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Walking a tight rope. Determinants of GP wellbeing - a qualitative study

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TITLE PAGE

Title	**Walking a tight rope. Determinants of GP wellbeing - a qualitative study**
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ABSTRACT

Objectives
The wellbeing of doctors is recognised as a major priority in health care, yet there is little research on how General Practitioners (GPs) keep well. This is of particular importance considering the role that GPs play in population health, with an increasing demand for primary healthcare services from an aging population. We aimed to explore the determinants of GPs' wellbeing.

Design
Semi-structured qualitative interviews.

From March to September 2021, we interviewed GPs working in numerous settings, using snowball and purposive sampling to expand recruitment across Australia. 20 GPs participated individually via Zoom. A semi-structured interview-guide provided a framework to explore wellbeing from a personal, organisational, and systemic perspective, including the recent challenges presented by COVID-19. Recordings were transcribed verbatim, and inductive thematic analysis was performed.

Results
Eleven female and nine male GPs with diverse experience, from urban and rural settings were interviewed (mean 32 minutes). Determinants of wellbeing were underpinned by GPs' sense of identity. This was strongly influenced by GPs seeing themselves as a distinct but often undervalued profession working in small organisations within a broader health system. Financial aspects emerged as important moderators of the inter-connections between these themes. A complex balancing act between all determinants of wellbeing was evidenced.

Conclusions
Conceptualising determinants and understanding their inter-connections can inform future strategies, and interventions. Finances need to be a major consideration to prioritise, promote, and support GP wellbeing, and a sustainable primary care workforce.

Keywords

Wellbeing, determinants, general practitioner, family practitioner, primary health care, qualitative research.

Ethics approval statement
This study was approved by the University of Sydney Human Research and Ethics Committee (2020/822).

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STRENGTHS AND LIMITATIONS OF THIS STUDY

Strengths

- A well and thriving generalist workforce is crucial to sustained population health. A qualitative exploration adds rich and nuanced information to better understand the determinants of GPs' wellbeing, and their complex interactions.
- It is necessary to understand drivers and barriers of wellbeing in view of developing strategies to better support and enable GP wellbeing.
- Our sample of twenty interviewees includes GPs working in a wide range of clinical settings in Australia. In addition, half of these GPs have worked and trained overseas including the UK, NZ, Africa, the Indian subcontinent, and the Middle East.

Limitations

- Our results reflect the lived experience of twenty GPs, and these findings may not be generalisable to all GPs, particularly those working outside of the Australian context.
- Selection bias needs to be considered in any voluntary research participation.

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INTRODUCTION

Wellbeing of health care professionals has been recognised as a priority, and key component of the wider goals for health care in the USA, and Canada (1-4). General practice crucially provides cost-effective care to an aging population with chronic and complex health needs, and demand for generalist services outweighs supply in many countries, particularly in the UK, and USA (5-8).

In Australia, the 'National medical workforce strategy' aims to develop and coordinate a joint vision to provide effective, universally accessible, and sustainable health care across the entire population (9). Doctor wellbeing, and insufficient generalist capacity, have been identified as top concerns that need to be addressed besides maldistribution, and imbalance of specialities within the medical workforce (9, 10). Despite growing numbers of GPs nationally (11, 12), and GPs per capita (12), the availability of GPs in Australian major cities outstrips that of non-metropolitan areas (11). Together with a longstanding dearth of GPs in rural and remote areas (11, 13), this leaves parts of the population chronically underserviced. Global

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factors including an aging GP workforce, a trend for reducing work hours, a shift towards more women entering GP training also afflict Australia (14-16). A decline in Royal Australian College of General Practice (RACGP) applications and filled training places (14), and a waning interest in general practice from surveyed medical students (17), may well exacerbate the issue.

The additional strain of the current pandemic (18) highlights the need for a thriving GP workforce, and GPs' wellbeing is more important than ever. Professional organisations endeavour to address wellbeing (i.e., RACGP programmes and resources (19, 20)), yet there is remarkably little evidence on how to increase GP wellbeing (21). Our recent systematic review of both trials and policy changes showed interventions are typically aimed at the individual GP, involve mindfulness practice, and show low to moderate effectiveness. Very few interventions target organisations, or health systems (21).

OBJECTIVES

A robust and sustainable generalist workforce is important. To improve GP wellbeing, we must first know how GPs conceptualise wellbeing and what determines it, to then establish how to bolster this. We aimed to explore GPs' perspectives of wellbeing and key, potentially modifiable, factors that determine it.

METHODS

Qualitative approach and research design

We applied a six-step qualitative thematic analysis (22-25), providing a flexible and accessible way of analysing qualitative data, enabling iterative exploration of patterns and relationships between different themes whilst ensuring research rigour.

The six steps included: 1) familiarising with data; 2) generating initial codes; 3) searching for themes and subthemes; 4) reviewing themes; 5) refining, defining and naming themes; and 6) writing the report (25).

We used an inductive data-driven (bottom-up), and a critical realist epistemological approach to our analysis (26). A COREQ (27) reporting checklist is provided.

Researcher characteristics and reflexivity

Our research team (four females and three males) consisted of a PhD candidate with background in medicine and coaching psychology (DN); two GPs, one (BG) a representative of a Primary Health Network (PHN), a GP led organisation responsible for the primary care

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of a large geographical location typically serving a few hundred thousand people, and a representative (LA) of a national private GP organisation; two psychiatrists (NG, IH); a psychologist/researcher (AM), and a researcher (CK) both with extensive qualitative expertise. Collaborating with GPs within our research team enabled reflexivity across personal, professional, organisational and systemic experiences (28).

Context & sampling strategy

Recruitment was aimed at GPs, and GP registrars working clinically in Australia. We chose a maximum variation sampling approach (29, 30), and purposely engaged PHNs and a private GP organisation to announce our study in e-newsletters and communications. Furthermore, we utilised flyers, social media, and snowballing.

Patient and Public involvement

Patients and public were not involved in the design or conduct of this research project.

Ethical issues

Participation was voluntary. All participants received a participant information sheet and provided consent prior to being interviewed. The University of Sydney HREC approved this study (2020/822).

Data collection & management

DN interviewed GPs one-on-one online in password protected Zoom conferencing rooms. A semi-structured topic guide (Supplement 1) - developed by the entire team - provided a framework, whilst allowing for further explorative questions. Interview topics included demographic information about participants, GPs' conceptualisation of wellbeing, factors promoting their wellbeing on a personal, organisational and systems level, the impact of culture in health care on wellbeing, accessing information and support to assist with their wellbeing, and the impacts of COVID-19 on their wellbeing. We planned 20 interviews with the potential for further interviews. After independent analysis of half the transcripts (DN, CK) no new codes or themes were identified (31). Interviews were continued to capture GPs from various geographical locations and experience levels. No additional themes emerged, meeting the criteria for thematic data saturation (32). We concluded at 20 participants as intended.

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Interviews were audio-recorded, and securely managed on University of Sydney research servers. Verbatim transcripts were checked for accuracy against original recordings and de-identified by DN before analysis.

Data analysis

Inductive thematic analysis (25) was facilitated by Nvivo12 software (33). DN, CK, AM, NG engaged in steps 1) to 3) as described above, based on three different, randomly selected transcripts that were allocated to each researcher. DN developed a preliminary codebook in consultation with the research team with themes and subthemes (step 4), and coded all transcripts using NVivo (33). CK independently reviewed all transcripts and double coded half of them. Inter-coder variability (34) ranged from k = 0.48 to k = 0.99 depending on the theme, providing the basis for further dialogue, reflexivity, and theme development (step 4 and 5). The codebook was iteratively refined throughout the process (DN, CK), and by triangulation with AM and NG (step 5); detailed descriptions of all codes were developed. For step 6, reporting of results, see below.

RESULTS

From March to September 2021, we interviewed 20 GPs (mean duration of 32 minutes; range 20 - 43 minutes) with diverse experience levels, backgrounds, geographical, and work arrangements (Table 1).

