



UNIVERSITY OF LEEDS

This is a repository copy of *Strategies to improve general practitioner well-being: findings from a focus group study*.

White Rose Research Online URL for this paper:
<http://eprints.whiterose.ac.uk/125793/>

Version: Accepted Version

Article:

Hall, L, Johnson, J orcid.org/0000-0003-0431-013X, Heyhoe, J et al. (3 more authors) (2018) Strategies to improve general practitioner well-being: findings from a focus group study. *Family Practice*, 35 (4). pp. 511-516. ISSN 0263-2136

<https://doi.org/10.1093/fampra/cm130>

© The Author(s) 2017. Published by Oxford University Press. All rights reserved. This is a pre-copyedited, author-produced PDF of an article accepted for publication in *Family Practice* following peer review. The version of record, Louise H Hall, Judith Johnson, Jane Heyhoe, Ian Watt, Kevin Anderson, Daryl B O'Connor; Strategies to improve general practitioner well-being: findings from a focus group study, *Family Practice*, , cmx130, <https://doi.org/10.1093/fampra/cm130>, is available online at: <https://doi.org/10.1093/fampra/cm130>.

Reuse

Items deposited in White Rose Research Online are protected by copyright, with all rights reserved unless indicated otherwise. They may be downloaded and/or printed for private study, or other acts as permitted by national copyright laws. The publisher or other rights holders may allow further reproduction and re-use of the full text version. This is indicated by the licence information on the White Rose Research Online record for the item.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Article published in Family Practice (accepted 2017)

Strategies to improve General Practitioner wellbeing: A focus group study

Running Head: General Practitioners' burnout coping strategies

Louise H. Hall^{1,2}, Judith Johnson^{1,2}, Jane Heyhoe², Ian Watt³, Kevin Anderson^{4,5},

Daryl B. O'Connor¹

1. School of Psychology, University of Leeds; Leeds, England
2. Yorkshire Quality and Safety Research Group, Bradford Institute for Health Research, Bradford Royal Infirmary; Bradford, England
3. Department of Health Sciences, University of York; York, England
4. Haxby Group Surgeries; Hull, England
5. Hull York Medical School; York, England

Corresponding author: Miss L. H. Hall; School of Psychology, University of Leeds; Lifton Place, Leeds, LS2 9JT, England; L.H.Hall13@leeds.ac.uk

Word Count: 3,261

References: 31

Key Messages

- Organisational changes are needed to improve GP wellbeing and burnout levels
- Organisational and individual awareness and training around burnout could help
- Increases in resources (staff) could reduce workload and improve wellbeing
- Practice and individual-level strategies could reduce burnout in the interim
- Introducing daily coffee/lunch breaks could greatly benefit staff wellbeing
- More support from various sources (colleagues, public, government) is needed

Abstract

Background

Primary care physicians are particularly prone to high levels of burnout and poor wellbeing. Despite this, no qualitative studies have specifically investigated the best ways to improve wellbeing and prevent burnout in primary care physicians. Previous interventions within primary care have been person-oriented and mainly focused on mindfulness, but there has been no prior research on whether general practitioners (GPs) deem this to be the best approach.

Objectives

To explore strategies that could improve GP wellbeing and reduce or prevent burnout, based on GP perceptions of the workplace factors that affect their levels of wellbeing and burnout.

Methods

Five focus groups were conducted, with 25 GPs (locums, salaried, trainees, and partners) in the UK, between September 2015 and February 2016. Focus groups took place in GP practices and private meeting rooms. Discussions were centered on the workplace factors that they perceived to influence their wellbeing, along with strategies that they use either personally, or as a practice, to try and prevent burnout. Furthermore, strategies that could feasibly be implemented by individuals and practices to improve wellbeing, as well as changes that are needed by groups or organizations that are external to their practice (e.g. the government) to improve the working conditions, were explored. Thematic analysis was conducted on the transcripts.

Results

Based on the contributors to burnout and workplace wellbeing that the participants identified, the following feasible strategies were suggested: compulsory daily coffee breaks, increasing self and organizational awareness of the risks of burnout, and mentoring/buddy systems. System-level organizational changes were voiced as vital, however, to improve the wellbeing of all primary care physicians. Increasing resources seemed to be the ideal solution, to allow for more administrative staff and GPs.

