

BMJ Open 'You can't be a person and a doctor': the work-life balance of doctors in training—a qualitative study

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ABSTRACT

Objectives: Investigate the work-life balance of doctors in training in the UK from the perspectives of trainers and trainees.

Design: Qualitative semistructured focus groups and interviews with trainees and trainers.

Setting: Postgraduate medical training in London, Yorkshire and Humber, Kent, Surrey and Sussex, and Wales during the junior doctor contract dispute at the end of 2015. Part of a larger General Medical Council study about the fairness of postgraduate medical training.

Participants: 96 trainees and 41 trainers. Trainees comprised UK graduates and International Medical Graduates, across all stages of training in 6 specialties (General Practice, Medicine, Obstetrics and Gynaecology, Psychiatry, Radiology, Surgery) and Foundation.

Results: Postgraduate training was characterised by work-life imbalance. Long hours at work were typically supplemented with revision and completion of the e-portfolio. Trainees regularly moved workplaces which could disrupt their personal lives and sometimes led to separation from friends and family. This made it challenging to cope with personal pressures, the stresses of which could then impinge on learning and training, while also leaving trainees with a lack of social support outside work to buffer against the considerable stresses of training. Low morale and harm to well-being resulted in some trainees feeling dehumanised. Work-life imbalance was particularly severe for those with children and especially women who faced a lack of less-than-full-time positions and discriminatory attitudes. Female trainees frequently talked about having to choose a specialty they felt was more conducive to a work-life balance such as General Practice. The proposed junior doctor contract was felt to exacerbate existing problems.

Conclusions: A lack of work-life balance in postgraduate medical training negatively impacted on trainees' learning and well-being. Women with children were particularly affected, suggesting this group would benefit the greatest from changes to improve the work-life balance of trainees.

INTRODUCTION

Medicine is a prestigious and valued career, but it can be arduous: doctors are required to work long hours, make difficult decisions

Strengths and limitations of this study

- There are increasing concerns about incidence of burnout and the lack of work-life balance in doctors in the UK; this study provides a timely account of junior doctors' experiences given fears that this may deteriorate further as a result of changes to junior doctors' contracts introduced in 2016.
- This qualitative study has a large and diverse population with 137 participants, including 96 trainees from all grades, UK and International Medical Graduates from White and Black and Minority Ethnic backgrounds, 6 medical specialties and 4 geographical areas in England and Wales. It also includes 41 trainers, including course directors and postgraduate deans.
- Not all specialties and locations in the UK were represented, meaning potential differences could not be fully explored.
- There is the possibility of response bias; those most dissatisfied may have been more likely to volunteer; however, trainees mostly described positive as well as negative experiences of their time as a trainee.

in the face of uncertainty and cope with death and distress while maintaining compassion.^{1 2} Doctors in training have to undertake competitive job applications and numerous assessments and examinations, while managing frequent job, role, team and hospital changes.³ It is unsurprising that medical training is associated with mental health problems,⁴⁻⁷ with a recent review concluding that lack of work-life balance, long hours, lack of job satisfaction, female sex and younger age are important predictors of burnout in doctors.⁸ Doctors' well-being has a significant impact on healthcare provision and directly influences patient care, including patient satisfaction, adherence to treatment and interpersonal aspects of care.⁹⁻¹¹ Recently, there have been significant concerns that already high levels of emotional exhaustion and burnout in doctors will

increase as a result of changes to the junior doctor contract in the UK and this will cause trainee doctors to leave the UK to work in other countries^{1 12} causing significant problems for a health system already suffering a recruitment and retention crisis, particularly in specialties like General Practice and Psychiatry.^{13–15}

As a group, female doctors have been found to be vulnerable to burnout⁸ and two studies have highlighted lack of work–life balance as the single most important precipitant of burnout in female doctors. One UK study surveyed 716 doctors across 6 different NHS trusts in London and the South East of England, finding that female doctors and doctors working full time had significantly increased levels of stress and burnout compared with male doctors and those working less than full time.¹⁶ A study from the USA found burnout rates among female doctors increased by 12–15% with each additional 5 hours they worked over the contracted weekly 40 hours and this correlated with women feeling less in control of their working environment.¹⁷ The strain of juggling caring responsibilities with challenging job demands impinges more on women because domestic responsibilities more often fall to them;¹⁸ although some studies have found the strain of parenthood was related to stress for male as well as female doctors.^{19 20}