We identified three major themes: participants' conceptualisation of wellbeing; determinants of wellbeing; and strategies for wellbeing. Running through each was a current focus on COVID-19 influences and impacts on GPs' wellbeing. Determinants of wellbeing discussed in the interviews were charted (Figure 1), and important interconnections were analysed.

Identity

Determinants of wellbeing were related to GPs' identity as a person, and as a professional with many seeing themselves as 'wellbeing experts' especially for physical and mental aspects of wellbeing (Table 2a). Personal determinants included exercise, sleep, nutrition, social and community connection, leisure activities, spiritual practice, and a 'sense of balance' overall (Table 2b) determined by participants beliefs, intentions, and behaviours. However, several participants stated not (always) heeding the wellbeing advice they gave their patients.

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'...I've come to realise, actually, that what I'm imparting is good advice, but I need to follow it myself as well, because it does make sense, and it does improve my wellbeing as well. So, yeah, I think as GPs, I'm not sure we always do what's right for ourselves, you know, compared to what we impart to our patients.' (GP15)

A strong professional identity - defined by a sense of duty, responsibility, and high self-expectations - was ubiquitous. GPs also saw themselves as high achieving, able and resilient (Table 2c).

'From an identity point of view, ... being a doctor sometimes subsumes my identity, and it's an important part of my identity. And therefore, my contentment at work and my recognition as a doctor, and the satisfaction I get at work impact on my identity as a doctor...' (GP14)

'You know, you've just got to be professional. Doesn't matter how you're feeling, doesn't matter what's happening. Work is work. And, if you don't, bad things happen.' (GP5)

Variation in the type of work carried out was another personal determinant of keeping well, both through avoiding monotony and isolation, and by temporarily relinquishing the burden of patient responsibility (i.e., having academic days, pursuing teaching and management, or assisting surgeons in theatre) (Table 2d).

Having a mentor or supervisor who modelled how to maintain personal wellbeing was seen as important to learning how to prioritise personal wellbeing, particularly for GP registrars.

'...I think we need to be modelling. Because I think if people are going through the training and not experiencing any different, we shouldn't be surprised that they then become like 30, 40, 50-year-old GPs who are totally burnt out, and have no sense of what's actually important for their self-care.' (GP12)

Determinants of professional wellbeing were offset by a sense of being perceived as 'less than' a specialist by the public, other doctors and often internalised by the GPs (Table 2e).

Organisation

On the organisational/practice level, the most important factor determining personal wellbeing was team and peer support. This included mostly informal debriefs with colleagues

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about challenging patients, medical management, staff, or personal issues, and was facilitated by organisational practices encompassing physical (e.g., having a common tea-room), social (e.g., protected breaks, and collegial social activities), and work domains (e.g., efficient practice management, routine workflow, and infrastructure).

> *'Ahh, having a good bunch of people to work with, people who are working together in an environment that is safe, there is timetabling of patients, that we are able to have a tea break, toilet break, lunch break, and be able to respond to patients' needs as they arise, at the same time. That is important in a clinical setting.' (GP3)*

GPs perceived working in competitive or negative team climates as highly detrimental to their wellbeing (Table 2f). This was more often expressed by participants in metropolitan practices, where practices reportedly skimp on tea-rooms, and doctors routinely work through lunch breaks due to financial strains related to significantly higher living expenses than in regional/rural areas (Table 2g).

Again, the effect of mentorship and role modelling was important. Effective practice leadership was helpful, whereas a lack of management understanding was detrimental.

High workload and the pressure to see patients, sometimes coupled with insufficient staffing were frequently cited as barriers to wellbeing.

> *'…I feel that there is a real sausage factory sort of approach to it in Sydney. It's just bang, bang, bang, go, go, go.' (GP12)*

Additionally, unrealistic patient expectations, including to receive services for free, was frequently mentioned.

> *'…You see a number of patients that basically see you as the local Coles [supermarket]. "OK, doctor, I need my prescription, and I need my referral…" And you know, you are just a dispensing machine, an ATM. And it doesn't cost them anything because you are bulk billing.' (GP14)*

> *'Patients think that they can come in, and see you, and have a great amount of things dealt with. And if you deal with three of the sixteen things, they walk away feeling unhappy, even though they've booked 15 minutes [consultation].' (GP20)*

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Profession

This included determinants of wellbeing originating from within the GP community, and their representative bodies. Many interviewees were dissatisfied with their professional college because they felt ill-represented, or even that the college was actively working against them. Consequently, several participants withdrew their college membership. GPs were either only vaguely aware of college support resources for wellbeing, or, frankly, weren't interested.

> *'And I do find that the college completely useless at sticking up for GPs. I refuse to join them. I find them very frustrating. They don't, in my opinion, act as a good voice for us. So, mostly I work around them.' (GP6)*

The college representing rural practitioners, GP training organisations, and Primary Health Networks (PHNs) were seen to offer more tangible support, although this had suffered during COVID-19.

Health Care System

The theme most frequently emphasised by GPs during the interviews was a sense of not being valued, and a lack of appreciation, respect, and support. Whilst this mostly related to the systems level, it was found throughout, and attributed to almost every section of society.

> *'And I think the government just think we are a disorganised bunch, and who we can just brush aside, and they will go the extra mile for their patients… Unless GPs get organised, and more militant, then we're just going to be ground.' (GP9)*

Participants expressed, that others' lack understanding of what a GP does on a daily basis, and the importance GPs play in the provision of population health (Table 2h).

> *'I think if more people had a concept of what general practice actually can do, and what it does, there would be a lot more respect.' (GP17)*

This lack of understanding was exemplified by limited GP consultation by the government concerning the Covid-19 response, and vaccination rollout.

> *'…With the vaccination programme…we weren't regarded as frontline workers, and we did Covid testing. We treat people with respiratory illness. And so, that was kind of - I think that was a diminishing thing, really, apart from you know, not feeling protected.' (GP16)*

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This was compounded by the fear of billing audits by Medicare (definition, Supplement 2), formal patient complaints (Table 2i), litigation threats, and bad media press.

'Well, I think the Medicare audits – although I've been lucky enough not to receive an audit letter yet – I think that has sent … a whole load of fear through a lot of GPs who've tried to do the right thing'. (GP11)

'The other thing that can affect you, is probably if you get a few patient complaints to HCCC and AHPRA, or to the board. That actually brings your morale down quite a lot. It's one of the easiest things to complain against a doctor. You know, we're all soft targets.' (GP13).

Over-specialisation (Table 2e) and GP shortages, as well as working in silos, rather than hand in hand (i.e., with other healthcare providers, between federal and state agencies) were mentioned by a small proportion of GPs.

Finances

Financial aspects were interlinked with all themes, and directly and indirectly determined wellbeing (Figure 2). Two drivers were external, one was internal: Firstly, Medicare rebate structure that determined fee for services (Supplement 2) was closely tied to a sense of being valued, and personal wellbeing. Secondly, fee structure drove patient behaviour, which impacted on GPs overall and financial wellbeing. And thirdly, remuneration influenced GPs' behaviour. In our sample, several GPs responded to low rebate structure and high patient expectations with increasing patient throughput and foregoing work breaks, with implications for their wellbeing.

Remuneration was perceived as a direct reflection of the value of a profession, a service, and a proxy for the outright value of a GP individually.

"…To me, so, I'm really sort of fed up [with the Medicare rebate] - disillusioned with - where we're at this stage, you know. And that, doesn't help our wellbeing because we don't - we feel undervalued. And the government has done nothing to really, you know, show any positive change in that respect. So definitely, and I don't really know the way out of that, because, you know, even if they were to increase the rebate a small amount, it still doesn't really reflect, you know, the amount of effort that we put

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in to our patients, and the preventative side of things, I mean the amount of work we're doing to prevent hospitalisations and, all of that sort of thing.' (GP15)

GPs voiced frustration with the cutbacks of billable Medicare items (Supplement 2) crucial to general practice, and the impact that had on their wellbeing.