Conclusion

These strategies merit further consideration by researchers, physicians, healthcare organizations, and policy makers both in the UK and beyond. Failure to do so may result in healthcare staff becoming even more burnt-out, potentially leading to a loss of doctors from the workforce.

Background

Burnout and poor mental wellbeing in healthcare professionals are rising internationally¹⁻³. Burnout, “a state of vital exhaustion”⁴ can be characterized by feelings of emotional exhaustion, depersonalization, and reduced personal accomplishment⁵. Wellbeing is a broader concept, with clinicians often viewing it as a spectrum from low to high⁶. Low wellbeing includes symptoms or diagnoses of depression and/or anxiety, and high wellbeing as feelings of happiness and flourishing⁷. Primary care physicians are at high risk of these ailments^{8,9}. Rates of burnout in UK General Practitioners (GPs) are particularly high compared with other European countries and similar to rates within the US and Canada¹⁰⁻¹², leading to concerns that UK general practice is currently ‘in crisis’¹³. Negative implications of burnout and poor wellbeing for the individual include an unfavourable work-life balance, poorer quality of life, substance abuse, and suicidality^{12,14}. Implications of staff burnout and poor wellbeing on healthcare organisations include high staff turnover, increased sickness absence, poorer quality of care (e.g. negative attitudes towards patients and reduced patient satisfaction), and poorer patient safety outcomes (e.g. increased likelihood of making a wrong diagnosis or medication error)¹⁵⁻¹⁷. All of these outcomes also cost healthcare organizations billions of pounds/dollars annually^{18,19}.

Several studies have investigated the factors contributing to stress, burnout, and depression within primary care physicians. They have suggested that causes include high workload, difficult patients, lack of support, and lack of control^{8,10,20}. The majority of research however, has been survey based, lacking the depth and explanatory power that qualitative methods provide. In some instances little justification was provided for why particular organizational variables were measured. Whilst one study by Fisher et al.,²¹ has taken a qualitative approach, they focused solely on workload stressors and strategies to deal specifically with workload. Our study aims to build upon these findings and extend them by focusing on general workplace stressors (including but not limited to workload), along with potential strategies to deal with these stressors and their effects on the individuals.

Despite similar demands amongst healthcare staff, not all practitioners experience such problems. Strategies used by resilient physicians and practices to cope with workplace demands include; limiting one’s practice/reducing work hours, improving communication and team functioning, having job control and seeking peer and personal support²¹⁻²³. Although these strategies have been found useful, they mostly rely on the physician themselves to ensure implementation. This requires individuals to have the relevant resources (time, support, flexibility) to make changes to their routines.

Those who are already struggling and therefore have limited resources are less able to make these amendments, keeping them trapped in a negative feedback loop.

Regarding formal interventions to reduce physician burnout, both organizational and individual approaches have been successful, however no organizational interventions have been trialed in primary care²⁴. Organizational interventions are warranted so that a) the responsibility for burnout reduction is shared between the practitioner and the organization and b) working conditions improve for all staff. Furthermore, many interventions simply aim to treat outcomes, without addressing the cause of the problem. As such, our aim was to explore potential strategies that GPs think could improve their wellbeing and reduce/prevent burnout, based on their perceptions of the workplace factors that affect their levels of wellbeing and burnout. To accomplish this we took a two-part approach, to meet the following objectives:

- 1) To understand which workplace factors GPs' perceive to influence their levels of wellbeing and burnout.
- 2) To explore strategies and changes that GPs think could improve their wellbeing/prevent burnout

Method

Participants

Five focus groups were conducted with a total of 25 practicing General Practitioners who worked in the North of England. Each group consisted of three to six GPs. Three focus groups consisted of GPs working within the same practices, the other two consisted of locum GPs. Participant and focus group characteristics are displayed in Table 1.