Previous research has examined the impact of work–life balance on doctors' and medical students' psychological health, but there is little evidence about how it might affect their experiences of training, learning and career progression. This study will examine how trainee doctors and their trainers perceive work–life balance during postgraduate medical training and its impact on learning and career progression. This study formed part of a larger General Medical Council-funded study about the fairness of postgraduate medical training, which aimed to investigate the fairness of postgraduate training and the possible factors influencing differential attainment concerning International Medical Graduates and UK Black and Minority Ethnic Graduates,^{21 22} and was conducted during the junior doctor contract dispute in late 2015; as a result, we were, in addition, able to examine trainees' perceptions of the proposed contract.

METHODS

Design

Trainees' lived experiences of training were gathered using a qualitative approach, comprising focus groups and one-to-one interviews in person and over the phone, using a semistructured interview guide (see online supplementary file 1). The interview schedule was piloted on two junior doctors. Questions were designed to elicit positive and negative experiences. Trainees were first asked to describe times where they had learnt a lot, and subsequently asked about difficulties. Trainees were not specifically asked about work–life balance, but these issues emerged from the data.

Trainers, programme directors and postgraduate deans also participated to contextualise the perspectives of trainees. Participants were given a certificate for taking part and refreshments were provided at focus groups. Ethical approval was granted by the University College London Ethics Committee reference: 0511/11. Participants gave informed consent before taking part. A COREC checklist is provided in online supplementary file 2.

Participant sampling framework and recruitment

UK medical training comprises an undergraduate medical degree, postgraduate training of 2 years Foundation followed by specialty training. Postgraduate training is organised geographically into areas administered by Local Education Training Boards (LETBs) in England, and the Welsh Deanery in Wales. Participants were from five LETBs (Kent, Sussex and Surrey; North Central and East London; North West London; South London; Yorkshire and Humber), the Welsh Deanery and the corresponding Foundation Schools. Trainees were selected from six specialties with differing competition ratios and proportions of International Medical Graduates and UK Graduates and White/Black and Minority and Ethnic doctors (Medicine, Surgery, Psychiatry, General Practice, Clinical Radiology, and Obstetrics and Gynaecology). We selected across all stages of training (Foundation, Specialty Training (ST) Years 1–3, and 4+) as well as doctors who had failed to progress or who had completed within the last year. Trainers were also selected from the six specialties or Foundation. Recruitment took place via email invitations, recruitment at training courses in London and advertisements. Those who were eligible to participate were invited to attend a focus group or be interviewed. Data collection venues were universities, training venues and hospitals. Owing to high expressions of interest, participants were purposively sampled in line with the sampling frame. Full details of the methodology are given elsewhere (see online supplementary file 3).²¹

Analysis

Focus groups and interviews were transcribed verbatim. Data were analysed using QSR NVivo 10. Detailed development of the coding framework and analysis can be found elsewhere.²² The analysis forms part of a larger study focusing on fairness in training. Respondents were not specifically asked about work–life balance, but codes relevant to this emerged from the data. Three researchers (RV—linguist, AR—health psychologist, KW—academic psychologist) read all the transcripts and developed an initial coding framework using thematic analysis.²³ Each coded three transcripts independently and then came together to refine the framework. One researcher (RV) then coded all the transcripts and four others double-coded a selection. Discrepancies were discussed and agreed. Authors continued to meet regularly to develop and agree the emerging themes of specific

relevance to work–life balance, in order to fully capture the range of views and experiences of trainees and trainers.

RESULTS

A total of 392 trainees and trainers expressed interest in taking part. One hundred and thirty-seven (96 trainees including 1 post-Certificates of Completion of Training (CCT) and 1 who failed to progress; 41 trainers) took part in 13 focus groups and 35 interviews with trainees and 3 focus groups and 14 interviews with trainers. [Table 1](#) provides demographic details of the sample.

Analysis revealed five themes, described in detail below. In summary, the first two themes illustrate key contributors to work–life imbalance: trainees felt they had to *prioritise work over home life* to cope with a difficult job while also completing their training requirements; and *frequent transitions at work and home* could disrupt personal relationships. This caused stress which impacted on learning and also deprived trainees of support to cope with work difficulties. The next two themes explain the consequences of a lack of work–life balance. Trainees felt they *lacked time to cope with personal pressures outside of work* which they perceived as significantly affecting their learning and performance. *Low morale* and a feeling of exploitation was exacerbated by the proposed junior doctor contract, and was demotivating. The fifth theme describes the perceived greater negative *impact on women* due to structural barriers and discriminatory attitudes.