'But the wellbeing that GPs achieve, is by their own measures, and they are to counteract the negative pressures that come from outside this [consult] room. So … the forces that are negative, are Medicare, and the way GPs are treated. Like the telehealth items are just going to be cut… ECGs [electro-cardiograms], that item was just cut. Joint injections, they were just cut.' (GP9)

GPs described two factors that influenced their income: the volume of patients seen; and how, and what they billed. High patient throughput was sometimes driven by practice owners, but more often by personal financial pressures. Particularly, when the GP was the main breadwinner, lived in a metropolitan area, and/or the practice bulk billed only, there was significant pressure to see as many patients as possible. For example, one participant saw over one thousand bulk billed patients per month. Some GPs charged patient gap payments above the Medicare rebate, to reflect the value they attributed to their expertise and services (Table 2j). Whilst others reported a reluctance to privately bill their patients, or unwillingness to argue with patients over charging the gap between private and bulk billing (Table 2k). 'Time is money' was a frequently reported concept, which directly impacted on some GPs' willingness to work less, and spend time on activities that they knew improved wellbeing, such as taking breaks, engaging in reflective practice, or attending peer review groups.

'*Fundamentally, I think the issue is … the way that we're paid. And because we only generate billings when we're seeing patients it just sort of warps your whole view of, you know, what's worthwhile doing.' (GP12)*

According to one participant, GPs were ill-informed about Medicare's billing structure available to general practice (Table 2l). Indeed, several interviewees stated not being well versed or interested in financial management, so some deliberately engaged an accountant. For GP registrars the financial pressures were compounded, as they are salaried, and remuneration is typically lower than for a fully qualified GP. Unpaid maternity leave was a relevant consideration (Table 2m), however, high autonomy and flexible working

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arrangements were specifically stated by women as key benefits of going into general practice (Table 2n).

Overall, what was most striking, was the tension and complex balancing act required between all determinants, at the centre of which stood the individual GP. We didn't observe a simplistic 'work-life balance', i.e., predicted on reducing hours and demands at 'work' to enable more 'life'. In this cohort much of GPs' sense of self - and wellbeing - lay in how they viewed themselves professionally, including their working life. Seen through this lens, it becomes clear that simple interventions, i.e., to offer resilience and wellbeing seminars will not suffice (Table 2o).

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DISCUSSION

Summary

GPs reported determinants of wellbeing (Figure 1), and provided numerous examples of the tension they navigate between competing interests: their own, as well as those imposed by others. If the balance is off kilter, wellbeing suffers.

Facilitators included positive self-perception and outlook; taking an interest in, and prioritising wellbeing; variation, flexibility, and autonomy in choosing how to work; peer support and collegiality; and a well organised practice workflow. Barriers included financial pressure offset by increased patient throughput and minimising break and recreation time; patient expectations and inability to set boundaries; fear of complaints and audits; lack of representation/advocacy from professional bodies; and overwhelmingly, insufficient system support reflected through funding cuts, and lack of GP consultation in policy decision-making (including COVID-19 response strategy).

GP wellbeing - or lack thereof - is a complex interplay between different determinants and stakeholders. The main, underlying determinant of wellbeing - correlated with, and represented by remuneration - seems to be inadequate professional value and recognition. If GPs and their services are undervalued, personally and professionally, it depletes their wellbeing. GPs largely counter-balance this personally as best they can, and crucially, through informal peer support. When these mechanisms are exhausted or impossible, wellbeing quickly deteriorates. Furthermore, several GPs compensate low remuneration,

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inadequate professional recognition, and high patient demand with means detrimental to their wellbeing (i.e., by working harder, Figure 2).

GPs' inherent resilience, ability, and sense of duty are in large parts responsible for good health outcomes. However, for many it may be a delicate balance, one that expends much energy, and hence likely isn't sustainable indefinitely. Above mechanisms may also explain why resilience and mindfulness interventions are not overly effective (21), nor welcomed by practitioners. GPs are the backbone of primary healthcare, and yet this service appears to rely on GPs' good-will, and professional dedication. Primary care is the most (cost-) effective avenue to manage population health (35), hence policy makers must do their utmost to value and enable GPs, particularly given the added strain, and GPs role, during the pandemic.

Comparison with existing literature

There appears to be little qualitative research explicitly about GPs' satisfaction, and none to our knowledge on wellbeing. The European General Practice Research Network interviewed 183 GPs across eight countries. Factors that promote job satisfaction were freedom to organise and choose their practice environment; professional education; and establishing strong patient-doctor relationships (36). Interestingly, patient-doctor relationships and professional education were not mentioned in our cohort. It was more a case of patient expectations being detrimental to wellbeing, and role modelling for registrars being useful. Female rural family doctors in the USA were interviewed regarding practice attributes that promote satisfaction, whereby supportive professional relationships were crucial (37). Our interviewees described the importance of professional peer support, and particularly women appreciated the autonomy and flexibility to choose when, and where to work.

In the UK, a qualitative study examined why GPs leave direct patient care. Reasons were complex, but in alignment with our cohort, included personal and professional identity issues, the value perception of general practice within the health system, and risk (i.e., medical litigation) (38). In our interviews, stress of formal patient complaints and audits surfaced repeatedly.

A systematic review thematically analysed studies broadly focusing on positive factors related to general practice. They discerned general medical workforce themes, general practice specific themes, and professional/personal issues impacting on GP satisfaction in clinical practice (39). Subthemes included balance between income and workload; flexibility, variety, and freedom to choose work; responsibility, competency, recognition; positive self-image, personality, and values; and relationships with community, patients, carers, and other

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professionals (39). So overall, previous qualitative research in different contexts demonstrate preliminary alignment with our results.

Our data also shows similarities with quantitative data on life and job satisfaction, particularly regarding remuneration, value, and the strain of maintaining balance. The 'Medicine in Australia – Balancing Employment and Life' (MABEL) surveys, were conducted annually from 2008 to 2018 with yearly participant numbers of >3000 GPs (11, 40-47), and the RACGP regularly commissions surveys, and reports (14, 48). GPs are most satisfied with variety and choosing how to work, least satisfied with remuneration and recognition, and about half of surveyed GPs report that maintaining work-life balance is a challenge (14, 46, 48, 49). Over several years, >40% of GPs have identified Medicare rebates as a top priority for policy action (14). Positive associations for job satisfaction in all doctor types include doctor characteristics (age close to retirement, Australian trained, good health); social characteristics (living with a partner, social interaction); and job characteristics (part-time work, opportunities for professional development, support networks, realistic patient expectations) (42, 43).

Whilst surveys highlight correlations, they do not demonstrate causation. Our nuanced, qualitative exploration sheds light on multiple determinants of GPs' wellbeing and, most importantly, how they are interrelated.

Strengths and limitations

Strengths include the diversity of participants and their combined wealth of experience (Table 1). GPs rich and nuanced recounts enabled in-depth analysis of determinants of their personal wellbeing.

Limitations include selection bias often inherent in qualitative research with voluntary participation. We purposely only included GPs working in Australia for practicability reasons, and local relevance. These results may not equally apply to GPs working elsewhere, different factors may be present for GPs in other countries, particularly around funding structures and policy.

Implications for research and/or practice

To prioritise GP wellbeing, we need to understand determinants and how they interplay. GPs expend effort to navigate internal and external forces that impact on their wellbeing.

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Our data suggests it does not suffice to address the individual GP by offering wellbeing workshops to them. Instead, organisational, and professional structures need to be targeted and this will require policy advocacy. The determinants that need to change in order to fundamentally shift the perceived value of general practice, and avoid band-aid solutions must be prioritised. Strategies to advance these issues were raised in the interviews, and are detailed in our subsequent publication.

