methods, one was a discrete choice experiment and one a secondary analysis of existing data. We found no relevant interventional study designs (e.g. randomised controlled trials).

Sample sizes ranged from 44 to 1902 participants (median 368). Demographic characteristics commonly reported by studies included age and gender, with mixed reporting of other characteristics such as working hours. Six studies focused on only exploring the views and experience of women, while nine compared men and women.

Summary of findings

Existing studies in this field most commonly discussed barriers associated with childcare responsibilities and gender differences in need for (or use of) flexible and part time working (explored in 10 studies). Associated with this were prohibitive maternity leave practices and women described challenges of spouse's job and geographical location. Seven studies described gendered cultures and discriminatory practices and five studies described gender differences in satisfaction with their roles and career progression. These themes are described in further detail in Appendix B.

Figure 1: PRISMA diagram of studies



4.2. Integrated qualitative findings

4.2.1. Sample characteristics

Our data was derived from three sources:

- 40 interviews with UK GPs during Spring/Summer 2021; 29 women and 11 men, purposively recruited to cover different career stages and job roles (Table 1).
- 50 GPs who participated in asynchronous online focus groups, incorporating a DCE; we over-sampled women and recruited partners, non-partners and those who had left partnership roles (Table 2).
- 232 GPs tweeting 629 tweets relating to discussions about GP partnership roles made between 1st January 2019 and 12th March 2022. 347 (55%) of the tweets were posted by 135 (58%) male GPs, 269 (43%) by 92 female GPs and 13 (2%) were posted by 5 (2%) GPs with an unknown gender.

We have pooled the three data sources in order to draw out overall themes.

Table 1: Interview participant characteristics

CHARACTERISTIC		N=40
CAREER STAGE	Early	13 (33%)
	Established	19 (48%)
	Late	8 (20%)
GENDER N (%)	Male	11 (28%)
	Female	29 (73%)
AGE N (%)	<30	3 (8%)
	30-39	20 (50%)
	40-49	9 (23%)
	50-59:	6 (15%)
	>60	2 (5%)
ETHNICITY N(%)	Black, Asian or other ethnic minority	10 (25%)
	White British	27 (68%)
	White non-British	3 (8%)
ROLE N (%)	GP trainee	6 (15%)
	GP retainer	1 (3%)
	Salaried GP	17 (43%)
	GP Partner	14 (35%)
	Retired GP	2 (5%)
LOCATION N (%)	East of England	3 (8 %)
	London	5 (13 %)
	North East	1 (3 %)
	North West	3 (8 %)
	South East	3 (8 %)
	South West	4 (10 %)
	West Midlands	5 (13%)
	Yorkshire and Humber	14 (35%)
	Northern Ireland	2 (5%)
CLINICAL SESSIONS N (%)	Median (IQR)	6 (3.6)
	1-4	11 (28%)
	5-7	16 (40%)
	≥8	9 (23%)
	Retired	2 (5%)
	Unknown	2 (5%)
PORTFOLIO ROLES N (%)		18 (45%)
AREA DEMOGRAPHICS	Highly deprived	10 (25%)
	Pockets of deprivation	9 (23%)
	Rural or semi-rural	4 (10%)
	Large elderly population	4 (10%)

Table 2: Focus group and DCE participant characteristics

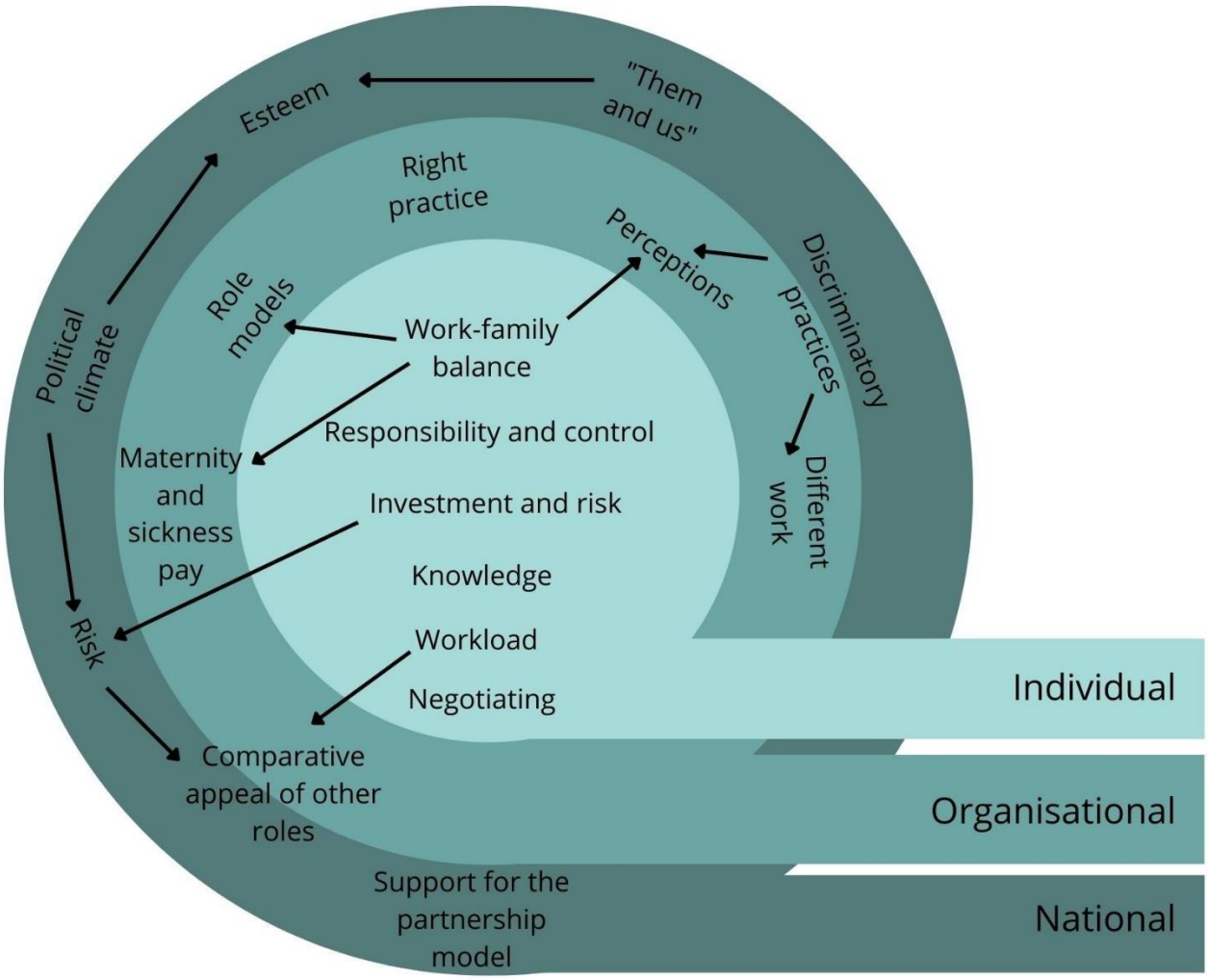
			FOCUS GROUP						
		ALL (and DCE) (N=50)	Women salaried 1 (N=7)	Women salaried 2 (N=8)	Women partners 1 (N=8)	Women partners 2 (N=7)	Men salaried (N=7)	Men partners (N=6)	Former partners (N=7)
GENDER	Male	14 (28%)							1
	Female	36 (72%)							6
AGE N(%)	<30	1 (2%)	0	1	0	0	0	0	0
	30-45	32 (64%)	6	5	3	3	7	4	3
	46-60	14(28%	1	2	4	4	0	2	1
	>60	3 (6%)	0	0	0	0	0	0	3
	Missing	0	0	0	1	0	0	0	0
SESSIONS/HOURS	Median (IQR)	13 (19)	25.0 (12.5)	22.5 (9.4)	40.0 (14.5)	33.0 (6.0)	35.0 (5.8)	40.0 (1.9)	18.0 (9.4)
CARING	No caring role	17 (43%)	1	3	0	3	3	3	3
RESPONSIBILITIES	Caring, dependent	31 (62%)	6	5	7	4	4	3	3
	children	1 (2%)	0	0	1	0	0	0	0
	Caring, other	1 (2%)	0	0	0	0	0	0	1
	Missing								
PRACTICE SIZE	<10,000	8 (16%)	0	1	2	0	4	0	1
	10,000-15,000	12 (24%)	1	2	1	1	2	1	3
	15,000-20,000	9 (18%)	0	2	3	2	0	2	1
	>20,000	18 (36%)	6	2	2	4	1	3	1
	Missing	2 (4%)	0	1	0	0	0	0	1
ROLE	Locum	4 (8%)							
	Salaried	24 (48%)							
	Partner	21 (42%)							
	Retired Partner	1 (2%)							
LOCATION	East of England	4 (8%)							
	London	4 (8%)							
	North East	1 (2%)							
	North West	4 (8%)							
	South East	5 (10%)							
	South West	3 (6%)							
	West Midlands	6 (12%)							
	Yorkshire and Humber	23 (46%)							

4.2.2. Thematic findings

Through an iterative thematic analysis of all datasets, overarching themes around facilitators and barriers to uptake of partnership roles began to emerge, with notable similarities across all datasets. Many of these were interrelated; often the 'push' away from partnership roles was supplemented by the 'pull' of other roles. For example, the substantial financial investment involved in joining a partnership was viewed negatively alongside the relatively high earnings potential of other roles, including locum posts, portfolio roles, and even some salaried GPs' earnings. Context was important, with views of partnership often influenced by the wider political context and pressures facing general practice.

In the mapping phase of analysis, we grouped findings into themes that related to the 'individual,' 'organisational' and 'national' levels. These are summarised graphically in Figure 2. Relationships between themes are indicated by arrows. These relationships often crossed levels - for example the impact of childcare needs and desire to achieve 'work-family balance' was influenced by organisational factors, such as role models, maternity pay or presumptions of managers or practices teams.

Figure 2: Factors influencing perceptions and experiences of uptake of partnership roles.



Gender differences

While there did not appear to be any strong gender differences in interview respondents' accounts regarding partnership roles (and numbers in this dataset were small), the social media and focus group analyses revealed different proportions of comments from men and women GPs. In Table 3 and 4 these themes are highlighted where there is a moderate difference in proportions. Tests for statistical significance in these proportions revealed some of these were statistically significantly different for men and women GPs (Table 3 and 4). In the social media analysis, there were gender differences in the quantity of tweets in support of the partnership model (more often discussed by men, p=0.013) and about gender differences in childcare responsibilities, conditions and the gender pay gap (more often discussed by women, p=0.008). Amongst focus group participants, there was a greater tendency for women to describe experiences of gender discrimination (p= 0.03), difficulties in balancing work and family life (p=0.03) and lower likelihood of commenting on perceived parity in pay (p=0.04).