Table 1 Participant demographics

	Trainee	Trainer
Ethnicity		
BME	42	9
White	49	32
Unknown	5	0
PMQ		
UK graduate	74	36
International medical graduate	21	5
Unknown	1	0
Gender		
Male	42	21
Female	54	20
Specialty		
GP	27	31
Medicine	27	4
Surgery	10	1
Psychiatry	17	1
Radiology	3	1
Obstetrics and Gynaecology	5	3
Foundation	7	
Location		
Kent, Surrey and Sussex	16	30
London	36	5
Wales	10	3
Yorkshire and Humber	34	3
Total sample	96	41

Expectation that trainees prioritise work over home life

Trainees expected to have to work hard and many felt medicine was a vocation. Many also felt they were expected to prioritise their work over their home life. As well as long hours and high volumes of patients to care for, trainees reported having to work in their evenings and holidays to fulfil all their training obligations such as examination revision—including finding suitable patients to practice for clinical examinations—and working on e-portfolios. This resulted in a loss of time for activities outside work, already restricted by long hours and for some, long commutes.

Having to use leave to revise for the Royal College exams, and I guess that comes with a sacrifice of the social element or having a proper holiday or seeing your friends and using your holiday instead to revise.

(White, UK graduate, male, Foundation)

Lack of work–life balance did not just result from work taking up a lot of time, but also from its stressful and difficult nature. Many trainees had worked in chaotic, poorly organised training environments in which service delivery was prioritised over learning needs and supervision was lacking. If trainees were lacking in confidence, these experiences could knock their confidence even further, impeding their ability and motivation to learn, sometimes with long-lasting effects. Similar negative effects resulted from working with trainers perceived as unsupportive or even bullying.

The night shifts and the twelve days in a row and seventy hour weeks, I don't think they're very good for learning from the point of view that I'm too tired to learn, I'm just existing for long periods of time.

(White, UK graduate, female, GP, ST1–3)

We didn't have SHOs, we didn't have registrars, we had staff grades and a consultant who was never around. I was constantly feeling like I wasn't sure if I was missing something, and I felt like that all the time. And no amount of sort of soul searching or reading books was helping me. What I took away from that, I wouldn't really call learning in the sense of being a junior doctor.

(Asian Indian, UK graduate, female, GP ST1–3)

A few trainers recognised that managing high volumes of work with training requirements and commitments outside work could be a significant problem for many trainees:

You basically have a full-time job or a time-and-a-half job as a trainee, and then trying to do exams on top of that, or trying to look after a family on top of that, it's really—that's an ongoing problem that I think is the biggest problem for most trainees.

(Trainer Asian Indian, UK graduate, male, Obstetrics and Gynaecology)

Frequent transitions at work and at home and separation from family and friends

Trainees frequently changed workplaces, which could mean long commutes to work and could make it difficult to plan major life events such as buying a house or having a family:

I'm looking forward to finishing my ST3. That's the point in my life where I'm going to start to have a life and get more of a balance. Not work full-time and start thinking about family. Because I feel like personally I've put everything on hold until I've got to the end of my training.

(White, UK graduate, female, GP ST3)

Having to spend time apart from family and friends due to work could put a huge strain on relationships; as one trainee put it, 'it destroys families' (White International Medical Graduate, Male ST4+ Surgery). Being separated from family and friends could also mean trainees lacked support outside work, which many found vital to enable them to cope with the demands of training.

These strains could be more likely for trainees who did poorly in assessments and so had less choice about where they worked, and whose partners who were also trainees and might be placed in another part of the country. International Medical Graduates and UK graduates from Black and Minority Ethnic backgrounds talked more frequently about ending up moving somewhere they had not wanted to be, being separated from their family and social support, and this causing stress and impeding their ability to learn and progress.