Regarding research implications, we recommend a focus on organisational, professional, and systemic interventions. This is more complex and costly than interventions on the individual (GP) level, but presumably more useful and sustainable. Research into interventions for health care professionals necessitates the same dedication and funding as research aimed at improving patient outcomes because a general practitioner who is well and satisfied, is better equipped to provide quality care to others.

CONCLUSION

GPs are walking a tight rope that requires careful balance between complex and interconnected determinants of wellbeing, whereby value, remuneration, and peer support are crucial.

Organisations, professional bodies, and policy makers have an untapped opportunity to enable and support GPs' wellbeing, with benefits to practitioners, their families, their patients, the sustainability of the general practice workforce, and population health.

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Registration

Not applicable.

Ethics approval statement

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This study was approved by the University of Sydney Human Research and Ethics Committee (2020/822).

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Competing interest statement

Beyond the Raymond Seidler PhD scholarship for Diana Naehrig there was no support from any organisation for the submitted work. Ian Hickie has competing interests to declare. All other authors have no competing interests to declare.

Authors' Contributions

DNA is the guarantor and corresponding author and attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted. All authors contributed to the study conception and design, dissemination, and revision of the final manuscript. DN collected the data. DN, CK, AM, NG analysed the data, and drafted the manuscript. All authors critically revised and approved the final version of the manuscript to be published.

Transparency declaration

Dr Diana Naehrig (the manuscript's guarantor) affirms that the manuscript is an honest, accurate, and transparent account of the study being reported.

Data sharing statement

We will consider sharing de-identified data upon reasonable request.

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Figure 1. Determinants of wellbeing in General Practitioners and their interaction.

Figure 2. Mechanisms of the negative impact of finances on the wellbeing of General Practitioners.

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REFERENCES

1. Wallace JE, Lemaire JB, Ghali WA. Physician wellness: a missing quality indicator. The Lancet. 2009;374(9702):1714-21.
2. Dunn PM, Arnetz BB, Christensen JF, Homer L. Meeting the imperative to improve physician well-being: Assessment of an innovative program. J Gen Intern Med. 2007;22(11):1544-52.
3. Luchterhand C, Rakel D, Haq C, Grant L, Byars-Winston A, Tyska S, et al. Creating a Culture of Mindfulness in Medicine. Wmj. 2015;114(3):105-9.
4. Spinelli WM. The phantom limb of the triple aim. Mayo Clin Proc. 2013;88(12):1356-7.
5. Addicott R, Maguire D, Honeyman M, Jabbal J. Workforce planning NHS Kings Fund. London: The King's Fund; 2015.
6. Nussbaum C, Massou E, Fisher R, Morciano M, Harmer R, Ford J. Inequalities in the distribution of the general practice workforce in England: a practice-level longitudinal analysis. BJGP Open. 2021.
7. Abel GA, Gomez-Cano M, Mustafee N, Smart A, Fletcher E, Salisbury C, et al. Workforce predictive risk modelling: development of a model to identify general practices at risk of a supply-demand imbalance. BMJ Open. 2020;10(1):e027934.
8. Sandhu D, Blythe A, Nayar V. How can medical schools create the general practice workforce? An international perspective. MedEdPublish. 2020;9(1).
9. National Medical Workforce Strategy - Investing in our medical workforce to meet Australia's health needs. The Department of Health, Australian Government; 2021.
10. National Medical Workforce Strategy - Scoping Framework. Canberra: Australian Government. Department of Health.; 2019.
11. Scott A. The evolution of the medical workforce. ANZ Health Sector Report: Melbourne Institute: Applied Economic and Social Research, The University of Melbourne; 2021 03/06/2021.
12. General Practice Workforce providing Primary Care services in Australia. Statistics by calendar year 2014 - 2019. Canberra: Australian Government. Department of Health.; 2020.
13. Scott A, Witt J, Humphreys J, Joyce C, Kalb G, Jeon SH, et al. Getting doctors into the bush: general practitioners' preferences for rural location. Soc Sci Med. 2013;96:33-44.
14. RACGP. General Practice: Health of the Nation 2020. East Melbourne, Vic: The Royal Australian College of General Practitioners. ; 2020.
15. Medical Education and Training (MET) - 4th edition. Canberra: Australian Government. Department of Health.; 2019.
16. Beech J, Bottery S, Charlesworth A, Evans H, Gershlick B, Hemmings N, et al. Closing the gap. The Health Foundation. The King's Fund. Nuffield Trust.; 2019.
17. MSOD. National Data Report 2020, 2015-2019, Data from Final Year Medical Students at Australian Medical Schools. Medical Deans Australia and New Zealand. Medical Schools Outcome Database.; 2020.
18. Scott A. The impact of COVID-19 on GPs and non-GP specialists in private practice. The University of Melbourne.: Melbourne Institute of Applied Economic and Social Research.; 2020.
19. RACGP. The Royal Australian College of General Practitioners. Annual report 2019–20. . East Melbourne, Vic: RACGP; 2020.
20. RACGP. GP wellbeing Royal Australian College of General Practitioners Website. 2021 [Available from: https://www.racgp.org.au/running-a-practice/practice-management/gp-wellbeing.

For peer review only

21. Naehrig D, Schokman A, Hughes JK, Epstein R, Hickie IB, Glozier N. Effect of interventions for the well-being, satisfaction and flourishing of general practitioners-a systematic review. BMJ Open. 2021;11(8):e046599.
22. Braun V, Clarke V. What can "thematic analysis" offer health and wellbeing researchers? Int J Qual Stud Health Well-being. 2014;9:26152.
23. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology. 2006;3(2):77-101.
24. Clarke V, Braun V. Thematic analysis. The Journal of Positive Psychology. 2016;12(3):297-8.
25. Braun V, Clarke V. Thematic analysis. APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological2012. p. 57-71.
26. Archer M, Bhaskar R, Collier A, Lawson T, (eds) NA. Critical realism: Essential readings2013.
27. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International journal for quality in health care. 2007;19(6):349-57.
28. Barry C, Britten N, Barber N, Bradley C, F. S. Using reflexivity to optimize teamwork in qualitative research. Qual Health Res. 1999(9):26-44.
29. Sandelowski M, Docherty S, Emden C. Focus on qualitative methods. Sample size in qualitative research Research in Nursing & Health. 1995;18:179-83.
30. Rice PL, Ezzy D. Qualitative research methods: A health focus. Melbourne, Australia. 1999.
31. Fusch PI, Ness LR. Are we there yet? Data saturation in qualitative research. The Qualitative Report. 2015;20(9):1408-16.
32. Francis JJ, Johnston M, Robertson C, Glidewell L, Entwistle V, Eccles MP, et al. What is an adequate sample size? Operationalising data saturation for theory-based interview studies. Psychology and health. 2010;25(10):1229-45.
33. NVivo 12: QSR International Pty Ltd.; 2020 [Available from: https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home.
34. O'Connor C, Joffe H. Intercoder Reliability in Qualitative Research: Debates and Practical Guidelines. International Journal of Qualitative Methods. 2020;19.
35. Scott A, S. J. Primary Care. Oxford: Oxford University Press; 2011.
36. Le Floch B, Bastiaens H, Le Reste JY, Lingner H, Hoffman R, Czachowski S, et al. Which positive factors give general practitioners job satisfaction and make general practice a rewarding career? A European multicentric qualitative research by the European general practice research network. BMC Fam Pract. 2019;20(1):96.
37. Hustedde C, Paladine H, Wendling A, Prasad R, Sola O, Bjorkman S, et al. Women in rural family medicine: a qualitative exploration of practice attributes that promote physician satisfaction. Rural Remote Health. 2018;18(2):4355.
38. Sansom A, Terry R, Fletcher E, Salisbury C, Long L, Richards SH, et al. Why do GPs leave direct patient care and what might help to retain them? A qualitative study of GPs in South West England. BMJ Open. 2018;8(1):e019849.
39. Le Floch B, Bastiaens H, Le Reste JY, Lingner H, Hoffman RD, Czachowski S, et al. Which positive factors determine the GP satisfaction in clinical practice? A systematic literature review. BMC Fam Pract. 2016;17(1):133.
40. Scott A. The impact of COVID-19 on GPs and non-GP specialists in private practice. Melbourne Institute: Applied Economic & Social Research, The University of Melbourne; 2020.