General changes over time

General changes over time permeated all of the datasets. Societal changes, changes to medical culture, perceptions of and appetite for partnership roles and also the processes of buying-in were just some examples of factors that had varied over time. In terms of gender differences in uptake of partnership roles, societal changes over time and changes to medical training such as the provision of 'less than full time' training routes were described as making medicine more accessible to women. There were, however, wider changes that were seen as deterring GPs (both male and female) from taking on partnership roles. These included higher costs of student loans, personal mortgages, perceived risk and instability in UK general practice and unmanageable workload pressures. Described in further detail in later sections, some of these barriers are discussed in the following quotation from a focus group participant:

> *"Fundamentally it's hard to see partnership becoming more appealing whilst there are so many supply side issues in general practice. We're under-funded, can't recruit and it feels like we're struggling to survive and being drowned in work. There's also a prevailing and negative narrative around partnership at the moment. My feeling is that 20 years ago partnership was something to aspire to. Now, my perception is that there are loads of practices - certainly around where I work - who are absolutely desperate for partners. Lots are retiring, and they can't find replacements - and so begins a vicious cycle of over-work and more quitting/early retirements." GP25, female salaried*

Table 3: Number and proportion of women and men discussing each theme.

*Highlighted themes indicate larger differences in proportion of responses by gender. *Statistically significant differences in proportions at the p<0.05 level*

FOCUS GROUP THEMES AND SUBTHEMES		NUMBER OF WOMEN AND MEN DISCUSSING EACH THEME			
		Women (N=36)		Men (N=14)	
		N	%	N	%
TIMES CHANGE		17	47	6	43
BARRIERS	Work-family life*	31	86	8	57*
	Financial	31	86	12	86
	Workload	26	72	10	71
	Risk	21	58	8	57
	Relationships - right practice	19	53	10	71
	Business management	28	78	10	71
	Knowledge	25	69	8	57
	Media and political narrative	13	36	5	36
	Other ways to earn/changes	11	31	7	50
	Perceptions/awareness	7	19	2	14
	Role models	3	8	1	7
	Culture - us and them	15	42	2	14
	Other	3	8	2	14
FACILITATORS	Responsibility and control	29	81	11	79
	Relationships	19	53	5	36
	Investment	13	36	9	64
	Knowledge	7	19	1	7
	Esteem	7	19	5	36
	Flexibility	3	8	1	7
	Other	7	19	3	21
GENDERED	Barriers	32	89	11	79
	Family/childcare	26	72	11	79
	Discrimination*	20	56	3	21*
	Imposter syndrome	7	19	1	7
	Different work	5	14	0	0
	Career choice	7	19	1	7
	Negotiating	9	25	2	14
	Maternity	15	42	5	36
	GPG causes	8	22	4	29
	Perceived parity*	14	39	10	71*
	Changed times	2	6	1	7
	Cultural	1	3	2	14
NEW TO PARTNERSHIP	Positives	23	64	8	57
	Negatives	29	81	12	86

Table 4: Topics covered by tweets, by gender

**Statistically significant difference in proportions at the p<0.05 level.*

SOCIAL MEDIA THEME	TOTAL		MALE		FEMALE	
	N	%	N	%	N	%
Barriers to partnership roles	202	32	120	35	78	29
No aspirations to be partner	37	6	19	6	18	7
Facilitators to salaried roles	19	3	11	3	7	3
Facilitators to locum roles	11	2	5	1	6	2
Opposed to partnership model	58	9	33	10	25	9
Facilitators to partnership roles	31	5	15	4	16	6
Aspirations to be a partner	15	2	6	2	9	3
Barriers to salaried roles	86	14	45	13	39	15
Barriers to locum roles	11	2	7	2	3	1
Support for the partnership model*	89	14	58	17	27	10
Childcare, conditions and pay*	32	5	11	3	21	8
Mix of GPs	42	7	21	6	19	7
Other (pathways, training…)	47	8	24	7	23	9

4.2.2.1. Individual factors

Work-family balance

By far the most commonly discussed barrier to women's career progression was childcare responsibilities and the desire to balance work and family life. GPs reflected on their own experiences, and held general perceptions that these challenges led to women working fewer hours, taking on fewer external roles and taking longer to progress through training. While both male and female GPs described family responsibilities as a barrier to choosing a partnership role, this was particularly described by women who, reported taking on more home responsibilities (in our focus groups 31 women (86%) discussed this barrier, compared to 8 men (57%)). One female GP interviewee had left a partnership role in order to be able to spend more time with her young children, while eight GPs (7 of whom were women), described choosing general practice as a specialty as it facilitated better work-life balance and flexibility.

Some female GPs described feeling they were making compromises in both aspects of life and not meeting others' expectations. For others, however, this offered an opportunity to provide greater balance in their lives in order to better cope with the workload demands in general practice.

> *"I have constantly wrangled with not being there enough for the kids as they were growing up, but always feeling I had to go the extra mile and compromise my home life for the practice. Culturally as an Asian woman also I feel there is a domestic expectation to live up to, that I personally feel I have failed, in both my role as a mother and daughter caring for parents at times." Female partner (focus groups)*

In discussing sources of gender differences in medicine and the gender pay gap, family responsibilities were cited as a gendered barrier by both men and women in our focus groups (79% and 72%). Men appeared to focus more on this as an explanation for gender differences in general practice and the gender pay gap, and were less inclined to describe other gendered barriers - described in the next section.

The high costs of childcare were cited as discouraging women from working more hours, with some suggesting their earnings were lower than the cost of childcare. Those that had shared parental responsibility for childcare viewed themselves as fortunate and in the minority:

> *"My husband has always divided the time off 50/50. Including me dropping the kids off and him picking them up after after-school activities. Without him, I wouldn't have been able to work as a full-time GP partner; yet, I am aware that I stand out in this regard. There needs to be a culture shift" Female GP (Tweet) paraphrased*

Some GPs commented that women may prioritise having a family while in salaried roles, but by the time this phase of their lives is over they are no longer incentivised to become a partner – either due to burnout or lower potential for future investment (particularly with the gradual buy-ins, participants felt this may take some time to realise the investment).

> *"It feels as though we may spend our 20's training, 30's having babies, 40's doubting ourselves and feeling our male counterparts have already taken all the leadership roles and 50's wanting to retire. That's probably a huge sweeping generalisation but I feel partnership needs to become more flexible and*

understanding of the needs and skills women in their 30's offer in order to be more attainable." Female salaried (focus groups)

In dual-doctor marriages, men's faster progression to more senior roles while women take time out for maternity leave can lead to women's lower comparative earnings and less financial incentive to work greater hours.

> *"My wife is also a GP and has taken maternity leaves meaning my career progressed and I became a partner before she had the chance or desire to do it. Then, from a purely financial decision it makes more sense for me to work more than her." Male partner (focus groups)*

Cultural expectations

Related to the comments around family responsibilities were cultural expectations that some participants felt around their roles in the home. Although only mentioned by three participants (two men and one woman), cultural differences were cited as a source of pressure for both men and women GPs. For men, there was the expectation of providing financial security for their families, which led them to working full time. All three commented on a cultural pressure that created increased desire for work-life balance and therefore the choice to work in either salaried or locum roles (2/3 were locums).

> *"Partly due to my cultural upbringing and personal situation, I always have the lingering obligation to do right by my family in terms of quality time and finances. This has subconsciously made me set targets and plan my career progression towards being a salaried GP." Male salaried (focus groups)*

Workload

Workload pressures were one of the most commonly cited barriers to partnership, mentioned by 36 GPs on 83 occasions in our focus groups (both partners and non-partners and across genders). The overall responsibility for business management and accountability for wider roles (HR, financial, Care Quality Commission, compliance, health and safety, Primary Care Network negotiations) were described as too onerous for many alongside clinical workload pressures. One female GP partner summarised *"it's not a 9-5 job, more a 5-9 job"* (Female partner, focus groups).

> *"We deal with such a lot of clinical uncertainty, it limits our capacity to deal with any other uncertainty, whatever the source? I wonder if the issue is not about partnership per se but rather - as people have said - an unmanageable job that means we have to set boundaries?" Female salaried (focus groups)*

In interviews and social media, there were comments from GP partners that general practice ran on the goodwill of partners working beyond their contracted hours; in evenings, weekends and days off:

> *"And as for pay, whatever I do as a partner outside of my sessions is unpaid because my profit share is determined by the sessions I work (my GP partners *also* work at the weekends and in the evenings)." Female GP partner (Tweet) paraphrased*

For many, it was a matter of balancing workload with wider life, particularly family life (described earlier). This wasn't specific to women GPs - men equally commented on workload issues and

prioritising work-life balance at their current career (and family) stage, rather than joining a partnership – but the approach does seem to have changed over time. Younger salaried GPs were dissuaded from taking on partnership roles when seeing stress and burnout amongst GP partners they had worked with; problems they cited as becoming increasingly difficult in general practice. There was a sense that younger GPs had a lower willingness to accept these conditions - the younger generation of GPs were seen as having different priorities and being more focused on ensuring work-life balance.

> *"The old school hidden curriculum way of 'you just do whatever is needed in time that doesn't exist' no longer works" Female salaried (focus groups)*

> *"A partner must work 70 hour weeks and perform even more non-clinical administrative duties than a salaried GP. It is gruelling. Many young general practitioners (GPs) view salaried and locum work as allowing them to do what they were trained in—consulting with and assisting patients rather than battling targets and non-clinical duties" Female GP Partner (Tweet) paraphrased*

Stress and burnout

Issues with stress and burnout were described as affecting some GP partners' plans to leave partnership roles. GP partners described extreme pressure to remain in partnerships, either due to difficulties leaving with no incumbents to replace them, or a continued commitment to serving their local communities:

> *"I have loved my job for 29 years but it can be relentless and exhausting. Now we are facing the loss of 3 employees and I see myself having to cover extra days - I was thinking of retiring this summer but decided I wasn't ready to leave - now I feel I can't abandon the ship and do wonder how we will get through the summer." Female partner (focus groups)*

Challenges were exacerbated during the COVID pandemic: in our interview study on this topic, GPs described difficulties in managing staffing levels during the pandemic due to sickness absences from mental health issues, COVID self-isolating, but also staff leaving.