If I don't get transferred over [to another region], I think I will be at the point where I will have to think of resigning from the job, because, I, we, me and my husband, we have lived apart, my daughter, my eldest daughter, now she's going to be six in January, she will be eighteen months old and we've lived apart for two years just because I had started my training and he was doing LATs [locum appointment for training jobs]. And it was a three hour commute, well one-way every weekend for him. But then again, it was hard for me as well, with the younger child and then, living apart in a country where literally this is just us as a family, we don't have much relatives around, so. I don't want to go through that again.

(Asian Pakistani, international medical graduate, female, Medicine ST4+)

These issues were recognised as a significant problem by several trainers:

We've got 40% movement of trainees away from their medical school's localities now. [...] There are a group obviously that's scored so low [in recruitment] they don't

get the choice of where they want to be [...] and] don't have peer support. So that is an issue. I'm not sure what the answer is because real life is, you know, the top score gets the job.

(Trainer, White, Irish, UK graduate, male, GP)

The geography and the lack of autonomy [are the biggest problem for trainees]. [...] Having to move and not having control over where and when you move is difficult.

(Trainer, Black, UK graduate, female, Medicine)

Difficulty coping with commitments outside work

Trainees felt they lacked time and energy to deal with personal and family commitments outside work. Trainers and trainees identified pressures from outside work as being a major cause of trainees not engaging with training properly.

To go home after a nightshift or whatever and then have difficulties that you have to deal with, like fielding one parent or another or, you know. So dealing with all the emotional stuff that comes with that and then having to switch off of that and then go into work and then still having to do your portfolio and do your exams and do your, you know, and switch back and forth. Plus it's so key to try and get on with your relationships so, me, I'm married and you want to make sure that, that all goes well, and my family live abroad.

(Asian Other, UK graduate, female, Medicine ST1–3)

Needing fertility treatment was something. I couldn't conceive of rocking up to hospital every day for two weeks trying to get there and explain to people why I needed to leave the ward for two hours to go and get a scan every day for two weeks. And feeling like then have to take a year out of training to achieve that, it's bonkers.

(Asian Indian, UK graduate, female, ST4+ Medicine)

Many trainers felt the system did not allow them to support trainees with problems outside work, but some also believed that the more they know about trainees' personal lives, the more help and support they could provide.

I've had one trainee go through divorce on the job, I've had another trainee on the brink of divorce based on domestic violence. And it's very hard to say to them "Well actually you need to prioritise your learning".

(Trainer, Asian Other, international medical graduate, female, Psychiatry)

It's like we know the world around the patient, you need to know the world around the trainee.

(Trainer, White, UK graduate, female, GP)

Low morale and harm to well-being

Morale was generally low, and this was often because trainees felt that their propensity for hard work was exploited by employers and the government who put more and more demands on them without regard for their need for a personal life, and without providing good training environments or remuneration in return. The junior doctor contract dispute and the changes introduced with the Shape of Training review were perceived as exacerbating existing problems. The uncertainty regarding the outcome of the contract dispute and the proposed potential negative impact on work-life balance was distressing, and some trainees were considering alternative options, such as taking time out for research or seeking employment overseas.

F1: Personally I'm not even sure medicine is where my career is heading, to be honest with you. That's not just recent. That has been something over the last few years that's been niggling away. [...] For me some of the constant denigration of morale and things like that, and working environment.

F2: I'm seriously thinking of quitting. [...] Surely there are better ways that I can live my life. Surely there's more I can get out of my £36 000 a year that I'm earning from doing these nights, weekends. There's got to be more to it than that. [...]

F3: I think morale. Junior doctors are- already before all this [contract] stuff happened, everyone was feeling a little bit, very demoralised. Morale has never been lower in the NHS. [...] A lot of people are going "Why am I putting myself through this?"

(F1 White, UK graduate, female, GP ST1-3)

(F2 Asian Pakistani, UK graduate, female, GP ST1-3)

(F3 White British, UK graduate, female, GP ST1-3)

At its most extreme, a few trainees talked about being a doctor being a dehumanising experience that prevented participation in activities outside of work, such as having a family and being involved in the wider community.

You can't be a person and a doctor.

(Mixed, UK graduate, male, Psychiatry ST1-3)

You're almost not viewed as a human being who has the right to have a family, to be involved in society, you know, involved with church or local charities or whatever.

(White, UK graduate, female, GP ST1-3)

Low morale was only mentioned by one trainer.