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41. Scott A. General Practice Trends. The University of Melbourne, Melbourne.: Melbourne Institute: Applied Economic and Social Research; 2017.
42. Joyce C, Wang WC. Job satisfaction among Australian doctors: the use of latent class analysis. Journal of Health Services Research and Policy. 2015;20(4):224-30.
43. Joyce CM, Schurer S, Scott A, Humphreys J, Kalb G. Australian doctors' satisfaction with their work: results from the MABEL longitudinal survey of doctors. 2011.
44. Joyce CM, Scott A, Jeon SH, Humphreys J, Kalb G, Witt J, et al. The "medicine in Australia: balancing employment and life (MABEL)" longitudinal survey--protocol and baseline data for a prospective cohort study of Australian doctors' workforce participation. BMC Health Serv Res. 2010;10:50.
45. Rodwell J, Gulyas A. A taxonomy of primary health care practices: An avenue for informing management and policy implementation. Australian Journal of Primary Health. 2013;19(3):236-43.
46. Shrestha D, Joyce CM. Aspects of work–life balance of Australian general practitioners: determinants and possible consequences. Australian Journal of Primary Health. 2011;17(1):40-7.
47. Medicine in Australia: Balancing Employment and Life, Australia's national longitudinal survey of doctors: Melbourne Institute, University of Melbourne; 2021 [Available from: https://melbourneinstitute.unimelb.edu.au/mabel/home.
48. RACGP GP Survey. Melbourne: EY Sweeney; 2020.
49. McGrail MR, Humphreys JS, Scott A, Joyce CM, & Kalb G. Professional satisfaction in general practice: does it vary by size of community? Medical Journal of Australia. 2010;193(2):94-8.

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Table 1. Demographics of interviewed General Practitioners (GPs)

Demographic	N=20	Sub demographic
Sex	11	Women
	9	Men
Experience	2	GP registrars (trainees)
	2	GPs with 1 - 5 years of experience as a fellow
	4	GPs with 6 - 10 years of experience as a fellow
	4	GPs with 11 - 20 years of experience as a fellow
	4	GPs with 21 - 30 years of experience as a fellow
	4	GPs with 31 - 40 years of experience as a fellow
Current Location	15	NSW (11 metropolitan, 4 regional)
	3	VIC (2 metropolitan, 1 rural)
	1	QLD (metropolitan)
	1	SA (metropolitan)
Previous location AUS	9	GPs had previously worked in Australian locations that included regional, rural, and remote settings across different states (NSW, QLD, VIC, SA, WA, NT).
Previous location overseas	10	GPs trained and / or worked overseas (including the United Kingdom, New Zealand, the Middle East, the Indian Subcontinent, and Africa).
Special interests	18	GPs had special interests including one or several of the following: rural medicine, aboriginal health, mental health, women's health, parental care, paediatrics, skin, eye health, sports medicine, veteran's health, prison health.
Other professional roles	10	GPs held other professional roles, sometimes including several of the following: academic (research & education), GP training, corporate & management, policy, medico legal, RACGP, ACRRM, practice accreditation, Australian defence force.
Work arrangement	2	GP registrars were salaried.
	3	GPs currently were partners / principals in a practice, and several more had been practice-owners at some point during their career.
	15	GPs provided clinical work as contractors, or have mixed arrangements depending on their roles.
Billing	4	Practices bulk billed only.
	1	Practice billed privately only.
	4	Practices had mixed billing.
	2	Practices had other mixed means of funding (i.e., government grants)
	9	Interviewees did not discuss practice billing structure.

Table 1. *NSW: New South Wales, VIC: Victoria, QLD: Queensland, SA: South Australia, WA: Western Australia, NT: Northern Territory, AUS: Australia, RACGP: Royal Australian College of General Practice, ACRRM: Australian College of Rural and Remote Medicine, bulk billing: Medicare rebates cover practitioner charges (no out of pocket fees for patients).*

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Table 2. Determinants of Wellbeing - Verbatim Quotes

Quote	Subtheme	Verbatim Data (participant code)
a	**Identity** Wellbeing beliefs and intentions	*'…I think it's probably a case of the medical profession has lost control of wellbeing and it's now the domain of Instagram influencers. … I think wellbeing as a principle is what we've been trying to do for years.' (GP9)*
b	**Identity** Balance	*'So that's probably exercise, and eating healthy, and being with friends and family is probably what keeps me well. … I suppose having your work / life in balance, and still being able to function at work at an optimal level, and still be able to maintain all your responsibilities outside of work, with family and recreation, I suppose. And being happy with both aspects of your life.' (GP18)*
c	**Identity** Resilience	*'I expect myself to be more resilient [than others]. And I expect myself to cope with hardships.' (GP8)*
d	**Identity** Variation of work	*'If I work five, six, seven days [per week] in a general practice it really starts to affect you mentally. So, mixing it up is a fantastic way of keeping sane.' (GP5)*
e	**Identity / System** Specialisation Feeling 'less than' a specialist	*'The other things around the health system that I find very difficult and concerning, … is the proliferation of sub-, sub-, super-specialists.… That puts an incredible strain on you as a GP because now suddenly, like a GP is supposed to know everything. …You know, you're a sub-doctor in everything, or you're less of a doctor in everything because here these super-specialists telling you about the micro-details of how you should manage this one. But it also creates this huge gap. You're the generalist, and the next step is to this super-specialist.' (GP14)*
f	**Organisation** Lack of team & peer support	*'I think that's one of the most common causes of stress, depression, and mental illnesses in other practices, not having a good relationship with other GPs. … Belittling the other GP, and telling the patients that the other GP isn't good enough, or things like that. Or going against the medical advice of the other GP, even though that may have been correct, you know, trying to win over the patient, things like that.' (GP13)*

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g	**Organisation** Local differences Rural, regional vs. metropolitan	*'And I feel quite strongly that general practice, particularly in [a metro area], is in a really bad state in relation to the lack of collegial relationships that most GPs have. And I really sense that moving from [a regional area], you know I came from - I worked in two separate practices as a registrar, with huge, big tearooms. We'd all sit down for like a one-and-a-half-hour lunch, just chat, connect, all that stuff. And then, I came back to [a metro area], and started going to interviews, and I said to everybody, like, 'Where are your tearooms? Where do you guys have lunch?' And they said, 'Oh, I don't know. Well, we were going to put a tearoom in, but we decided that, you know, we couldn't really afford it. We just had to put another consulting room in'. Or others were like, 'Well, I think the doctors just eat at their own table.' And so, that I found really shocking. And I know that it's, it's just one thing. But I think that that really symbolizes just how much of a commodity that the general practitioner is seen as. You know, in most urban contexts… is you just come in, you sit at your table, you see the patients, and you go home. And I think that there's a huge cost to that. You know that you're, that you're not having those, you know, informal chats over morning or lunch.' (GP12)*
h	**System** Understanding	*'Maybe people who go into politics of general practice really have forgotten the basics. Yes, I think 'naïve' is the word. I don't think they have a great idea of the day to day.' (GP10)*
i	**System** Audits & Liability Complaint handling	*'This complaint, and all the other ones I've had, and other people I've seen… There should be some sort of triage system [within the HCCC, Health Care Complaints Commission] where the crap is weeded out, to reduce the stress on GPs, and other doctors, and save time. And at the same time not discouraging complainants, but perhaps it could be dealt with at a lower level. (GP20)*
j	**Finances** Organisation Private billing	*So, [we are] private billing … with discretion, so that there will be some patients that, you know, we'll bulk bill. But generally - And, I always have that mindset that I'm not going to undervalue myself. Otherwise, yeah, you know, yeah… And I think my patients have appreciated, that I do that extra bit for them and, you know, and they appreciate what they get. So, but I still will get occasional patients who will try [to get bulk billing].' (GP15)*