> *"I realised I could not cope with what I was doing [as a GP partner], and it was sort of draining the life force from me and I was not enjoying being a GP." Female former partner (interview)*

Several GPs were also concerned about discussions to offer extended opening over evenings and weekends, with fear that this was not feasible with the current workforce shortages:

> *"Weekend working is a real red line for many. Extended access is almost impossible to deliver with no extended workforce and everyone new still needing to be supervised by an online responsible GP" Female partner (focus groups)*

Responsibility and control

In contrast to the negative comments around workload, a sense of responsibility and ability to shape local services was by far the most discussed positive component of the partnership role. This was described more often by partners themselves and was the key motivator that GP partners cited as a reason to join a partnership. For some partners, their roles were more varied (including

management, training, HR, research), which supported their ability to cope with clinical demands. Partners described being *"personally invested" (Female partner, focus groups),* energised and enjoying working within communities and managing the business:

> *"The appeal of GP partnership is that it grants us the freedom to influence our job, which can be thrilling or frightening but is ultimately a privilege. It is empowering" Male GP Partner, (Tweet) paraphrased*

On social media, those who indicated firmly that they did not want to pursue a career as GP partner cited the business elements and responsibility as deterring them:

> *"I feel turned off by and unsuited to the business aspect of partnership, thus was never attracted to it, despite the excellent pay raise. We aren't suitably trained in medical school for partnership roles and I don't believe all general practitioners and doctors are naturally good business people." Female Salaried GP (Tweet) paraphrased*

Investment

There were varied views of the financial investment involved in joining a partnership. While the variety of methods for buying-in had increased over time to remove some financial barriers, the cost of buy-in was still described as one of the greatest barriers to joining partnership and a key reason discouraging salaried GPs from considering this option. They likened this to a 'second mortgage', and many (both men and women) felt that they were not at the right life stage to consider this option due to either having a young family (and financial implication of this), or having large mortgages or University debts. Participants described how times had changed, with this being less affordable for GPs now due to higher mortgage and university costs.

> *"Friends have had to take out substantial business loans, larger than the mortgage I have on my home. Property prices are very high at the moment and buying into the partnership at the moment feels very scary - both in terms of a property bubble and it does not seem the government is supportive of partnerships as a long-term strategy for primary care." Female salaried (focus groups)*

Views of buy-in were affected by the perceived uncertainty around the future of the partnership model (described in later sections). There was also concern around the property market, with potential interest rate rises and concerns about potential fall in property values.

Some GP partners described the move to partnership as actually decreasing their earnings initially, as they had signed up to gradual buy-in schemes which meant they were earning the same, or less, than salaried equivalents. The variability of GP partner income was also described as a barrier to partnership, with fluctuations in numbers of staff, complying with employee pay rises and the cost of indemnity insurance all described as affecting pay.

> *"Under the current model partners are only able to increase GP capacity is by taking a massive pay cut. Why would my partners and I consent to accepting a significant pay reduction when we have never worked so hard?" Male GP Partner (Tweet) paraphrased*

In interviews, three GPs described the impact of pension changes on GP partners, with anecdotal reports of partners leaving NHS pension schemes. This was described as having a greater impact on GP partners due to their fluctuations in income:

> *"Right now, we are carrying an extra partner being off, so therefore the salary we're drawing is probably greater, but we don't really have a choice about that because we are trying to hire locums and there aren't any. So it's difficult really, if you are then going to be penalised on your pension." Female partner (interview)*

Financial risk

There were mixed views about financial security amongst our sample. While financial risk was cited as deterring some GPs from partnerships and causing stress for some current GP partners, the majority of GP partners saw it as a future investment. A greater proportion of men than women described this as a motivator in our focus groups (9 (64%) men vs 13 (36%) women).

For most partners, there was a sense that the financial benefits, coupled with ability to shape practices, counteracted some of the difficulties they experienced with stress and workload. This had been particularly attractive as a means of safeguarding their pension plans due to issues described with the NHS pension scheme.

> *"It is stressful but I get paid more than 4 times the average UK salary for doing three days a week" Male partner (focus groups)*

Conversely, some GP partners described the risks associated with changes to partnerships as partners exit and dependency on achieving good mortgage deals and rent rates. GPs compared entering a partnership to marriage; with the need for commitment, understanding relationship dynamics and, ultimately difficulties in leaving a partnership were compared to a costly divorce.

> *"It makes me nervous when partners leave and no new ones join as our capital share has to increase. I worry about this money more than I do about annual drawings and profit share as I see it as money which could potentially be lost and never returned at the point of retirement. It can feel like a bottomless pot." Female partner (focus groups)*

Knowledge

There was a general sense of there being insufficient training to prepare GPs for the needs of GP partnerships; one interviewee described being *"chucked out the conveyor belt of GP training" (male salaried GP).* Some cited the excessive workload currently being faced by GPs as inhibiting time to engage with the process of joining a partnership and also dissuading younger cohorts due to the wider narrative around partner workload.

In our focus groups, there were 65 comments relating to lack of knowledge of the process and role of partnership, with 14 GPs not knowing about the NHS England 'New to Partnership Programme' (N2PP) at all and 33 highlighting that more information was needed to help support GPs considering this route.

"In a world where we are all so time poor and juggling responsibilities of home, work and ongoing development we almost need a way of having information about partnerships / opportunities factored in to a space of time where we are able to focus in on it and give it thought. I must admit I have not sought out the information [about N2PP] because it is always a 'one day' thought in my head of looking into it more, sometimes feels 'where even to begin!'" Female salaried (focus groups)

The N2PP scheme was viewed as a useful benefit for those GPs that had already considered joining a partnership, but many commented that it would not act as a motivator in itself to counteract the workload and financial barriers. GPs were also concerned about the tie-in period associated with the scheme, as many described the risk associated with joining a partnership, with concern that they may not wish to remain in the partnership for the 5 year period.

"The scheme wouldn't incentivise me to become a partner - but if I had made the decision already then I would welcome the extra money to help get me started. It is probably akin to getting the part payment grant for my electric point at home - it did not incentivise me to by the electric car, but once I had it, it helped me buy the electric point as well and cushioned the outgoing initially" Female salaried (focus groups)

Many felt that further training should be embedded within the registrar period to provide information and skills relating to GP partnerships. Those that had joined partnerships described 'learning on the job', the importance of supportive colleagues or mentors (often their GP trainer) and attending formal training courses (for example 'Medics' Money'). Some GPs described the benefits of joining partner meetings, while others had opportunities for 'associate partner' roles. These approaches varied widely though, and there were mixed views about such schemes:

"[Associate partners] receive a very small/insignificant pay uplift for a huge amount of extra responsibility and many days extra work on the promise that [you] may or may not be offered a partnership… This makes me feel very uncomfortable, it is akin to unpaid internships and I do feel that extra responsibilities should be recognised and remunerated and people should not feel they have to commit to a large amount of unpaid work to become a partner." Female salaried (focus groups)

GP partners voiced frustration that more needed to be done to retain current GP partners and some disliked the focus being on *attracting* new partners rather than *retaining* them:

"It's a shallow offer. We need to focus on improving the contract, not chucking a bit of money at new partners. Does not help retention of mid-career GPs in the slightest" Male partner (focus groups)

One female former partner felt that the scheme to incentivise GPs to become partners devalued the contributions made by salaried GPs:

"Shows that [the] system values partner and does not value the contribution made by salaried GPs" Female locum, former partner (focus groups)

Negotiating

Women were described (by both men and women in the sample), as being less inclined to move practice or negotiate pay. Women described fearing needing to escalate complaints about pay, with concerns about potential legal proceedings and impact on working relationships as this was viewed as confrontational. In our focus groups, seven women GPs described their experiences of 'imposter syndrome', which was associated with a lower likelihood to apply for other roles or negotiate on pay.

> *"I did have a friend that challenged a hospital department on pay and not conforming to the contract through the BMA, this went to court and found in her favour. However, it has been incredibly damaging to her career, her personally in terms of mental health and made her feel it was impossible to continue to work/train in that region. She ended up moving her family to a different part of the country so she could get a job. This has also been a barrier for me to push too hard on terms, I don't want to end up with stressful negativity as a result." Female salaried (focus groups)*

> *"I have a colleague who feels indebted to her surgery due to flexibility of childcare and recent maternity leave. She almost feels greedy asking for a raise." Male salaried (focus groups)*

4.2.2.2. Local and organisational factors

Discriminatory practices

Women GPs often described gendered practices and how they felt they were being treated differently, affecting their working lives and career decisions. In our focus groups, such behaviours were described by 20 women (56%), compared to just 3 men (21%). Women described being treated differently by administrative staff, patients and GP colleagues, including receiving less respect than male doctors or other health professionals and feeling pressure to behave differently according to gendered societal norms.

> *"I think it affects how patients interact with us. My female partners and I find we have to work harder to be believed than our male colleagues. We often joke about the old white penis of power possessed by our male senior partner who can tell a patient they can't have something and they leave satisfied (or dissatisfied but content) while we get complaints or accused of being heartless because society assumes women will be softer and more malleable. Also makes me cross when parents say to their children "tell the lady" when I'm pretty sure they would say "tell the doctor" with someone male, likely even the nurse practitioners and physician associates who are not doctors!" Female partner (focus groups)*

> *"Medicine still feels very patriarchal, valuing working long hours, devaluing part time workers. I have suffered micro- aggressions from patients and partners. An ex- partner completely changed his attitude towards me once I had kids and went part time, as if this affected my brain in some way. Full timers are always*

complaining I do less work. Yes, I am part time and get paid less! I do proportionally a lot more partnership work in my own time for free however, which is not valued." Female partner (focus groups)

Women GPs described certain presumptions around how they may manage work/family commitments. Prejudices about women's roles in the home had affected conversations with senior colleagues about whether they would be ready to take on partnership roles. A patriarchal culture was described in some practices, where women felt undervalued if they were unable to work longer hours and contribute to wider activities. One salaried GP described how older female partners were unsupportive; taking the view *"'if you want to play in this arena you need to be strong… this is how I did it so you should be able to do it too"* (Female salaried, focus groups).

"I have spoken to partners at my current practice who have suggested I might not be ready for partnership as a new mum, the responsibilities may be too much and I might be better to wait, I'm not 100% sure but family commitments, maternity leave and being a new mum were all mentioned as reasons I may want to postpone becoming a partner. For me being a new mum doesn't put me off partnership, I do feel that returning to work is already a big enough leap for me that perhaps a new role with extra responsibilities wouldn't be the best option at this point, however, it may also be exactly the right time as our family is restructuring its routine anyway." Female salaried (focus groups)

"During the face to face discussion the male partner said, me and my wife made the decision that she would take on less sessions so she could be around for the kids, I don't what was meant by telling me this but I felt there was the insinuation there that I should be working less instead of requesting flexible working." Female salaried (focus groups)

A female locum GP described overt sexism at multiple practices, which ultimately led to her choosing to work in a locum role instead of joining a partnership:

"Many years ago I wished to become a partner after being salaried for many years but was sadly in a small practice that had fixed views of 2 male partners that females could not be GP partners... around then I left that practice! I then had some interviews at various practices but they all wanted either male (!) or NQGPs or someone who could work 8 sessions per week." Female locum (focus groups)

Perceived parity

In contrast to these experiences, when asked about the gender pay gap in general practice, half of the focus group sample made comments about parity in pay of male and female GPs - citing their own personal experiences of pay in their practices, or male GPs that had shared roles in the home. A higher proportion of men made these comments than women (10 men (71%) compared to 14 women (39%)). In focus groups, participants were asked about the potential causes of the gender pay gap, with an explanation that the gap remained despite adjusting for differences in hours worked. Male GPs still tended to attribute this to gender differences in working hours or uptake of partnership roles.