Table 1

Focus Group	GP surgery/ Locums	Number of partners	Patient list size	Number of participants	Sex	Job roles	Part/Full-time work	Mean age (range)	Mean no. years as registered GP (range)
1	GP surgery	2	45,000	6	2M, 4F	2 Trainees 2 Partners Salaried 1 Unknown	3 FT, 1 PT, 1 2 Unknown	35 (29 – 40)*	3.5 (0 – 11)*
2	Locums	-	-	4	2M, 2F	4 Locums	4 PT	47 (36 – 57)	17.5 (4 – 28)
3	Locums	-	-	5	2M, 3F	5 Locums	4 PT, 1FT	42.2 (34 – 56)	10.4 (0 – 28)
4	GP surgery	7	15,000	6	4M, 2F	6 Partners	6 FT	46 (35 – 55)	17.2 (8 – 28)
5	GP surgery	5	11,000	4	1M, 3F	3 Salaried 1 Partner	3 PT, 1FT	38.75 (33 – 44)	9.5 (4 – 17)

Focus Group Characteristics

*M = Male, F = Female, *Missing two participants' data*

Procedure

We recruited GPs via an existing network and then by a snowballing method between August 2015 and February 2016. Participants who took part in the first focus group put the researchers in contact with the practice managers in their associated practices. They also gave the researchers contact details of their personal contacts within local locum groups. Potential participants were fully informed of the topics to be discussed during the recruitment stage. LH conducted the semi-structured focus groups either in practice premises, or at a mutually convenient alternative location. Once written informed consent had been given by each participant, the questions listed in Box 1 were asked, with some room for emerging discussions. The transcripts were audio-recorded and then transcribed verbatim. Focus groups lasted 45 minutes to 1.5 hours.

Questions (prompts)

- How would you define wellbeing?
- How would you define burnout?
- What would you consider to be the main contributors to wellbeing at work? (Positive and negative contributors)
- Do you have a way to try and minimize the impact these issues have on your wellbeing? (Personally, as a practice)
- Would you say that burnout is a worry generally among doctors?
- Do you do anything to try and prevent burnout occurring?
- Are you aware of any services or coping mechanisms that could help prevent burnout?
- Do you think that burnout and/or poor wellbeing is increasing amongst doctors? (*Why? What's changed?*)
- Are you encouraged to talk about your own wellbeing? (To your colleagues, professionals, family. Is it a taboo?)
- What, in your opinion, would be the best way to improve the wellbeing of GPs, and prevent burnout? (Feasible ideas, if the sky was the limit)

Box 1. Discussion topic guide

Analysis

Thematic analysis (TA) was conducted based on Braun and Clarke's (2006) six phase guidelines²⁵. The transcripts were coded by hand, based on inductive, semantic principles, from the first author's realist

epistemological approach. All transcripts were coded by LH, with 20% double coded by JH to provide outside insight, allow discussions about the emerging themes, and guard against investigator bias. After initial coding of all the transcripts, codes were grouped into themes and sub-themes. Any disagreements regarding themes were discussed with one or more additional author until a consensus was agreed. Once a thematic map had been generated, the authors revisited the entire data set to check that the themes accurately reflected the majority of the data.

Results

The focus groups were heterogeneous with regards to job position (partner, locum, etc.), but all discussed very similar themes.

Objective 1: Contributors to wellbeing and burnout

When discussing which workplace factors contribute to their sense of wellbeing and levels of burnout, two distinct themes emerged: Those that were internal to their practice and/or the individual, and those that were external to their practice that they had no control over.

Internal influencers of wellbeing comprised of Team support, Variety (within their roles, practices, or patients), Control (over their work environment and/or timetable), and an Intense and unmanageable workload. The importance of working within a supportive, interactive team was mentioned by all focus groups as particularly vital for good wellbeing. Those who felt like they did not receive peer support or have the time to interact with their team described how it could have very negative effects on their wellbeing.

External influencers of wellbeing were discussed in negative terms. These consisted of; *Increases in pressures and workload, Increases in patients' expectations and complaints*, the Negative portrayal of general practice (in the media, by patients, and the government), and a Lack of support (from the public, patients, the government, and the media). An increase in the amount of administrative work that GPs have to do for external regulating organizations was described as adding to their workload, adding stress, and taking away their time which would be better spent on direct patient care.

Objective 2: Strategies to improve wellbeing

Participants discussed possible strategies to improve wellbeing and prevent burnout in two similar themes to the first objective: Strategies that could be implemented at an individual or practice level, and changes needed at a higher, organizational or policy level.