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k	**Finances** Organisation Bulk billing	*'One of the things I like about a bulk billing practice, and it's good, I think, for my wellbeing - I have worked at some practices that charge. I hated the stress at the end of every consult where someone would be saying, "Please, can you just bulk bill me"? or "I just can't pay this week". And honestly, it was a very stressful situation at the end of every consult...' (GP2)*
l	**Finances** Organisation Bulk billing	*'Ahhm, I think GPs themselves hinder themselves. ... I think doctors' knowledge and understanding of Medicare, or GPs', is often appalling. ... They claim wrongly, they act poorly, they spend the public money poorly, and they're scared of things they shouldn't be scared of, or conversely, they're not scared of things they should be scared of. I think it's GPs themselves, not Medicare. ... It is ridiculous, because if you're a bulk billing GP your entire income is based on understanding that system, how can you possibly derive your income without understanding it? ... There is tons of information, Medicare videos, tutorials, loads of stuff on there, regular webinars. GPs do not educate themselves, it's their fault.' (GP4)*
m	**Finances** Personal Maternity leave	*'And obviously, none of us get maternity leave from work. ... So financially, it's a huge source of stress, because - I'm lucky that my wife, who's also a doctor, works in the hospital system. She's put on and off about getting into general practice. Quite frankly, one of the things that puts her off is maternity leave and the thought of being completely unsupported by, you know, national government or any other organisation, if we were to take time off work.' (GP1)*
n	**Finances** Personal Control, flexibility	*'And I think that in general practice we're lucky that we have somewhat well, we do have quite good control of our hours in that in that sense, particularly as a part time worker balancing a family at home.' (GP19)*
o	**Overall** Balance View on interventions for wellbeing	*'I mean [the term] 'work-life-balance' does me in. Because working 60 hours a week is fine for me. And being quiet drives me nuts. ...'* *'...The college or the PHNs think they're fabulous when they put on a wellbeing weekend - and there's always a yoga class, you know, always a yoga class. I mean, what does that mean? That's a token, and the wellbeing industry is – the corporate life is all about talking about people's wellbeing, rather than providing real support.*

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		Communication, engagement, concern, yeah, the same as we look after our patients. And we don't get looked after by anyone.' (GP9)

Table 2. *HCCC: Health Care Complaints Commission, Bulk billing: Medicare rebates cover practitioner charges (no out of pocket fees for patients). PHNs: Primary Care Networks.*

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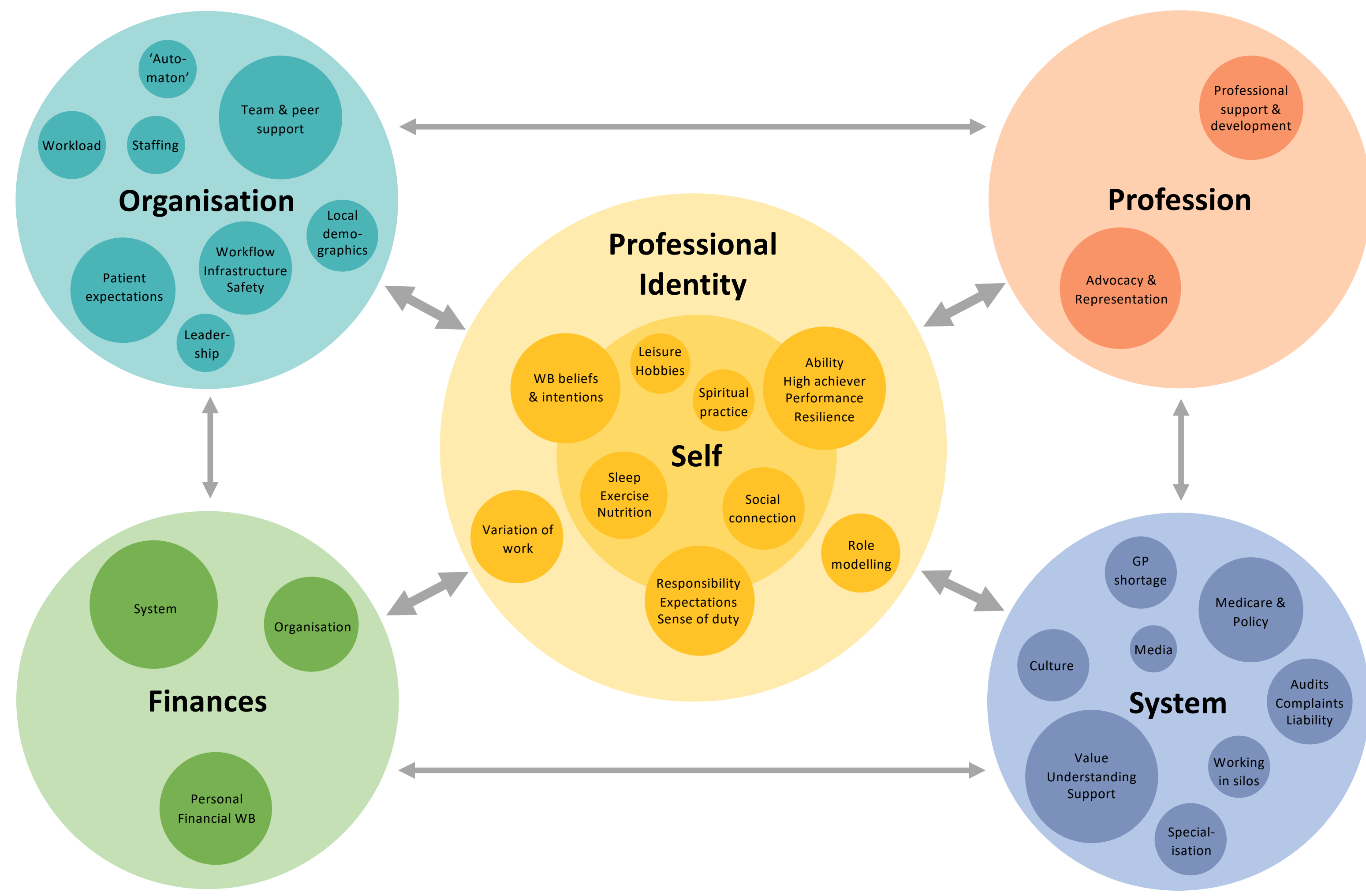

Fig. 1. Determinants of wellbeing in General Practitioners and their interaction. Bubble size reflects attributed importance of determinant.

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Remuneration / rebate structure is a proxy for being valued (external driver)

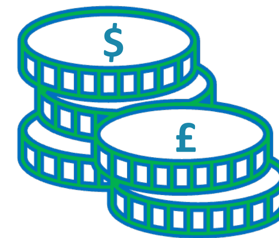
❖ Low remuneration, fees for item of service
❖ Exclusion from remuneration for 'specialist' services

This negatively impacts on GPs' perceived value, financial wellbeing and overall wellbeing.

Fee structure drives patient behaviour (external driver)

❖ Patients' unwillingness for co-payments
❖ Patients' expectations & regard for GPs providing free services

This negatively impacts on GPs' overall & financial wellbeing.



Remuneration drives GP behaviour (internal driver)

❖ High patient throughput
❖ Not taking breaks (working as an 'automaton')
❖ Working full-time (overall workload)

This creates stress over time, and negatively impacts on GPs' overall wellbeing.

Fig. 2. Mechanisms of the negative impact of finances on the wellbeing of General Practitioners.