Different work

Five GPs, all women, described having different roles within their practice – both in terms of the clinical workload (women GPs tended to be given more women's health queries) and also taking on more of a role in managing and supporting teams. Some described this with resentment and increased time pressures associated with both.

Maternity and sickness pay

GPs described greater perceived security in earnings in salaried roles compared to partnerships as a barrier to joining partnerships, due to differences in approaches for maternity and sickness pay. While the maternity leave benefits for salaried GPs were described as following BMA guidance, those for partners appeared to fluctuate according to different practices' partnership agreements.

> *"It is often also unclear what a partnerships maternity clause is as this is not standard- whereas most salaried positions follow a standard BMA contract. Depending on the partnership there is every chance I could have to pay for the locum to cover me while I am off- which is difficult to find and expensive." Female salaried (focus groups)*

A female salaried GP suggested that shared paternity leave is insufficient at present, and argues that this exacerbates this issue and undervalues women's contributions:

> *"why is it OK to say to women 'ok, we can do without you for 6/12 months whilst you have a baby / adopt' but when it comes to male partners the view is 'oh no, you are FAR too important for business continuity / fee earning to have 6/12 months off, here have 2 weeks and then let your (usually female) life partner get on with it'" Female salaried (focus groups)*

Team working: *"It just has to be the right practice"*

These differing experiences appear to be largely led by practice dynamics. GPs describing partnership roles with a sense of positivity appeared to be very much related to how well practice teams worked together, with positive partnerships described as *"a real feeling of team, being in it together as a partner" (*Female partner, focus groups*).* In our focus group sample, the importance of these positive working relationships was more commonly discussed by female GPs (19 (53%) women, 5 (36%) men).

> *"I have a wonderful team of partners who I enjoy working with hugely. Without them I can imagine it would become a bit thankless and miserable, but we are a great team, friends as well as colleagues." Female partner (focus groups)*

Salaried GPs considering this route described looking to find a team where they felt comfortable and valued, with the support of other GP partners. The importance of role models and having positive informal discussions about partnership was described as a facilitator to those either in partnership roles or considering their future roles.

> *"It just has to be the right practice. And I can't…I don't see myself as being a single person partner. I want to be able to go into a team, as almost like a junior*

partner and work my way up within an already settled environment." Male salaried (interview)

"[Partnership can be] very supportive and very rewarding but the key is to be lucky with your partners. Choosing the right team to be part of is more important than any other factor." Female GP Partner (Tweet) paraphrased

Several salaried GPs considering partnership described being wary of smaller practices; voicing concerns about being the *"last man standing."* There appear, however, to be some trade-offs in views of the size of organisations, as several GPs in larger practices described feeling unable to affect change, which was described as the key motivator for taking on a partnership role. Meanwhile others, in partnerships with strong relationships and a supportive business manager, described having greater ability to affect change and manage this alongside their clinical workloads.

"In my practice we have a great management structure and a large efficient admin team meaning I have dedicated time away from direct contact with patients to do this other work. I find the variety in my day to day schedule refreshing and rewarding." Male partner (focus groups)

Those that struggled or had left partnerships, had often done so due to difficulties in working relationships. Men were slightly more likely to comment on barriers due to negative relationships (10 men, 71% vs 19 women, 53%).

Comparative appeal of other roles

The introduction of salaried roles to general practice was described as changing long-held expectations, as many older GP partners described the partnership as the only route when they completed training. Younger GPs described increased opportunities for higher earnings, greater flexibility and reduced pressure offered through other roles. These included locum posts, additional earnings from 'improving access to care' hours, working for private GP providers and taking on portfolio roles. In some regions, GPs described there being relative similarities in earnings of salaried and partner GPs due to supply and demand issues.

"Now you can earn a reasonable and reliable amount without the partnership responsibilities, If you want to earn more take on a portfolio role or do some OOH shifts or Livi or push doctor these days or Newson [Health] Menopause Clinic / private GP with good income and 15-20 min appts from home with defined hours rather than the open ended and riskier partnership role? There just weren't the alternative options in the past. There are also lots of other non-partnership leadership roles with a defined salary so lower risk if you do want to do leadership" Female partner (focus groups)

In our focus groups, a slightly higher proportion of men than women discussed the relative appeal of these other roles (7 men (50%) discussed this, compared to 11 women, 31%). GP partners that were using a gradual buy-in process or had large business loans also described how their earnings were equivalent or lower than salaried roles:

"We had a lean year which coincided with a tax time bomb (my first payment was for 18 months which at high rate as I'd done some maternity cover which

artificially inflated my income) and an over payment of pension meant I earned -5k in my first year. I've never quite recovered!" Female partner (focus groups)

The advantages of being a salaried GP mirrored the disadvantages of being a GP partner - centring primarily on avoiding the challenges of additional workload and responsibilities. GPs stated that salaried, locum or private provider roles appealed due to the ability to work only contracted hours and not having to carry out non-clinical duties or have business skills.

> *"In a salaried service, or as a locum, I turn up, do the job, whatever that is (don't mind what I do within contracted hours) then go home. Partners stay and finished the job." Female Salaried GP (Tweet) paraphrased*

> *"I am a locum now and can control my workload. Otherwise, I don't feel I have the time to care. Being a partner or being salaried is not enjoyable. " Male Locum GP (Tweet) paraphrased*

4.2.2.3. National factors

Risk and political climate

In addition to the financial risks outlined under 'investment' above, participants voiced concerns about potential changes to the organisation of general practice and provision. These concerns related to fears that the partnership model was under threat due to *"dwindling partner numbers"* (Female partner, focus groups) and following the Secretary of State for Health's February 2022 comments in the Times newspaper about moving to a salaried service.

> *"My biggest worry about joining a partnership at the moment is the partnership model may not exist in 10 years." Female salaried (focus groups)*

Salaried GPs expressed concern in taking on the financial risk of joining a partnership amidst such potential reforms and alongside negative media portrayals. There were 28 focus group comments from 18 participants around negative media portrayals of general practice and perceptions of being undervalued by the government. Participants described how the partnership model provided good value for money for the NHS.

> *"When the government and press rhetoric is around how useless and money grabbing GPs are and I worry about the sustainability of general practice at present. With things the way they are, I wouldn't gamble mine and my family's financial future on a partnership that may not be sustainable, and at a time when GP feels very under pressure and existentially under threat" Male salaried (focus groups)*

> *"We are the only NHS doctor group who would commit to such levels of personal borrowing to provide clinical services. We accept high financial risk… as the partnership model becomes more under threat and public opinion shifts - I think I might struggle to maintain this level of comfort with such financial risk." Male partner (focus groups)*

GPs felt pressure from public expectations to provide *"[cradle] to grave care with demands of Amazon Prime instant delivery of service" (Male partner, focus groups).* GPs in underserved areas described fear around the sustainability of partnerships and leaving communities without care.

Support for the partnership model

Although present across all datasets to some degree, more political commentaries around the future of the partnership model were present within our social media dataset, with 89 comments relating to support for the GP partnership model. There was a statistically significantly higher proportion of these comments made by men (58 by men, 17% vs 27 by women, 10%).

The partnership model was described as cost-effective, providing continuity of patient care and the only way the system can cope with the current shortage of GPs, since it was described as running on the goodwill of GP partners.

> *"Partnerships work because, in part, partners hold responsibility for the patients they serve and in part because it's incredibly agile - and because partners do a substantial amount of work for free. Offering that kind of service under a salaried system would be extremely expensive…." Female GP (Tweet) paraphrased*

Those with negative views of the GP partnership model tended to emphasize that the system was unsustainable in its current format. Their opposition rested heavily on the heavy workload and responsibilities of GP partners.

> *"From the view point of GPs: The partnership model is dying. In part due to wider societal factors - the price of property, student loans, and generational inequality with pensions. The rewards from the cost of buying in aren't what they used to be. IF the Government wants to keep the partnership model it has to be radical." Male GP Partner (Tweet) paraphrased*

Esteem – *"being a partner was the ultimate in GP"*

There was a sense of pride amongst GPs in the contributions they made and their identity as a GP was important to them. For GP partners and some salaried GPs that were considering partnerships in future, there was a sense that the movement to a partnership role was seen as a logical next step in a GP's career and something to aspire towards:

> *"I always saw myself as a partner... I thought being a partner was the ultimate in GP." Male partner (focus groups)*

These comments tended to made by younger male GPs and older GPs that had formally held partnership roles. Men were approximately twice as likely to comment in this respect in our focus groups, citing aspirations and an expectation to move into these roles (5 (36%) men vs 7 (19%) women), while the women that made comments about this tended to be those from older cohorts that described how this had changed over time:

> *"In my experience most partners and older GPs tout partnerships as the ultimate goal and try to plant the seed when they can so there is no shortage of small talks regarding potentially becoming a partner and even signposting to relevant programs/courses." Male salaried (focus groups)*

> *"I think as a male there is expectation to progress my career as fast as possible and "achieve" constantly which has pushed me to take on more than I would have liked at times. Some of this is personal expectation but also has been felt externally." Male salaried (focus groups)*

Negative media narratives had influenced GPs' feelings about the role and the sense of esteem they got through work. One GP interviewee described the loss of identity when considering changing roles due to workload pressures:

> *"I felt [being a GP] was part of who I am, how I define myself and how I wanted to be. And that has strongly diminished, there's no doubt about it now. I'm no longer that person… it was, almost, scary to lose that because it was a case of, well, who am I going to be when I'm no longer a doctor?" Female partner (interview)*

Through our social media analysis, salaried GPs appeared not to be accorded quite the same recognition as GP partners with GPs referring to themselves as '*just* a salaried GP', or '*only* a salaried GP'. Yet many salaried GPs felt that this was unjustified and that they had made a positive career move to become a salaried GP.

> *"Salaried GPs are not second class, but a positive career choice for many who are not interested in the responsibilities, risks and insecurity of partnership." Male Salaried GP (Tweet) paraphrased*

Role demarcations: "*Them and us*"

In relation to the different perceptions of partner and non-partner roles, it became clear in a number of our focus groups, as well as in the social media analysis, that a *"them and us"* culture may be emerging in general practice (Female partner, Focus groups), with demarcations arising between salaried and partner GPs.

> *"Dear GPs, We are all equal practitioners. If we decide to be a partner, salaried, portfolio or locum GP - it is a personal CHOICE we make as individuals. Let's unite, stand together and speak with an equal voice for all" (Female GP tweet) paraphrased*

There were gender differences in focus group comments around this topic – with 15 women (42%) commenting on this, compared to 2 men (14%). While some GP partners voiced frustrations with salaried GPs' lower workload and working to more distinct hours, salaried GPs expressed frustration that they were perceived by partners as having *"an easier life… [we] do a 13hr day of back to back patients with no breaks"* (Female salaried GP, paraphrased Tweet). Salaried GPs felt powerless and they described feeling like work was 'farmed out' to them:

> *"I believe that some partners still have the unfortunate attitude that a salaried GP is simply there to soak up work, follow orders and generally be a good little employee as opposed to being urged to take ownership of things, contribute and receive a fair pay." Male GP (Tweet) paraphrased*

These divisions appeared to be borne out of workload pressures faced on both sides; for GP partners this appeared to fuel negative perceptions of non-partner GPs' work-ethic:

"They come see the patients, refuse to do anymore and leave. We do everything else. If someone is off it's us who have to cover… we do everything" Female partner (focus groups)

Through the social media analysis, there were commentaries around the 'misconception' that GP partners earn much higher salaries than salaried GPs, and GP partners described a lack of recognition for the high levels of risk and income uncertainty that comes with the role.