Individual and practice level strategies

GPs discussed strategies that fell under the following categories; Breaks, Support, Physical needs, Psychological strategies, and Control. There was some overlap between these sub-themes, particularly between Breaks and Psychological strategies and Physical needs.

Breaks. Scheduling a coffee and/or lunch break into the working day was viewed as a feasible strategy that would be very beneficial to their wellbeing. Having the opportunity and being encouraged to leave their individual and often isolated offices, interact with their colleagues, and have a short respite from work was seen as something that positively impacted on GPs' wellbeing in practices where this was already implemented, and something that those who did not get the chance to, wished they did.

“M1: (...) the coffee break in the middle of morning surgery. We try and get here and meet for a bit of rest and recuperation (...) ... I've definitely recognized that it is a positive factor for our wellbeing and therefore it's something that we need to maintain and cherish” [FG4]

Breaks served as fulfilling psychological needs by having that mental break from 'being the doctor' [M2, FG1], physical needs by having the chance to have a drink, some food, perhaps some fresh air, and a toilet break, and social needs through interacting with colleagues. Lunch breaks were not viewed as a realistic option that could be implemented, however one short coffee break a day was deemed feasible. Participants voiced that even if GPs only briefly left their office to make a cup of tea and take it back to their office, this very short respite and chance of interaction could be enough to make a big change to their wellbeing.

Support (social, supervisory, workload, and from patients). Having social support within the practice, peer-to-peer, and from both medics and non-medics outside of their practice was found to be useful for

preventing burnout. To improve support at the practice level, buddying and mentoring systems were suggested, along with regular meetings to ‘check in’ with how team members are doing.

“F1: But I think also, looking after each other... I think we're quite good at looking over our shoulder at the other person (...) if you see somebody's got a really full load, getting them a cup of tea, or going and seeing one of their extras, (...) is quite a positive thing about our team that we tend to do.” [FG1]

A suggestion for improving support from patients was to communicate the state of the surgery with them and ask for their patience and support.

Physical needs. In addition to the physical needs within the breaks theme (food and drink), participants discussed the need to make time for exercise to support physical and psychological wellbeing. Exercise additionally served their social needs through team sports, and as a psychological strategy through being a form of ‘escapism’.

Psychological strategies. Strategies that participants used to deal with the emotional toll of patient contacts included being emotionally guarded/setting boundaries, and isolating themselves. The latter approach, however, was acknowledged to be unhealthy and did indeed worsen one participant’s ability to cope. Maintaining awareness of the risk of burnout was voiced as a useful strategy that some participants used. Additionally, it was mentioned that this could be implemented in practices through discussions and meetings, and externally at the training stage. It was evident that awareness was needed at the individual, practice, and external levels.

“F1: I agree. Self-awareness is often the key thing. I certainly wasn't taught that in a training stage. I think if trainees are taught or encouraged to be more self-aware so they know what their personal stresses are, how to manage them, how to identify them...(...) I suppose that's actually resilience isn't it, it probably makes people feel more resilient because they're more aware of their limits.” [FG 2]

Control. Control over how much, where, and when they worked was seen as a positive strategy that some GPs (mostly locums) used to prevent burnout. Many had chosen this manner of work specifically to prevent them from burning out. Or it was chosen as a way forward to protect their wellbeing after previously working full-time and suffering from burnout or depression.

External changes

Despite the positive changes that could be implemented within practices at a team or individual level, it was evident that system-level changes are needed to have a larger impact on GPs' work environment and their wellbeing. The need for more Support, a Reduction in pressures, and an Increase in resources, was discussed.

Support. Participants voiced the need for support from the government, their patients, the healthcare organization as a whole, and the wider public and press through a reduction in negative media portrayal. Additionally, a need for support from other services was discussed, for example from social services, to reduce the workload falling to primary care related to care-related and social problems. However this may be an issue with (a lack of) funding and access also within those organizations.

"F1: But wider support about if it's an over the counter medication that you can buy from the chemist please don't request it from your doctor." [FG3]

Reduction in pressure. Participants stated the need for a reduction in the tasks that decrease their time that should be spent on direct patient care, such as; administrative work, quality assessment exercises, additional work pushed onto them from secondary care.