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Supplement 1. Qualitative Interview Guide "Wellbeing of General Practitioners"

Introduction script:

- Hello, and thank you for your willingness to participate in this interview about GP wellbeing.
- This interview will take approximately 30 minutes.
- With your consent, a recording of this interview will be made for transcription and analysis. The video component of the recording is not necessary for transcription or analysis and can be turned off if you prefer. If you do decide to turn the camera off, you will still be able to participate in the interview. **indicate the video button on the bottom toolbar** Is that okay? Please note that I will ask you again once the recording starts to confirm that you have consented to recording.
- Then I will start the recording NOW.
- Can I confirm that you have consented to video / audio recording this interview?
- Have you read the Participant Information Statement?
- Do you have any further questions?
- Do you consent to take part in this research project?
- Great thank you. Let's start.

Question	Prompt	Rationale
1. I'll just start by asking some general information about yourself: a. Where do you work? b. How many years have you worked as a GP? c. Are you employed, contractor, owner?	• Where is the GP practice located (metro, rural, remote)? • Have you worked in any other type of practice or location? • Have you specialised or received training in any specific additional areas?	Understand the different demographic groups of Australian GPs that have volunteered to participate in this study.
2. How would you define wellbeing?	• What does the concept 'wellbeing' mean to you? • Does wellbeing mean the same thing when you think of your own personal wellbeing compared to the wellbeing of your patients? Do you use the same 'yardstick'?	Introduction. Lead into their understanding of the subject of wellbeing. Explore their personal meaning of wellbeing.
3. What promotes wellbeing for you on a personal level?	• What do you generally do to keep yourself well? • Are there any resources, people, strategies you use to help maintain your wellbeing? • How important is improving your own wellbeing to you? Why is this so? • Are there any differences in how you maintain your own wellbeing at work, compared to when you are not at work?	Explore how they stay well, what factors are involved to gain and maintain personal wellbeing. How important is this to them.

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4. What promotes your wellbeing on an organisational (GP practice) level?	• How does the environment at work support your wellbeing? • Is there anything in your work environment that hinders or does not support your wellbeing? [If yes] What is that? • What needs to change? • What would need to happen in your immediate work surroundings for your wellbeing to be optimally supported?	Explore what organisational factors need to be in place to gain and maintain personal wellbeing.
5. What promotes your wellbeing on a health systems level?	• Looking at the situation from a systemic perspective, what keeps you well? • If you could wave a magic wand, what would need to be in place (ie. how would you change the system for GPs)? • What support could policy makers, RACGP college, PHNs, Medicare, health insurances, etc) provide?	Explore what systemic factors need to be in place to gain and maintain personal wellbeing.
6. What is the impact of overall culture in health care on wellbeing?	• How does the culture in health care influence the wellbeing of GPs? • How would you change the culture in health care to promote the wellbeing of GPs more generally?	Explore cultural aspects to wellbeing.
7. Where do you access information and support to assist with your wellbeing?	• Do you access any information or services to assist in your wellbeing? • If yes, how useful is this? • If no, what would this information or service need to look like to be useful to you? • What sort of interventions (or support) do you think could be implemented to improve GPs wellbeing? ○ How should these be delivered?	Continuing personal and professional development.
8. Is there anything else about wellbeing for GPs or your personal experience that you would like to share?	• How has COVID-19 impacted GP wellbeing? • Has COVID-19 influenced any support/ interventions focused on GP wellbeing being provided?	Final question

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Supplement 2. Medicare terms explained.

All definitions are direct verbatim quotes from the sources in parenthesis. Accessed online on 16/09/2021.

Medicare

'Medicare is Australia's universal health insurance scheme. It guarantees all Australians (and some overseas visitors) access to a wide range of health and hospital services at low or no cost.' (Australian Government, Department of Health, https://www.health.gov.au/health-topics/medicare)

'Medicare was introduced by the Commonwealth Government in 1984 to provide eligible Australian residents with affordable, accessible and high-quality healthcare. Medicare is based on the understanding that all Australians should contribute to the cost of healthcare according to their ability to pay. It is financed through progressive income taxation and an income-related Medicare levy.' (State Government Victoria, Department of Health, https://www.racgp.org.au/download/Documents/e-health/Summary-of-new-MBS-item-numbers.pdf)

Medicare rebates and item numbers

'The Medicare Benefits Schedule (the MBS) is a list of the medical services for which the Australian Government will pay a Medicare rebate, to provide patients with financial assistance towards the costs of their medical services. Medicare rebates do not, and were never intended to, cover the full cost of medical services. The Government sets a Medicare Schedule Fee to determine the amount of the rebate that patients receive from the Government.' (Australian Medical Association, https://www.ama.com.au/sites/default/files/documents/Guide%20for%20Patients%20on%20How%20the%20Health%20Care%20System%20Funds%20Medical%20Care.pdf)

Bulk billing

'Bulk billing means you don't have to pay for your medical service from a health professional. They [health professionals] bill us [Medicare] instead and they accept the Medicare benefit as full payment for the service. … Not all health professionals bulk bill.' (Australian Government, Services Australia, https://www.servicesaustralia.gov.au/individuals/subjects/how-claim-medicare-benefit/bulk-billing)

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COREQ 32-item checklist

Authors: 1. D. Naehrig, 2. N. Glozier, 3. C. Klinner, 4. L. Acland, 5. B. Goodger, 6. I. Hickie, 7. A. Milton

Number	Item	Description	Page No.
1.	Interviewer	Author 1 conducted all interviews.	Title page, and page 5
2.	Researcher credentials	Author 1: Dr.med., FMH Radioonkologie, MSc Coach Psych. Author 2: Prof of Psychological Medicine. Author 3: Grad Cert QHR (Qualitative Health Research) Author 4: BA BMed MHM MPH FRACGP. Author 5: Dr Author 6: AM MD FRANZCP FASSA FAHM Author 7: BSc, MAppSc, PhD	Title page.
3.	Occupation	Author 1 is a PhD candidate in psychological medicine, with experience in mixed methods research, as a clinician-researcher, coaching psychology, and as medical communication skills facilitator. Author 3 is a research assistant and experienced qualitative researcher. Author 4 is a general practitioner and head of clinical governance. Author 5 is a general practitioner. Authors 2 and 6 are psychiatrists both with extensive expertise in mixed methods research. Author 7 is a post-doctoral researcher in psychology, with extensive experience in qualitative research design, conduct and analysis.	Title page, and page 5.
4.	Gender	Authors 1, 3, 4 and 7 are female. Authors 2, 5 and 6 are male.	Page 5
5.	Experience and training	Authors are experienced and active researchers with expertise in qualitative, quantitative, and mixed methods approaches. Authors have researched and published in the broad topic area previously.	Page 5
6.	Relationship established	Participants only had direct contact with author 1. GPs interested in participating in the research contacted author 1 via phone, text, or email. Prior to interviews, the participants had the opportunity to review the participant information and consent forms, and discuss any questions, before giving consent. After the interview there was one brief follow-up and thank you email sent out. Author 1's interest in, and perceived importance of the topic of GP wellbeing may have assisted in establishing a relationship built on trust and mutual understanding. Similarly, GPs who are particularly interested in the subject of wellbeing may have chosen to participate.	Page 5
7.	Participants' knowledge of the interviewer	Author 1 who conducted all interviews had no previous professional or personal relationship with any of the participants. Co-authors only reviewed de-identified transcripts thus had no personal relationship with, or knowledge of participants. Participants were informed about who the involved researchers are in the Participant Information Statement (PIS).	Page 5
8.	Interviewer characteristics	The interviewer is a PhD candidate, with a background in medicine and psychology. Author 1 chose to pursue the topic of GP wellbeing, because of perceived importance of the subject matter, and a personal belief that this is crucial in providing sustainable primary care to the population. As such she is aware of potential bias particularly in favour of GPs and their experience.	Page 5
9.	Methodological orientation and theory	Thematic framework analysis with an inductive, data-driven approach was taken.	Page 4
10.	Sampling	Maximum variation sampling was applied, as we aimed for a diverse mix of participants across Australia.	Page 5