"£54k for salaried GPs. The higher amount is for partners who own, invest in, run and take the risk of running the business. How many Sisters/Charge nurses invest £50k to £300k in their hospital?? How many run the risk of picking up the cost if the practice closes?" Male GP Partner (Tweet) paraphrased

Some GPs voiced concerns about how the organisations representing GPs were often formed largely of GP partners, who may have differing motivations to salaried and locum roles. There were suggestions for the different types of GPs to be represented by different organisations or unions.

"Locums not permitted? The conflict of interest issues representing different 'types of GP' is just as troublesome as the BMA representing different branches of practice… salaried vs partner, locum vs salaried. A GP union may not be any better, each 'type of GP' needs a strong voice and a fair chance." Female GP (Tweet) paraphrased

4.2.3. Discrete Choice Experiment (DCE) Results

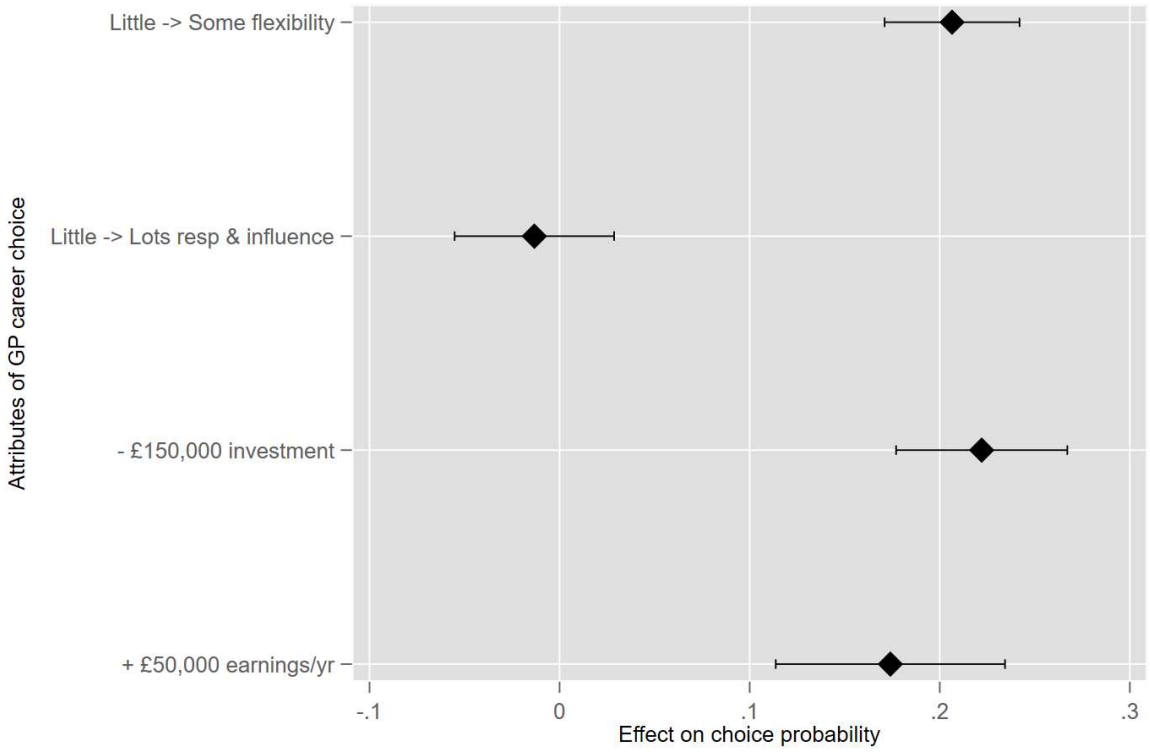
There were 47 respondents to the DCE answering 8 scenarios each, giving a total of 376 observations. We analysed the data using logistic regression models. We present the main results with bar charts showing the estimated marginal effects of a change in each attribute on the probability of choosing a given choice alternative (Figures 3 and 4). For ease of interpretation, the investment attribute has its sign reversed so that a reduction in the investment (from £150,000 to £0) is shown in the bar chart. A full regression table is presented in Appendix F.

4.2.3.1. Findings from the overall model

Figure 3 presents the findings from the model using all of the respondents' data. Three of the four attributes: change in earnings (£90,000 or £140,000/year), investment (£150,000 one-off) and flexibility (some ability to choose timing of working hours) are all statistically significant determinants of GPs career choice in these scenarios. The three attributes have similar magnitude, each increasing the probability of choosing a scenario by approximately 20 percentage points. At this sample size, we cannot reject the hypothesis that all three of these attributes have the same effect on GPs career choice. Higher earnings, lower investment, and more flexibility all positively influence the probability of choosing a career option.

The responsibility attribute (*responsibility and influence over practice management and risks*) is not statistically significantly different from zero, suggesting that GPs are not influenced by this attribute OR that some GPs are positively influenced, and others negatively (effectively balancing out near to zero on average).

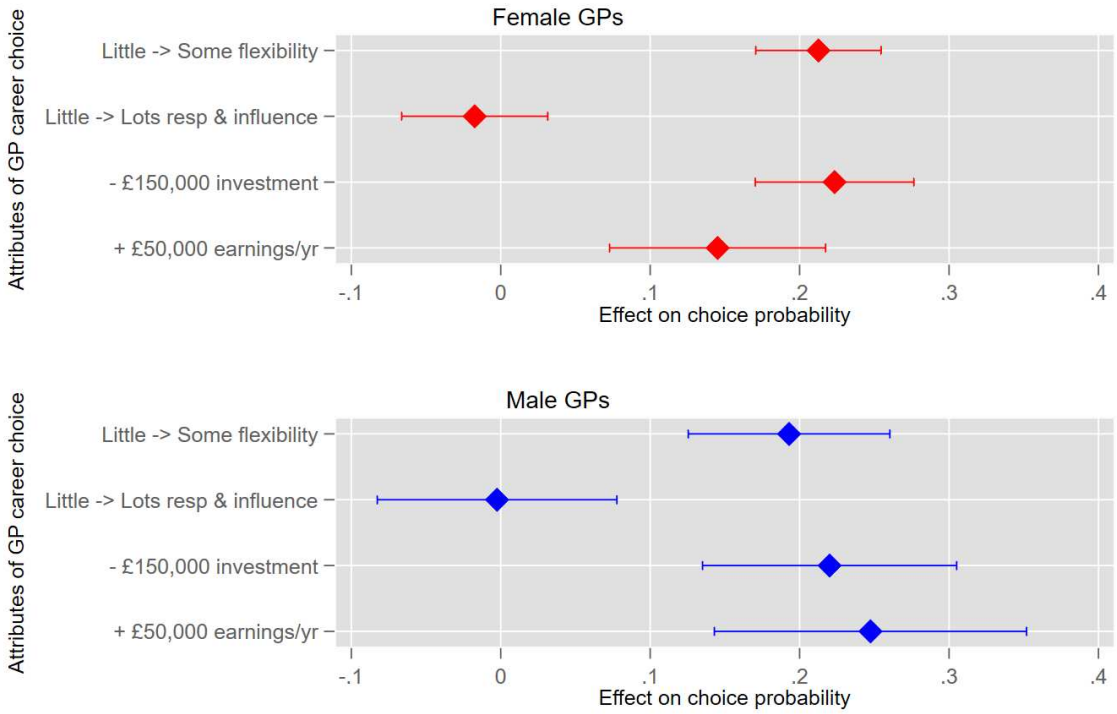
Figure 3: Marginal effects from the DCE - full sample (diamond markers are point estimates, error bars give 95% confidence intervals)



4.2.3.2. Model findings by gender

Figure 4 presents results of the logistic regression model estimated separately for female and for male GPs. The marginal effects of the choice attributes are similar for the effects of the investment, responsibility and influence, and flexibility of working hours, and match approximately the effects in the main regression model (Figure 4). There is a notably higher effect of the earnings attribute for men (£140,000 compared to £90,000 earnings increases probability of choice by ~25 percentage points for men and ~15 percentage points for women). Due to a smaller sample, the estimates are less precise for male GPs, as shown by the wider confidence interval around each estimated marginal effect.

Figure 4: Marginal effects from the DCE for Female and Male GPs (diamond markers are point estimates, error bars give 95% confidence intervals)



4.2.3.3. Model simulation for career choices by gender

Table 5 shows model simulations of two scenarios with the middle column representing a "Salaried" GP scenario and the right column representing a "Partner" GP scenario. Compared to the salaried scenario, the partner scenario has higher earnings, a larger investment, more responsibility and influence, and less flexible working hours. These reflect feedback from the rapid review and initial discussions with stakeholders at DHSC and with GPs involved in the project. Rows A to D show the

predicted probabilities of these scenarios first in the base case (Row A), then in three alternative scenarios where there is a change to the Partner scenario as described.

In the base scenario, the model predicts that only 19% of GPs would choose the “partner” scenario, with the remaining 81% choosing the “salaried” option. The proportion choosing “partner” is higher for male GPs at nearly 25% and lower for females at 17%. The reason for this gender difference is that the main compensating benefit of the “partner” scenario is the higher earnings available for that choice, and male GPs have a stronger preference for higher earnings (see Figure 4).

In the first alternative partner scenario (B), the flexibility of working hours is changed to be the same as for the salaried scenario, “some choice over timing of working hours”. This change has a large effect on the predicted proportion of GPs choosing the partner scenario, with the overall figure increasing to 40.5%, more than double in the base scenario. Male GPs remain with a higher proportion choosing the partner option (47.3%), as before reflecting the stronger preference for higher earnings from male GPs.

In rows C and D, the partner scenario is given a financial boost, in terms of a halving of the Investment required (C) or an increase in earnings (to £165,000, increasing the difference between partner and salaried scenarios by £25,000 or 50%). Both of these changes have substantial effects on the predicted proportion of GPs choosing the partner option (10.4% points and 7.9% points respectively), but smaller than the effect of the change in flexibility of working hours in row B. The change in earnings has a much larger effect (increase of 13.8 % points) on male GPs due to their stronger preferences for higher earnings.