"F1: they [secondary care] treat us like um -

F3: - yeah like can you recheck this and do that and -

F1: - they give us lots of menial, not menial tasks but things that they should be doing themselves they're pushing onto us all, so if they stopped doing that..." [FG5]

Increase in resources. Increasing resources for primary care was seen as an ideal solution that would help to improve all the previous factors mentioned, such as reducing pressures and enabling time for breaks. Ideally, having more GPs and funding to pay for more administrative staff would improve the wellbeing of the GPs and also the quality of care by enabling GPs to offer longer appointments. Increasing funding in other sectors (such as social care and mental healthcare) would also reduce the added pressure currently within primary care.

“F1: So your options are you could increase funding in general practice back to the 11% it should be at, which would be a 3 or 4% rise, and that additional resource would pay for either more doctors or more staff within practices to do the things actually you don't need a doctor to do, and free up the doctors to then treat patients (...) it's better for the doctors but it's better for the patients as well” [FG3]

Additional quotes for each theme and sub-theme can be found in the supplementary files (tables 2-5)

Discussion

Summary

Five focus groups of GPs discussed issues that they perceived contributed to their wellbeing and levels of burnout. They also considered possible strategies to improve wellbeing and prevent burnout. Their responses fell under two main themes; those that were internal to the individual and practice, and those that were external to themselves and their practice and therefore perceived to be outside of their direct control. Internal influencers of wellbeing mainly consisted of having good team support, variation within the job, job control, and unmanageable workloads. Individual and practice strategies to improve wellbeing and prevent burnout tied in with these. In particular, participants noted strategies to look after their physical needs (e.g. exercising), to have control (e.g. through choosing to locum), having breaks, offering support, and psychological strategies such as increasing their self-awareness. External influencers of wellbeing were framed in negative terms and comprised perceived increases in pressure and workload, increasing patient expectations and complaints, lack of support from multiple sources, and a perceived negative portrayal of general practice. External changes to improve wellbeing also drew a parallel with these. Increases in support from the public, patients, media, and the government,

reduction in pressures, and increases in resources (e.g. funding) were stated as the three main external changes that would be needed to improve wellbeing. It is important to note that control was seen as an important contributor to wellbeing and yet the changes most likely to have a big impact in improving all GPs' wellbeing were mainly things outside of their control, suggesting a state of helplessness and vulnerability to burnout with primary care physicians.

There were no obvious differences between or within groups based on job role, gender, or number of years working as a GP. The only difference was in the language used: focus groups with locum workers were more willing to discuss personal experiences of poor wellbeing or burnout, whereas groups run with colleagues in the same practices spoke about more general workplace contributors to stress, with fewer participants sharing their personal experiences of burnout or depression. This is unsurprising given the potential stigma attached to discussing personal mental health issues in front of colleagues. However this could also be explained by their current roles, as many of the locum workers had chosen that line of work in a concerted effort to prevent burnout, or as a way to improve their wellbeing after experiencing burnout/poor wellbeing when previously working full-time.

Previous literature

Similar contributors to wellbeing have previously been reported across various countries, including America, Canada, and the UK^{10,20,26,27}. Some of these factors have also been cited as reasons why UK GPs have left general practice in recent years²⁸. Our study complements their findings, giving further evidence for the lack of support within primary care in the UK, showing that these issues are widespread and geographically generalizable. Furthermore, our study extends these findings by shifting the focus away from strategies to deal specifically with workload, and instead offering practical recommendations for individuals and practices to implement in the workplace to prevent burnout and improve wellbeing generally. Additionally, our findings put forward system-level changes that are needed to improve working conditions.