Greater impact on women

The lack of work-life balance was felt to have a larger effect on the learning, performance and career progression of trainees with children or who wanted children, and women in particular. Some female trainees said having children would mean taking a 'step back' (White, UK graduate, female, ST1-3 GP) from their career and the only way possible to combine a family and work was to work less than full time; however, there was also a perceived lack of less-than-full-time positions during training and in consultant posts.

My current plan is that I will drop to part-time and I've come to that point because [...] I don't think I can work full time, and have a family, and pass my exams.

(White, UK graduate, female, GP ST1-3)

While not mentioned as frequently by trainers, several did mention the challenge of bringing up a family with a career in medicine:

My current trainee has just come off maternity leave so her priority is her child and there are current episodes of sick leave, her child goes to nursery and bringing everything back to her and giving it to her. So it is quite the juggle for trainees.

(Trainer, Asian Other, International Medical graduate, female, Psychiatry)

Although much fewer in number, some trainees described positive experiences of a training role which allowed them to have a work-life balance, which was particularly important at certain periods of life, such as after having children:

It could be time of life as well. One of the rotations that I did with a hospice... we only had a consultant there once a week.... I actually really loved the job, but it was my first job back after maternity leave. I got to leave on time every day. For me coming from acute specialties it was really community-based, so it was great as my first insight to GP.

(White, UK graduate, female, GP ST1-3)

In addition to structural barriers, trainees described negative attitudes from seniors towards pregnancy and maternity/paternity leave, and towards trainees—especially women—who wanted to work less than full time. It was felt that these negative attitudes could impede learning for trainees who were having or had had children. Negative attitudes were most often reported to be from senior male doctors and/or in surgical specialties.

I needed to learn how to do laparoscopic sterilisation and the consultant before we went in to do the case was very hostile towards me [...] "How come I've got to that stage in my training and I've got children already? Was that appropriate to have children when I was at that

level? How come I haven't been signed off for this particular procedure already?" [...] I was in such a kind of emotional wreck by that point that I was completely incapable of learning anything. I couldn't even function at a basic level.

(White, UK graduate, female, Obstetrics and Gynaecology, ST4+)

The surgical environment is a male bastion, whether or not we like to acknowledge it. If it's changed, it's slowly but it's still very, very male dominated. So maternity leave is a dirty word. [...] I've had one very negative Annual Review of Competence Progression (ARCP) [...] I was only 10 weeks pregnant and I felt that I was under pressure to be forthcoming with the pregnancy and as soon as I came out with that, that completely changed the dynamic of the ARCP and not in my favour. [...] It was my first and I hope my only outcome that was not an outcome I [...] Not to mention this very negative reaction I had from my consultant at the time in the unit when I told them I was pregnant. Very negative. He chastised me for it. [...] It was soul destroying.

(Asian, UK graduate, female, Surgery, ST4+)

There were also reported instances of overt sexism, some of which were related to the perception that women would be less likely to prioritise work over their families:

I hear [consultants] who come out with remarks that amount to- and I think I'm pretty much quoting verbatim, "I would never hire a female registrar if I could help it".

(Asian UK graduate, female, ST4+ Surgery)

I've had people say to me, so "You're either a woman or a neurosurgeon, you can't be both" [...] It made me lose the passion for my specialty and for my job.

(Asian Pakistani UK graduate, female ST4+ Surgery)

To manage these difficulties, some trainees altered their career paths. Several female trainees said they chose GP because it was the only specialty where they could see having family and being a doctor as feasible, because it allowed part-time working and greater control of their hours, and had shorter training. In contrast, a female GP trainer said that it was incredibly difficult bringing up a child while working as a GP as there is not the flexibility that exists in other careers to manage your workload, and a Medicine trainer said that work-life balance improved considerably once training ended.

DISCUSSION

Statement of principal findings

Junior doctors described training as lacking in work-life balance, which negatively affected their learning and

progression as well as their personal life, morale and well-being. Trainees often worked in pressurised environments, which—coupled with an expectation that they should prioritise work over their personal needs—meant trainees sacrificed leisure time to fulfil training obligations. Frequent transitions to new work environments and lack of autonomy about geographic location of work could disrupt trainees' personal lives, including separation from loved ones, which as well as causing stress could mean trainees lacked support outside work. As a result, trainees lacked the ability to meet personal commitments including caring roles, and many trainees described low morale, feeling exploited by their working conditions and even feeling dehumanised. The impact of work-life imbalance was greater for those with children, particularly women who experienced structural barriers and negative discriminatory attitudes to starting and having a family, especially in surgical specialties. Many trainees, female and male, chose General Practice over hospital Medicine to mitigate against problems caused by work-life balance, despite a GP trainer saying General Practice was unaccommodating for family life compared with other professions and a Medicine trainer saying that work-life balance improved after training ended. These problems were perceived to be exacerbated by the proposed new junior doctor contract.