Table 5: Model simulation of predicted probabilities for Salaried and Partner scenarios, with three different policy options and resulting changes

Attribute	**Salaried scenario**	**Partner scenario**
Earnings	**£90,000** per year	**£140,000** per year
Investment	**£0**	**£150,000**
Responsibility and influence	**Little** responsibility and influence	**Lots of** responsibility and influence
Flexibility	**Some** choice over timing of working hours	**Little** choice over timing of working hours
A: Base scenario choice probabilities **Pr(Choice) - overall** **Pr(Choice) - women** **Pr(Choice) - men**	 81.0% **83.2%** **75.4%**	 19.0% **16.8%** **24.6%**
B: Partner scenario: Flexibility → Some choice **Pr(Choice) - overall** **Pr(Choice) - women** **Pr(Choice) - men**	 **59.5%** **62.1%** **52.7%**	 **40.5% (↑21.5% points)** **37.9% (↑21.1% points)** **47.3% (↑22.7% points)**
C: Partner scenario: Investment → £75,000 (halved, -£75,000) Pr(Choice) - overall **Pr(Choice) - women** **Pr(Choice) - men**	 **70.6%** **73.5%** **63.3%**	 **29.4% (↑10.4% points)** **26.5% (↑ 9.7% points)** **36.7% (↑12.1% points)**
D: Partner scenario: Earnings → £165,000 (+£25,000, difference +50%) **Pr(Choice) - overall** **Pr(Choice) - women** **Pr(Choice) - men**	 **73.1%** **77.2%** **61.6%**	 **26.9% (↑ 7.9% points)** **22.8% (↑ 6% points)** **38.4% (↑ 13.8% points)**

5. Discussion

5.1. Summary of findings

Our literature review highlighted the dearth of recent evidence on this topic - no studies were identified since 2013, no interventions had been evaluated to explore practices to support women in general practice and no research specifically had explored partnership uptake.

Our empirical research findings from GPs in England demonstrate factors at an individual, organisational and national level which were described as barriers to GPs taking on partnership roles. Many of these were experienced similarly for both men and women, and indeed the relative attractiveness of partnerships were described as changing over time and corresponding to a time when more women had entered medicine and general practice.

Key barriers included workload and the greater level of responsibility associated with partnership roles, financial investment and risk. The view of partnership was unappealing amidst wider workforce issues and perceived lowered esteem of general practice, further depleted by discussion of potential changes to the partnership model. Partnerships were viewed as less attractive relative to other roles, with similarly high earning potential (depending on location) and greater opportunity for work-life balance possible through salaried and wider roles. Furthermore, some conflict was described between these groups of GPs, with a "them and us" culture emerging, potentially due to workload pressures and a perceived devaluing of the profession.

There were, however, key areas in which gender related differences in perceptions and experiences were reported. Specifically, women's more negative experiences of childcare pressures and balancing work and family life, working conditions including maternity and sickness pay, and discriminatory practices. Male GPs on social media, and also in the DCE, were more in favour of the partnership model.

The importance of 'finding the right practice' was stressed across the board, with examples of this working well to support GPs to join partnerships, share workloads and give a sense of teamwork. This had particularly encouraged women GP partners' participation - they described valuing positive role models, having open conversations about partnership and the positive influence of working for a shared goal. However, patriarchal practices were still present; some participants felt the work of women and part-time workers was devalued and many described experiencing toxic behaviours.

5.2. Strengths and limitations

Pooling data across 40 interview participants, 50 focus group participants and 629 social media tweets by 232 GPs, along with a DCE completed by 47 participants, created a reasonably large body of data on which to base our analysis. The mixed methods design enabled triangulation across four methods, strengthening the validity and transferability of our findings. For example, the DCE results highlighted the importance of flexibility in attractiveness of partner roles, which supports the qualitative findings. Though the social media data is broad in scope and offers the opportunity to study a wider sample of GPs, it is not possible to pose specific questions to GPs through this method

and we are limited to studying the social narratives that GPs choose to portray online. It is possible that online personas may differ either in depth or content to those views expressed in other, more traditional research methods. The social media analysis was also restricted to just one platform, Twitter, which is a social broadcasting network with messages limited to 280 characters. More than one platform is recommended in social media research (Sen, 2019); the addition of which may have enabled us to obtain more personal perspectives with a greater insight that more lengthy postings allow. Nevertheless, through combining these findings with both interviews and focus groups, we found strong similarities across methods. UK NHS GPs posting on Twitter may not fully represent all UK NHS GPs. In general, social media users tend to be younger (Sloan et al., 2015) and have a higher level of education (Sloan et al., 2015; Sloan et al., 2013; Wojcik S, 2019). In other respects, such as gender, race and ethnicity they tend to reflect the population (Sloan et al., 2013; Wojcik S, 2019). Although we do have an indication of key demographics including gender, race, and location. Lastly, we may not have identified all posts related to GP partnerships. Searched on its own 'Partner' is a noisy term – retrieving many posts on people in a romantic relationship rather than a professional one.

Many studies identified in our scoping review report women's views without making comparisons to the experiences of male doctors. We have seen the value of comparison through our research since many of the barriers felt by women were also described by men (e.g. greater flexibility was modelled to increase the relative attractiveness of partner roles in the DCE for both men and women). We sampled a lower proportion of men for the AOFGs and DCE due to time constraints and the focus of this project, which may have under-represented these views and as a result, further research including a larger sample of male GPs would be beneficial to test our findings in other groups. The precision of the findings of the pilot DCE are limited by the sample size, coefficients are estimated with relatively large standard errors and the policy simulations should be interpreted with caution due to this imprecision. Further work is needed to refine the hypothetical scenarios described in the DCE and estimate the DCE model with a larger group of GPs. It would also be beneficial to explore the views and experiences of GPs across the other devolved nations, since our research data was focussed on GPs in England.

While we recruited through a variety of channels for our online focus groups, the majority of participants came through snowball sampling of existing contacts and through calls on Twitter, which was an efficient method for recruiting GPs in a short timeframe. This did, however, result in two difficulties. Firstly, approximately 50% of our sample is from the Yorkshire and Humber region, which is less than ideal for national representativeness, although we have no reason to think that these GPs perceive partnerships differently, and indeed factors which may differ by region (e.g. property prices) were discussed in the focus groups. Second, recruiting using Twitter (supplemented by an online questionnaire to explore demographic and practice characteristics) meant that two focus groups included four participants who were (we believe) not GPs (indeed we have reason to think this was one fraudulent individual). We consequently checked that all participants had a valid GMC number, and excluded comments from these 'four' participants. We have no reason to think that the focus group discussions were affected adversely by this incident, discussion amongst the remainder of these groups was lively and relevant.

5.3. Implications for policy and practice

It has been over 20 years since Reed and Buddeberg-Fischer (2001) summarised the struggles affecting women doctors' career progression. Our review highlights a lack of recent research evidence with this professional group and continued challenges around inflexibility, balancing work-family lives and discriminatory practices. Similar findings have been reported in a recent international study of female doctors' career progression in primary care (Shiner, Watson et al. 2020).

The benefit of the DCE approach means that we were able to model different scenarios, in order to estimate the characteristics of partnership roles that were most important in GPs' role choices. By improving flexibility of working hours for partners, we estimate that this may encourage uptake of partnership roles approximately twofold. Our qualitative findings further support this, since childcare barriers and inflexibility were described as key barriers.

Larger partnerships may be one way to enable more flexibility around these roles, offering greater structure to support varied roles and working hours. Indeed, previous research with Scottish GPs has suggested this may encourage participation in partnerships compared to smaller or single partner practices (Watson, Schulz et al. 2021). Our focus group participants in larger group practices, though, described feeling that their voices were not heard, resulting in disengagement. Others described requests for more flexible working hours being met with ingrained cultures and an unwillingness to change, even in larger practice teams.

This research highlights the variation in working conditions and contractual arrangements across England, which appear to be impacting women GPs' decisions to take on partnership roles due to their concerns about maternity and sickness cover. Standardisation of such practices may encourage greater participation, as would signposting to support organisations. However, women described first-hand experiences of challenging pay negotiations and were fearful of risking working relationships in such scenarios. In a survey conducted as part of the Mend the Gap report, 72.8% of women doctors did not feel comfortable negotiating pay, compared to 54.4% of men (Dacre and Woodmans 2020). These experiences, together with those described around gendered stereotypes from patients and colleagues, suggests that the culture in general practice still has a long way to go.

Our findings also highlight the financial barriers to joining partnerships – both in terms of upfront costs and also perceived financial risk. Since 2017/18, a different system of partnership now exists in Scotland; introduced to reduce income risk to GP partners by providing a guaranteed income, reducing risk of premises ownership and maintenance and reduced management duties for partners and offering staff through NHS Boards to build a multi-disciplinary team (Watson, Schulz et al. 2021).

Our participants expressed a view that further training is needed to provide GPs with the business skills needed for partnerships. Although this is offered through the N2PP scheme, there was a lack of awareness of this scheme amongst GPs. Furthermore, some GPs were reluctant to sign up to a minimum of five years as a partner in order to benefit from this support.

5.4. Conclusion

The relative attractiveness of salaried, locum or private roles in general practice appears to be discouraging men and women from partnerships due to a range of barriers that we have described at an individual, organisational and national level. Longstanding gendered barriers still appear to impact differentially the career decisions of women GPs. Promoting positive workplace cultures through strong role models, improved flexibility in roles and management skills training could encourage greater uptake of partnership roles.

Appendix A: Additional tables from review

Table S1: Characteristics of included studies

Author	Year	*Study title*	Location	Sample size	Participants	Research method(s)	Outcome measures
Anonymous	1983	*Newcastle vocational trainees 1976-1980: are they doing the work they wanted?*	Newcastle	101	70 male 31 female. Variations in role and caring responsibilities reported. No age reported.	Cross-sectional survey	Gender differences in preferences for GP roles, alignment with current role and future plans
Brooks, F	1998	*Women in General Practice: responding to the sexual division of labour?*	Former industrial city in North of England	44	All female GP partners. age: 25-35=18, 36-45=19, 46-55=8. Full time: 30, Part-time >30 hours: 6, Part-time <30 hours: 9. Gender balance of partnerships: 8 predominantly female, 23 balanced, 14 predominantly male.	Semi-structured interviews	Thematic analysis of interviews regarding role women health workers play in construction and provision of primary health care services for women
Dumelow, C and Griffiths, S.	1995	*We all need a good wife to support us*	South Thames region	570 (407 GPs)	Across whole sample (data for GPs not presented separately): 62% male, 38% female. Aged 26-69.	Cross-sectional survey	Examining attitudes of appointment committee members towards employment of female doctors and equal opportunities. Questions asked at interview regarding family and domestic commitments and training in equal opportunities.
French, F., Andrew, J., Awramenko, M., Coutts, H., Leighton-Beck, L., Mollison, J., Needham, G., Scott, A., Walker, K.	2006	*Why do working patterns differ between men and women GP's?*	Scotland	924	GP Principals in Scotland. 559 (61%) men, 363 (39%) women. Age: men <40: 133, 40-49: 261, 50-59: 150, 60+: 15; women <40: 155, 40-49: 139, 50-59: 65, 60+: 4.	Cross-sectional survey	Gender comparison in hours of work, job satisfaction, remuneration, retirement plans, spousal occupation and impact on working patterns.