Interventions

Improving self-awareness of personal stressors and signs of stress was a strategy suggested by our participants. This has been successfully trialed within healthcare staff, through mindfulness training

courses, as an effective way to reduce burnout^{29,30}. The GPs also discussed the need for more self-awareness and stress management coaching from their education providers during early stages of professional training. This could encourage practitioner awareness of burnout whilst simultaneously encouraging a wider, organizational understanding. Additionally, participants suggested various strategies to foster peer-support. Balint groups (a group of clinicians/doctors who regularly meet to discuss their difficult patient cases in a safe and supportive environment), could be one way of increasing both peer-support whilst also increasing competence, and are used by some physicians as a means to prevent burnout³¹. The primary novel strategy suggested by the participants of this study, was the need for regular coffee/lunch breaks. These were believed to help to improve both physical and psychological wellbeing, whilst also fostering a better team culture.

Implications

There are some practical strategies that individuals and practices can implement to reduce burnout, such as introducing compulsory coffee breaks, and mentoring/buddying systems. However, it is evident that system level changes may also be valuable. These could include training future GPs and organizations to be aware of the signs of burnout and evaluating the impact this has on workforce wellbeing. The changes that are likely to have the biggest impact on wellbeing however, such as increases in funding, resources, and staff, are those that are the most challenging to implement.

Strengths and limitations

All participants were working within UK general practice, which challenges the representativeness and generalizability of the sample and results. However many of the themes discussed were of international relevance, particularly regarding the need for increases in support, resources, and breaks. The primary strength of this study is the practical and feasible strategies that could be implemented within practices immediately to improve workplace wellbeing in the interim before organizational change can be implemented.

Conclusion

GPs identified both practice-level and organizational-level factors that influenced their wellbeing. They suggested that the best, feasible way to reduce the negative impact of these factors on their wellbeing is

through daily breaks. However, external changes were deemed vital to provide increases in resources to allow for more administrative staff, GPs, and time for patient contact, as well as an increase in support from various sources. These factors all merit further consideration by researchers, physicians, healthcare organizations, and policy makers worldwide. Failure to do so may result in the primary care workforce becoming even more burnt-out, depressed, and a subsequent increase in sick leave and early retirement.

Acknowledgements

Ethical Approval

This study received ethical approval from the School of Psychology, University of Leeds Ethics Committee (ref #15-0075 accepted on 06/03/15) and Health Research Authority R&D approval (IRAS ref #178501).

This project forms part of a PhD that is part-funded by an NIHR grant. This paper presents independent research by the National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care Yorkshire and Humber (NIHR CLAHRC YH). www.clahrc-yh.nir.ac.uk. The views and opinions expressed are those of the authors, and not necessarily those of the NHS, the NIHR or the Department of Health.

We gratefully thank all the GPs who gave up their time to participate in this study.

Conflict of Interest

The authors declare that they have no conflict of interest.

References

1. Arigoni F, Bovier PA, Sappino A-P. Trend of burnout among Swiss doctors. *Swiss Med Wkly*. 2010;140:w13070.
2. Embriaco N, Azoulay E, Barrau K, et al. High level of burnout in intensivists: prevalence and associated factors. *American journal of respiratory and critical care medicine*. 2007;175(7):686-692.
3. Klein J, Frie KG, Blum K, von dem Knesebeck O. Burnout and perceived quality of care among German clinicians in surgery. *International Journal for Quality in Health Care*. 2010;22(6):525-530.
4. Organization WH. International statistical classification of diseases and health related problems (The) ICD-10. World Health Organization; 2004.
5. Maslach C, Jackson SE, Leiter MP. Maslach burnout inventory manual . Mountain View, CA: CPP. Inc., and Davies-Black. 1996.
6. Johnson J, Wood AM. Integrating positive and clinical psychology: Viewing human functioning as continua from positive to negative can benefit clinical assessment, interventions and understandings of resilience. *Cognitive Therapy and Research*. 2016:1-15.
7. Dodge R, Daly AP, Huyton J, Sanders LD. The challenge of defining wellbeing. *International journal of wellbeing*. 2012;2(3).
8. Arigoni F, Bovier PA, Mermillod B, Waltz P, Sappino A-P. Prevalence of burnout among Swiss cancer clinicians, paediatricians and general practitioners: who are most at risk? *Supportive Care in Cancer*. 2009;17(1):75-81.
9. Smith F, Goldacre MJ, Lambert TW. Adverse effects on health and wellbeing of working as a doctor: views of the UK medical graduates of 1974 and 1977 surveyed in 2014. *Journal of the Royal Society of Medicine*. 2017:0141076817697489.
10. Lee FJ, Stewart M, Brown JB. Stress, burnout, and strategies for reducing them What's the situation among Canadian family physicians? *Canadian Family Physician*. 2008;54(2):234-235.
11. Shanafelt TD, Boone S, Tan L, et al. Burnout and satisfaction with work-life balance among US physicians relative to the general US population. *Archives of internal medicine*. 2012;172(18):1377-1385.
12. Soler JK, Yaman H, Esteva M, et al. Burnout in European family doctors: the EGPRN study. *Family practice*. 2008;25(4):245-265.
13. Baird B, Charles A, Honeyman M, Maguire D, Das P. *Understanding pressures in general practice*. Kings Fund; 2016.
14. Suñer - Soler R, Grau - Martín A, Font - Mayolas S, Gras M, Bertran C, Sullman M. Burnout and quality of life among Spanish healthcare personnel. *Journal of psychiatric and mental health nursing*. 2013;20(4):305-313.
15. Hall LH, Johnson J, Watt I, Tsipa A, O'Connor DB. Healthcare staff wellbeing, burnout, and patient safety: A systematic review. *PLoS One*. 2016;11(7):e0159015.
16. Salyers MP, Bonfils KA, Luther L, et al. The Relationship Between Professional Burnout and Quality and Safety in Healthcare: A Meta-Analysis. *Journal of General Internal Medicine*. 2016:1-8.