Strengths and weaknesses of the study

This was a large-scale national study with in-depth qualitative interviews and focus groups. It has extensive reach comprising trainees from both genders, mixed ethnic backgrounds, UK and International Medical Graduates and all stages, ranging from Foundation to completion of training. The study was timely as it took place at the height of the junior doctor contract dispute which resulted in strikes for the first time in 40 years.²⁴ The widespread anger of junior doctors has been seen to be an expression of wider frustration with the government's management of the NHS^{25–27} and the timing of the study may have encouraged doctors to talk openly about their experiences of training. The current mood should not be underestimated; indeed, it has been stated 'the morale of the medical profession in the United Kingdom has reached its nadir' (ref. 28, p. E1). It is impossible to know whether the current dispute impacted the research without a comparative study to draw on, which is challenging due to the rarity of a dispute of this scale. However, the proposed junior doctor contract can be considered to be merely a catalyst for the strikes, which have been seen to represent discontent that has been simmering for years over wider issues;^{26–28} thus even if the dispute was resolved to the satisfaction of all parties, it could be argued issues of work-life balance and the challenges that junior doctors face (eg, frequent transitions at work and home, pressure to prioritise work over personal life) are likely to transcend the current dispute.

Although coverage was wide, not all specialties are represented, others were under-represented (eg, 3 radiologist trainees) and others over-represented (eg, 31 GP trainers). It was therefore not possible to compare fully across specialties. While the study had extensive geographical spread, not all locations were represented. There is also the possibility of response bias, as those who are most unhappy with their training may have been more likely to volunteer; however, some described positive as well as negative experiences of training.

Lincoln and Guba²⁹ propose four criteria for evaluating the quality of qualitative research: credibility (value and believability of the findings), dependability (whether the findings are consistent and repeatable), confirmability (researcher neutrality and accuracy of the data) and transferability (the applicability of the findings to another similar context). Credibility and confirmability can be established by triangulation, the purposes of which are to 'confirm' the data and to ensure the data are 'complete',³⁰ and reflexivity. A number of types of triangulation were employed here: (1) gathering data from multiple perspectives, that is, trainers and trainees; (2) different data collection methods, that is, interviews and focus groups and (3) collecting data from a large and diverse sample of doctors. Reflexivity is an important aspect of confirmability. To minimise potential bias, multiple researchers developed the coding framework, which was an iterative process with regular discussion. As with all research, authors brought their own research and personal perspectives to the study. All authors are White women, some of whom are parents, one of whom is a trainee doctor and parent, and one who is a GP and considered how this may have impacted our results, with all researchers having considerable empathy for the demands placed on trainees.

Regarding transferability and dependability, care has been taken to describe the study in sufficient detail and further information can be found in the full report,²¹ to allow the reader to judge whether the findings are transferable to other contexts and to enable future researchers to repeat the study. The importance of the timing regarding the junior doctors' contract and possible effects on transferability has been discussed.

Strengths and weaknesses in relation to other studies, discussing important differences in results

Previous research investigating work-life balance in trainees consisted of predominantly quantitative surveys conducted in the USA⁶ and illustrated the impact on well-being and the prevalence of stress, anxiety and depression (eg, ^{6 31}); however, it has not focused on the impacts of work-life balance on learning and progression. This qualitative study has furthered our understanding of how a lack of work-life balance goes beyond a negative impact on well-being, affecting learning and progression, and demonstrating women with children face the greatest challenge. A further strength is the research highlights the factors likely to contribute to

high rates of psychological ill health and point to what may assist in redressing the situation.