Gravelle, H., Risa Hole, A., Santos, R.	2011	*Measuring and testing for gender discrimination in physician pay: English family doctors*	England	1902	GPs in England. 1168 male and 734 female.	Secondary econometric analysis of cross-sectional survey data	Presence of direct and indirect gender discrimination in pay: testing for discrimination via differential rewards, discrimination by assignment of less financially rewarding activities, differences in preferences and productivity between male and female GPs.
Henryk-Gutt, R., Silverstone, R.	1976	*Career problems of women doctors*	UK	61	Sample defined as "women doctors who were experiencing problems in continuing their careers." Age range: 27-45. 60/61 married, 33 to other doctors. Working hours: no sessions (8), unpaid sessions (1), <5 sessions (14), 5-6 sessions (21), 7-8 sessions (5), 9< (12).	Cross-sectional survey	Exploration of barriers associated with postgraduate training, working, childcare, other domestic responsibilities.
Johnson, N., Hasler, J., Mant, D., Randall, T., Jones, L., Yudkin, P	1993	*General practice careers: changing experience of men and women vocational trainees between 1974 and 1989*	Oxford region	796	GPs in region qualifying between 1974 and 1989. Mean age: 36.3, 498 men and 298 women.	Cross-sectional survey	Career destinations and factors affecting career.
Johnson, N., Hasler, J., Hayden, J., Mathie, T., Dobbie, W	1998	*The career outcomes for doctors completing general practice vocational training 1990–1995*	Merseyside, North West and Oxford regions	926	GPs in region qualifying between 1990-1995. 463 male 458 female (5 did not specify).	Cross-sectional survey	Career destinations and factors affecting career, desire for and experience of part-time training
Leese, B., Young, R., Sibbald, B	2002	*GP Principles leaving practice in the UK*	England and Wales	621	GP principles that had left practice. 396 Male, 217 Female.	Cross-sectional survey	Reasons for leaving described under themes job-related and personal. Factors that would encourage re-entry as a GP principle in those who do not wish to return. Factors discouraging doctors from being a GP principle.

Newman, P	2011	*Releasing Potential: Women doctors and clinical leadership*	UK	26	All female. 17 GPs, 6 secondary care clinicians (consultants and Chief Exec), 3 heads of policy.	Semi-structured qualitative telephone interviews	Initiatives in the private sector, women doctors experiences, current experience of emerging CCGs, contribution of women doctors, barriers to progress, solutions to improve the talent pipeline.
Osler, K	1991	*Employment experiences of vocationally trained doctors*	East Anglia	233	233 responses. All of female doctors of cohort were included and a random sample of 1/3 males. 83 M, 150 F responded. M. 90% M and 84% F were under age of 40.	Cross-sectional survey	Role preferences, present employment, barriers to choice of role, factors associated with job satisfaction
Pinder, R	1998	*On the margins: belonging in general practice for women part-timers and non-principles*	North-west London, London and the Home counties	25	25 female GPs: 9 LTFT (3 of whom were partners), 4 ex-full time partners who had become non-partners, 4 ex-non partners who had become full time partners, 8 full time partners. Mean age 39.72. 23 married, 1 divorced, 1 unmarried.	Qualitative in-depth exploratory interviews	Difficulties experienced in balancing home life and work life; challenges of being a part-time partner; benefits of being a partner; loss of 'specialness' of being a GP.
Warren, V., Wakeford, R	1989	*We'd like to have a family' -young women doctors' opinions of maternity leave and part-time training*	UK	145	Randomly sampled female graduates of British medical schools in 1976, 1980 and 1984.	Telephone interview	Relationship status, family size, current work status, maternity leave and pay, part-time working.
Wedderburn, C., Scallan, S., Whittle, C., Curtis, A	2013	*The views and experiences of female GPs on professional practice and career support*	Wessex deanery	368	Female GP registrars, principles and sessionals. 22% <34yrs, 60% 35-49yrs, 18% >50yrs.	Cross-sectional survey with qualitative and quantitative data.	Working pattern and status, relationship status, difficulties arranging childcare.
Wordsworth, S., Skatun, D., Scott, A., French, F.	2004	*Preferences for general practice jobs: a survey of principals and sessional GPs*	Scotland	1292	895 principles, 397 sessionals. 85% men were principles, 54% women were principles. Average age 42.3yrs.	Discrete choice experiment.	Preferences for key job attributes; determined through preparatory interview and focus group work. Attributes included: consultation time, change in total hours worked per week (indication of workload), change in annual personal income, outside

							commitments, out-of-hours work, involvement in practice decisions, CPD.

Table S2: Databases searched and number of records retrieved

Database	Interface	Date Searched	Number of Records
Medline	Ovid	05/01/2022	374
Embase	Ovid	05/01/2022	372
HMIC	Ovid	05/01/2022	273
Google Scholar	Web	05/01/2022	100*

**limited to 100 records*

Appendix B: Detailed findings from review

Childcare responsibilities and flexible working	Ten studies described barriers for women GPs associated with difficulties in balancing childcare responsibilities, part time working, gaining a part time post or altering their career aspirations due to having children (Henryk-Gutt and Silverstone 1976, Warren and Wakeford 1989, Osler 1991, Johnson, Hasler et al. 1993, Johnson, Hasler et al. 1998, Pinder 1998, Leese, Young et al. 2002, Wordsworth, Skatun et al. 2004, French, Andrew et al. 2006, Wedderburn, Scallan et al. 2013). Three studies with mixed-gender samples reported that this was more common amongst women GPs than men (Osler 1991, Johnson, Hasler et al. 1993, French, Andrew et al. 2006). Johnson (1993) followed a cohort of medical trainees over time and report gender differences in the impact of having children and family commitments as a perceived barrier to career progression. Perceptions of this reduced over time; suggesting either a change in experiences as their children aged, or perhaps some element of recall bias (Johnson, Hasler et al. 1998). In the most recent study we identified, Wedderburn (2013) surveyed 304 female GPs. They report that while younger age groups experienced the greatest difficulties associated with childcare, some 47% of the over 50 age group also reported difficulties with managing childcare responsibilities. The authors of this study describe women GPs as taking the *'path of least resistance'* in their professional lives while their children were young as younger female GPs with childcare needs were less likely to be involved in teaching and training or in wider engagements now considered 'portfolio roles'(Wedderburn, Scallan et al. 2013, pp327). In a large sample of 1292 Scottish GPs, Wordsworth (2004) explored GP preferences for different job attributes using a Discrete Choice Experiment. Amongst GP principals, gender differences were reported in valuations of all job attributes except for Continuing Professional Development (including consultation length, change in hours of work, change in annual earnings, outside commitments, out of hours work, involvement in practice decisions) (Wordsworth, Skatun et al. 2004). Gender differences were also found in sessional GPs' judgements of out of hours work. Leese (2002) surveyed 621 GP Principals that had left practice. While there were similarities in responses of men and women in terms of the job-related and personal-related factors for leaving their posts (all identified the need for greater variety and flexibility), more women than men cited leaving due to childcare responsibilities or due to partners' work location. Pinder (1998) described how women GP partners had experienced negativity from colleagues if they could not attend partner meetings due to childcare responsibilities.

	Three studies call for greater job flexibility and better childcare support in order to retain this sector of the workforce and increase participation rates amongst women (Leese, Young et al. 2002, Newman 2011, Wedderburn, Scallan et al. 2013). Leese (2002) found women GP leavers were more likely than male GP leavers to cite a need for flexible daytime working and better childcare as encouraging their re-entry. Meanwhile Newman (2011) described "*ramp on and off schemes",* for example, GP returner and retainer schemes, as positive to enable flexible contributions and temporary exit and re-entry to the workplace in order to retain talent. Wedderburn (2013) describe the impact of greater social support (for example through a home-based husband, proximity of extended family); which may act to 'buffer' childcare demands and workplace stress.
Maternity leave	In an earlier study, Warren (1989) found women GPs experienced barriers to qualifying for maternity leave due to time in service, "*unwritten rules*" around pregnancy during training and one GP felt pressure to resign due to pregnancy. Meanwhile others described wide variations in interpretation of practice agreements that dictated either the amount of time that was taken off or whether locums were to be paid by the practice or the GP themselves (Warren and Wakeford 1989).
Spouse job and location	Gender differences in the impact of spouse's work location were apparent across studies (Henryk-Gutt and Silverstone 1976, Anonymous 1983, Osler 1991, Leese, Young et al. 2002, French, Andrew et al. 2006). This created a barrier to career progression, causing some female GPs to leave their roles (Osler 1991, Leese, Young et al. 2002) and determined place of residence (Henryk-Gutt and Silverstone 1976).
Culture and discrimination	We identified seven studies that specifically describe the influence of gendered cultures or discrimination on women doctor's career progression in general practice. Women GPs describe being prohibited due to career breaks and negative perceptions of part time working (Warren and Wakeford 1989, Dumelow and Griffiths 1995, Pinder 1998, Newman 2011), inhibiting career structures (Newman 2011), lack of positive role models (Newman 2011), discriminatory interviewing practices (Dumelow and Griffiths 1995) and stereotypical views of 'women's work' which they felt marginalised women GPs' roles (Brooks 1998). Historically, studies describe a negative culture within general practice, with the perception of an 'old boys club' and issues of unconscious bias around perceptions of women, particularly those working part time (Dumelow and Griffiths 1995, Pinder 1998, Newman 2011). Pinder (1998) interviewed 25 women GPs, some of whom reported a sense that part time and non-partnership working were viewed negatively; showing a lack of commitment to the speciality. Professional status was attached to being a full time partner for some – becoming a full time partner was to 'arrive' in the profession. If working hours became more routine to balance work-life commitments, Pinder (1998, p367) describes a *"fear of loss of specialness in [the] profession"* as this had been *"associated with the scared rather than the mundane."* Similarly, in a study conducted in the 1980s, women faced practical barriers in finding part time training and securing maternity leave; which was frowned upon due to *"leaving their colleagues in the lurch"* (Warren and Wakeford 1989). In a study in the 1990s (Dumelow and Griffiths 1995), 84% GPs on appointment committees had not receive equal opportunities training and discriminatory practices had been applied to how question were asked at interviews. For example, questions about family commitments were more commonly asked of female candidates, and asked outside of formal interviews. Organisations such as CCGs have been described as being male-dominated, and with women lacking time for such roles and finding behaviours were inhibiting (Newman 2011).