17. Hall LH, Johnson J, Heyhoe J, Watt I, Anderson K, O'Connor DB. Exploring the impact of primary care physician burnout and wellbeing on patient care: a focus group study. *Journal of Patient Safety*. (in press).
18. Van Den Bos J, Rustagi K, Gray T, Halford M, Ziemkiewicz E, Shreve J. The \$17.1 billion problem: the annual cost of measurable medical errors. *Health Affairs*. 2011;30(4):596-603.
19. Health Do. *An organisation with a memory*. UK, London: The Stationary Office 2000.
20. Calnan M, Wainwright D, Forsythe M, Wall B, Almond S. Mental health and stress in the workplace: the case of general practice in the UK. *Social science & medicine*. 2001;52(4):499-507.
21. Fisher RF, Croxson CH, Ashdown HF, Hobbs FR. GP views on strategies to cope with increasing workload: a qualitative interview study. *Br J Gen Pract*. 2017:bjgpfeb-2017-2067-2655-croxson-fl-p.
22. Sinsky CA, Willard-Grace R, Schutzbank AM, Sinsky TA, Margolius D, Bodenheimer T. In search of joy in practice: a report of 23 high-functioning primary care practices. *The Annals of Family Medicine*. 2013;11(3):272-278.
23. Stevenson AD, Phillips CB, Anderson KJ. Resilience among doctors who work in challenging areas: a qualitative study. *Br J Gen Pract*. 2011;61(588):e404-e410.
24. West CP, Dyrbye LN, Erwin PJ, Shanafelt TD. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. *The Lancet*. 2016;388(10057):2272-2281.
25. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative research in psychology*. 2006;3(2):77-101.
26. Linzer M, Manwell LB, Williams ES, et al. Working conditions in primary care: physician reactions and care quality. *Annals of internal medicine*. 2009;151(1):28-36.
27. Cheshire A, Ridge D, Hughes J, et al. Influences on GP coping and resilience: a qualitative study in primary care. *Br J Gen Pract*. 2017:bjgp17X690893.
28. Doran N, Fox F, Taylor G, Harris M. Early GP leavers interim report: report to HEE & NHS England dated 4th May 2014. 2015.
29. Goodman MJ, Schorling JB. A mindfulness course decreases burnout and improves well-being among healthcare providers. *The International Journal of Psychiatry in Medicine*. 2012;43(2):119-128.
30. Krasner MS, Epstein RM, Beckman H, et al. Association of an educational program in mindful communication with burnout, empathy, and attitudes among primary care physicians. *Jama*. 2009;302(12):1284-1293.
31. Kjeldmand D, Holmström I. Balint groups as a means to increase job satisfaction and prevent burnout among general practitioners. *The Annals of Family Medicine*. 2008;6(2):138-145.