The study shows some groups are more likely to experience challenges in their work life balance than others. In line with previous research, the findings here show women and parents experience the greatest strain.²⁰ A systematic review and meta-analysis found female gender to be a significant risk factor for experiencing discrimination and prejudice during medical training, and with discrimination being more common in surgery.³² Some of the attitudes found here echo the views of a male surgeon who wrote in a national newspaper that women doctors harm the NHS.³³ Thus, women with children have the combined pressures of not only the stress of managing their career and a family, but may well also be coping with prejudice. Support from friends and family acted as a buffer for trainees, who mentioned drawing on loved ones for practical and emotional support. Social support is known to be an important buffer in coping with stress in medical students,^{34 35} including International Medical Graduates.^{36 37}

Some trainees felt General Practice offered a better work-life balance than other specialties and it is worth considering whether trainees were justified in this perception, given the pressures on GPs are contributing to high levels of burnout,³⁸ with challenges in recruitment (eg, decreasing numbers of applications for GP training³⁹) and retention.⁴⁰ Hobbs *et al*⁴¹ report a retrospective analysis of the direct clinical workload at 398 English General Practices between 2007 and 2014. This period saw GPs' workload increase by 16%, yet was accompanied with a 1% decline in full-time equivalent GPs.⁴¹ Furthermore, in a survey of 1192 GPs, 82% planned to leave, have a career break or reduce their hours, with the amount and intensity of work and lack of job satisfaction being important influences on their intentions.⁴² When considering differences in the work-life balance between medical specialties, Surman *et al*⁴³ published longitudinal survey data on UK-trained doctors, for six graduation year cohorts from 1996 to 2012. Satisfaction with work-life balance was notably lower than job enjoyment. Only 19% were 'highly satisfied' with the time available for leisure activities outside of work, and although this nearly doubled by 5 years postqualification (37%), it remained substantial. While enjoyment levels did not vary greatly between specialties, differences in leisure scores varied more, being highest among those in General Practice. In summary, while General Practice may offer greater satisfaction with leisure time, at least compared with other specialties historically,⁴³ the work-life balance of GPs appears far from adequate at present.

Meaning of the study: possible explanations and implications for clinicians and policymakers

Doctors' learning and performance was negatively affected by a lack of work-life balance, and this was

especially problematic for women and those with caring responsibilities, who now make up the majority of UK trainees. Trainees in our study felt the proposed changes to the junior doctor contract exacerbated a situation that was already close to breaking point⁴⁴ and the Department of Health's Equality Assessment of the new contract concluded that it disadvantages those who work less than full time, carers and lone parents, all of whom are disproportionately women.⁴⁵ There is a pressing need to improve work-life balance for all trainees but especially for women and those with caring responsibilities. This needs to occur at an organisational level (eg, creation of less-than-full-time posts, flexible working) but also at an attitudinal level, addressing implicit bias and discrimination. Addressing these issues may help address the relative lack of women in surgical specialties and their over-representation in General Practice.^{46 47} There is also a need for changes to address the fact that UK graduates from Black and Minority Ethnic groups and International Medical Graduates may be more likely to experience isolation from friends and family.

Implications for clinicians are that social support is invaluable. Developing a strong social support network, both fostering positive relationships at work and those with family and friends outside work, should also be a protective factor to buffer some of the pressures of training. There has been increasing discussion on whether doctors would benefit from resilience training, which may provide a buffer to the multiple demands placed on them,^{5 48} although it has been argued that training doctors to be resilient in the face of adversity cannot be the only solution; the profession should be looking at structural factors, not simply at the level of the individual, in order to reduce burnout and improve well-being.^{2 3}

Unanswered questions and future research

Given the difficulties trainees face in achieving work-life balance, further research that develops and evaluates interventions to improve this, particularly for women, are critical. The results indicated some specialties are perceived to have better work-life balance during training; thus, investigating differences between specialties and understanding the working conditions that facilitate work-life balance could help address this disparity.

Our study suggested that lack of work-life balance might vary by doctors' ethnicity and nationality, and if this negatively affects their learning, it might be linked to International Medical Graduates and BME doctors' relatively poorer academic performance.^{49 50} Results here suggest International Medical Graduates and BME UK graduates were more likely to be separated from their social support network, causing stress and affecting their learning. This is worthy of further exploration as explaining, and reducing, differential attainment, is a key objective for the NHS and General Medical Council (GMC), among others.

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Contributors KW and AG designed the study in response to a tender from the General Medical Council. RV, AR and KW analysed and interpreted the data with input from AG and SN. AR wrote the first draft. She is the guarantor. All authors revised it critically for important intellectual content and approved the final version for publication. All authors agree to be accountable for all aspects of the work.

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