	Newman et al (2011) describe the importance of good networks and positive role models during training and advocate the need for greater leadership development at the beginning of training to highlight the opportunities to all, regardless of gender. They also call for adequate allocated time for both male and female doctors in leadership roles, separate from clinical commitments. In highlighting the need to promote career development of female GPs, Wedderburn (2013) describe the need to offer wider leadership and training roles, *"to sow seeds for future career aspiration and to invest in its development."* In contrast to these studies, although Gravelle (2011) report statistically and economically significant differences in pay between male and female GP partners, no gender differences were found in likelihood to report job dissatisfaction and women were more likely to be satisfied with their pay than men. They describe this as an 'indirect test for discrimination.'
Dissatisfaction with role or career outcomes	Six studies, all conducted some time ago, described gender differences in satisfaction with GPs' career outcomes (Anonymous 1983, Johnson, Hasler et al. 1993, Brooks 1998, Johnson, Hasler et al. 1998, Leese, Young et al. 2002, French, Andrew et al. 2006). For example, women GPs in the 1980s were less likely to report being in their desired roles at the end of training, compared to men (Anonymous 1983). Johnson (1993) reported significantly more women GPs found it difficult or very difficult to choose and follow their preferred career compared to men ($p<0.01$). This became more difficult for men over time (this paper followed doctors completing training in 1988 over three timepoints from 1974 to 1987), though gender differences were still present when re-measuring this cohort in their later paper (Johnson, Hasler et al. 1998). Women GP leavers in a study by Leese (2002) cited lack of career status of non-principals as a discouraging factor in considering a GP principal post. Meanwhile Brooks (1998) report lower professional status of the stereotypical '*women's work'* that was described as being more often assigned to female GPs (including women's health and child/infant healthcare). When conforming to the notions of appropriate roles for women GPs, Brooks (1998) posits that women GPs may experience lower professional status as the definition of a "good GP" is defined using masculine terms. In contrast, French (2006) report women were statistically significantly *more* satisfied in work generally compared to men and also statistically significantly more satisfied with particular components of work, including remuneration, hours and working relationships. Hours of work was associated with overall satisfaction for both men and women, with fewer hours associated with better overall satisfaction and gender difference reducing the more hours were worked.

Appendix C

Table S3 - secondary analysis of qualitative data

Table S3 presents the proportion of GPs commenting on each theme that were female. Note that women's views were represented more in this sample of 29 female and 11 male GPs, so the higher proportions commenting on each theme should be considered in this context.

Theme	No. of references	No. of files	Percentage female (number M,F)
Barriers			
Responsibility	34	19	74% (5,14)
Right practice	33	14	71% (4,10)
Workload	32	20	80% (4,16)
Family	9	6	83% (1,5)
Finances and risk	8	4	25% (3,1)
Knowledge	5	3	67% (1,2)
Other	17	12	83% (2,10)
Facilitators			
Control	14	10	70% (3,7)
Esteem	13	9	67% (3,6)

Appendix D: Asynchronous Online Focus Group topic guides

Exploring gender differences in uptake of partnership roles

Topic guide: Online Focus Groups – former partner group

Introduction

Through this discussion, we would like to gain more insight into your experiences of working in general practice and your attitudes to the partnership role.

This group has been formed of a mixed gender group of GPs that have left partnership roles. Please be as open as possible; there are no right or wrong answers and your responses will remain anonymous.

Please do not share any personally identifiable information about you, your practice or patients in this forum.

TOPIC ONE, DAY ONE

Process of joining partnerships

1. The cost of partnership buy-in can be significant, but we're aware that practices for doing so vary greatly. What process did you go through to buy into a practice as a GP partner? Are you aware of other practices taking a different approach?

2. How do you feel about the financial outlay involved in becoming a GP partner?

3. Was the financial return a factor in your decision to leave a partnership? What were the general financial consequences of that decision for you?

TOPIC TWO, DAY TWO

Attitudes to partnership roles

1. What do you think are the differences in the role of a GP partner compared with a salaried GP?

2. Before you became a partner, how did you feel about taking on this different role? What excited you about it? What worried or concerned you?

3. What aspects of the role did you find unexpected or challenging?

4. What made you leave the partnership?

5. Would you encourage newer GPs that you know to take on a partnership?

TOPIC THREE, DAY THREE

Policy interventions

1. Under recent GP contract changes, NHS England have set up the 'New to Partnership Payment scheme' (N2PP) to promote GP uptake of partnership roles. Can you tell us a little about what you understand or already know about the scheme?

2. What do you think about the scheme?

3. What else could be done to help encourage future GPs to take on partnership roles?

4. Can you think of any policy interventions which would have encouraged you to sustain a partnership role?

TOPIC FOUR, DAY FOUR

Gender and culture in general practice

1. More women work in medicine than ever before, and in general practice there are now more women than men. Women are, though, less likely to take up a partnership role. Why do you think that might be?

2. Do you feel that your gender has influenced your working life?

3. What do you think are the primary causes of the gender pay gap in general practice?

TOPIC FIVE, DAY FIVE

PILOT DISCRETE CHOICE EXPERIMENT – questions to follow. This will ask GPs to choose between pairs of scenarios, built from three main factors: up-front costs of partnerships, longer-term earnings, and flexibility and work-life balance.

Exploring gender differences in uptake of partnership roles

Topic guide: Online Focus Groups – partner groups

Introduction

Hello! Thank you for joining our online focus group exploring gender differences in experiences of GP partnerships.

Through this discussion, we would like to gain more insight into your experiences of working as a partner in general practice and your attitudes to the partnership role.

This group has been formed of women/male GP partners. Please be as open as possible; **there are no right or wrong answers** and your responses will remain anonymous. Please do not share any personally identifiable information about you, your practice or patients in this forum.

We will add new pages for discussion each day - so please check back in to contribute to each section. You can also go back to previous days/pages if you have not yet contributed to those.

At the end of the week, we will be in touch to provide a £75 voucher as a gesture to thank you for your contributions. This will be offered for those contributing to all pages over the week.

TOPIC ONE, DAY ONE

Process of joining partnerships

1. The cost of partnership buy-in can be significant, but we're aware that practices for doing so vary greatly. What process did you go through to buy into your own practice as a GP partner? Are you aware of other practices taking a different approach?

2. How do you feel about the financial outlay involved in becoming a GP partner?

TOPIC TWO, DAY TWO

Attitudes to partnership roles

1. What do you think are the differences in the role of a GP partner compared with a salaried GP?

2. Before you became a partner, how did you feel about taking on this different role? What excited you about it? What worried or concerned you?

3. Are you pleased that you became a partner? What aspects of the role did you find unexpected?

4. Would you encourage newer GPs that you know to take on a partnership?

TOPIC THREE, DAY THREE

Policy interventions

1. Under recent GP contract changes, NHS England have set up the 'New to Partnership Payment scheme' (N2PP) to promote GP uptake of partnership roles. Can you tell us a little about what you understand or already know about the scheme?

2. What do you think about the scheme?

3. What else could be done to help encourage future GPs to take on partnership roles?

4. Can you think of any policy interventions which would encourage GP partners to sustain their partnership role?

TOPIC FOUR, DAY FOUR

Gender and culture in general practice

1. More women work in medicine than ever before, and in general practice there are now more women than men. Women are, though, less likely to take up a partnership role. Why do you think that might be?

2. Do you feel that your gender has influenced your working life?

3. What do you think are the primary causes of the gender pay gap in general practice?

TOPIC FIVE, DAY FIVE

PILOT DISCRETE CHOICE EXPERIMENT – questions to follow. This will ask GPs to choose between pairs of scenarios, built from three main factors: up-front costs of partnerships, longer-term earnings, and flexibility and work-life balance.

Exploring gender differences in uptake of partnership roles

Topic guide: Online Focus Groups – non-partner groups

Introduction

Through this discussion, we would like to gain more insight into your experiences of working in general practice and your attitudes to partnership roles.

This group has been formed of a *[female/male]* salaried GPs. Please be as open as possible; there are no right or wrong answers and your responses will remain anonymous. Please do not share any personally identifiable information about you, your practice or patients in this forum.

TOPIC ONE, DAY ONE

Process of joining partnerships

3. The cost of partnership buy-in can be significant, but we're aware that practices for doing so vary greatly. What do you know about the process of buying into your own practice as a GP partner? Are you aware of other practices taking a different approach?

4. How do you feel about the financial outlay involved in becoming a GP partner?

TOPIC TWO, DAY TWO

Attitudes to partnership roles

5. What do you think are the differences in the role of a GP partner compared with a salaried GP?

6. How do you feel about taking on this different role in future? What might excite you about it? What might worry or concern you?

7. Can you think of any experiences in your career so far which have encouraged or discouraged you from taking on a partnership role in future?

8. Do you feel supported to consider a future partnership role? If so, how? If not, what would support you in this decision?

TOPIC THREE, DAY THREE

Policy interventions

5. Under recent GP contract changes, NHS England have set up the 'New to Partnership Payment scheme' (N2PP) to promote GP uptake of partnership roles. Can you tell us a little about what you understand or already know about the scheme?

6. What do you think about the scheme?

7. What else could be done to help encourage GPs to take on partnership roles?

TOPIC FOUR, DAY FOUR

Gender and culture in general practice

4. More women work in medicine than ever before, and in general practice there are now more women than men. Women are, though, less likely to take up a partnership role. Why do you think that might be?

5. Do you feel that your gender has influenced your working life?

6. What do you think are the primary causes of the gender pay gap in general practice?

TOPIC FIVE, DAY FIVE

PILOT DISCRETE CHOICE EXPERIMENT – questions to follow. This will ask GPs to choose between pairs of scenarios, built from three main factors: up-front costs of partnerships, longer-term earnings, and flexibility and work-life balance.

Appendix E: Discrete Choice Experiment sample scenario

Imagine you are a GP and you have to make a major career choice between "Career Choice A" and "Career Choice B". In the following scenarios, assume the two choices are as described by the characteristics listed. Assume everything else is the same between both choices, for example that both choices have the same overall working hours. Earnings information is given as full-time equivalent. The characteristics of both choices change through the scenarios. You may find you would not wish to choose either option in the scenario, but in these instances, please choose your preferred option of the two choices, even if neither would necessarily be desirable to you. There are no right or wrong answers.

	Career Choice A	**Career Choice B**
Average **annual earnings** (full-time equivalent)	**£90,000** per year	**£140,000** per year
Up-front **investment**	**£0**	**£150,000**
Responsibility and influence over practice management and risks	**Little** responsibility and influence	**Lots of** responsibility and influence
Flexibility of working hours	**Some** choice over timing of working hours	**Little** choice over timing of working hours

Appendix F: DCE regression table

VARIABLES	(1) All	(2) Females	(3) Males
Earnings (£140,000 vs £90,000)	0.897***	0.752***	1.300***
	(0.182)	(0.211)	(0.367)
Investment (£150,000 vs £0)	1.145***	1.157***	1.157***
	(0.162)	(0.192)	(0.312)
Responsibility and Influence (Lots vs Little)	-0.0684	-0.0901	-0.0129
	(0.111)	(0.129)	(0.215)
Flexibility (Some vs No choice over timing of hours)	1.064***	1.101***	1.014***
	(0.139)	(0.167)	(0.261)
Constant	-0.0677	-0.000420	-0.239
	(0.161)	(0.192)	(0.304)
Observations	376	272	104

Coefficients from logistic regression. Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

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