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11.	Method of approach	We were supported by several organisations, who sent e-newsletters and communications to their members. Flyers, social media, and snowballing were also utilised.	Page 5
12.	Sample size	N=20	Page 7
13.	Non-participation	Three GPs that were initially interested, subsequently did not partake in the interview. One stated lack of time, the others simply didn't respond to follow-up emails. All interviews that were commenced, were also completed.	NA
14.	Setting of data collection	Interviews were conducted online one-on-one via a University of Sydney password-protected Zoom meeting room.	Page 5
15.	Presence of non-participants	NA	NA
16.	Description of sample	A diverse group of GPs working clinically in Australia.	Page 5
17.	Interview guide	Interviews were semi-structured, and included questions about GPs' own wellbeing.	Page 6
18.	Repeat interviews	NA	NA
19.	Audio/visual recording	Interviews were recorded via Zoom, either on audio, or audio and video setting, as per the preference of the GP. Only audio-recordings were saved.	Page 6
20.	Field notes	Notes were made for analysis and were updated during researcher discussions to inform the writing of the manuscript.	N/A
21.	Duration	Interviews ranged from 20 to 43 minutes (mean 32 minutes duration).	Page 7
22.	Data saturation	Interviews were continued until data saturation was achieved. Data saturation was discussed and agreed upon in a team of 2 researchers (author 1 and 3), in consultation with author 7.	Page 6
23.	Transcripts returned	Transcripts were not returned to participants.	N/A
24.	Number of data coders	Data was coded by authors 1 and 3.	Page 6
25.	Description of the coding tree	Codes, themes, and subthemes were iteratively refined and developed during regular research team meetings between authors 1 and 3, and were triangulated with authors 2 and 7. Descriptions of the themes, subthemes and codes were developed and captured in a codebook (or coding framework).	Page 6
26.	Derivation of themes	Themes and subthemes were derived from the data.	Page 6, 7
27.	Software	Microsoft Word and NVivo 12.1.0 were used to manage the data.	Page 6
28.	Participant checking	Participant checking was not applied.	NA
29.	Quotations presented	Participant quotations were used to exemplify (or illustrate) the finding. Quotations are identified with GP participant numbers, only to maintain anonymity.	Pages 7-14, Table 2.
30.	Data and findings consistent	Data and findings are consistent throughout.	Page 7-19
31.	Clarity of major themes	Themes are clearly described and presented in the manuscript and figure 1.	Pages 7,8, and figure 1.
32.	Clarity of minor themes	Subthemes are clarified in detail, and their interconnectedness described.	Pages 7-14, and figure 1.

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BMJ Open

Walking a tight rope. Determinants of GP wellbeing—a qualitative study

Journal:	*BMJ Open*
Manuscript ID	bmjopen-2021-058616.R1
Article Type:	Original research
Date Submitted by the Author:	06-Jan-2022
Complete List of Authors:	Naehrig, Diana; The University of Sydney Faculty of Medicine and Health, Central Clinical School; The University of Sydney Faculty of Medicine and Health, Brain and Mind Centre Glozier, Nick; The University of Sydney Faculty of Medicine and Health, Central Clinical School Klinner, Christiane; The University of Sydney Faculty of Medicine and Health Acland, Louise; ForHealth Goodger, Brendan; Central and Eastern Sydney PHN Hickie, Ian; The University of Sydney Faculty of Medicine and Health, Brain and Mind Centre Milton, Alyssa ; The University of Sydney Faculty of Medicine and Health, Central Clinical School
Primary Subject Heading:	General practice / Family practice
Secondary Subject Heading:	General practice / Family practice
Keywords:	GENERAL MEDICINE (see Internal Medicine), MENTAL HEALTH, OCCUPATIONAL & INDUSTRIAL MEDICINE, PRIMARY CARE, PUBLIC HEALTH

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TITLE PAGE

Title	**Walking a tight rope. Determinants of GP wellbeing—a qualitative study**
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Word count manuscript	4322/4000

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ABSTRACT

Objectives
The wellbeing of doctors is recognised as a major priority in health care, yet there is little research on how General Practitioners (GPs) keep well as opposed to mitigating burnout and mental ill health. We aimed to address this gap, apply a positive lens, and explore what determines GPs wellbeing in Australia. This is of particular importance considering the increasing demand for primary healthcare services.

Design
Semi-structured qualitative interviews.

From March to September 2021, we interviewed GPs working in numerous settings, using snowball and purposive sampling to expand recruitment across Australia. 20 GPs participated individually via Zoom. A semi-structured interview-guide provided a framework to explore wellbeing from a personal, organisational, and systemic perspective. Recordings were transcribed verbatim, and inductive thematic analysis was performed.

Results
Eleven female and nine male GPs with diverse experience, from urban and rural settings were interviewed (mean 32 minutes). Determinants of wellbeing were underpinned by GPs' sense of identity. This was strongly influenced by GPs seeing themselves as a distinct but often undervalued profession working in small organisations within a broader health system. Both personal finances, and funding structures emerged as important moderators of the inter-connections between these themes. A complex balancing act between all determinants of wellbeing was evidenced.

Conclusions
Understanding determinants of wellbeing and their complex inter-connections can inform future strategies, and interventions. Finances need to be a major consideration to prioritise, promote, and support GP wellbeing, and a sustainable primary care workforce.

Keywords

Wellbeing, determinants, general practitioner, family practitioner, primary health care, qualitative research.

Ethics approval statement
This study was approved by the University of Sydney Human Research and Ethics Committee (2020/822).

Funding source
Dr Diana Naehrig is funded through the Raymond Seidler PhD scholarship.

This research was supported (partially or fully) by the Australian Government through the Australian Research Council's Centre of Excellence for Children and Families over the Life Course (Project ID CE200100025).

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The funding sources did not have any influence on the design or conduct of this research.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Strengths

- A positive framework was deliberately selected to examine GPs' wellbeing, which complements literature on mitigating burnout.
- Qualitative inquiry assists in understanding complex interactions between different determinants of wellbeing.
- Our diverse sample includes GPs working in a wide range of clinical settings in Australia.

Limitations

- Our results may not be generalisable to all GPs, particularly those working outside of the Australian context.
- Selection bias needs to be considered in any voluntary research participation.

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INTRODUCTION

Wellbeing of health care professionals has been recognised as a priority, and key component of the wider goals for health care in the USA, and Canada (1-4). General practice crucially provides cost-effective care to an aging population with chronic and complex health needs, and demand for generalist services outweighs supply in many countries, particularly in the UK, and USA (5-8).

In Australia, the 'National medical workforce strategy' aims to develop and coordinate a joint vision to provide effective, universally accessible, and sustainable health care across the entire population (9). Doctor wellbeing, and insufficient generalist capacity, have been identified as top concerns that need to be addressed besides maldistribution, and imbalance of specialities within the medical workforce (9, 10). Despite growing numbers of GPs nationally (11, 12), and GPs per capita (12), the availability of GPs in Australian major cities outstrips that of non-metropolitan areas (11). Together with a longstanding dearth of GPs in rural and remote areas (11, 13), this leaves parts of the population chronically underserviced. Global factors including an aging GP workforce, impending retirements, a shift towards more women entering GP training, with a trend towards reduced work hours also affect Australia (14-16), and will likely further contribute to an imbalance in generalist capacity versus

service demand. A decline in Royal Australian College of General Practice (RACGP) applications and filled training places (14), and a waning interest in general practice from surveyed medical students (17), may well exacerbate the issue. Concerningly, a recent Australian report forecasts a 37% increased demand in GP services, with a likely undersupply of 9,298 full time equivalent GPs by 2030, particularly for urban areas (18).

The additional strain of the current pandemic (19) highlights the need for a thriving GP workforce, and GPs' wellbeing is more important than ever. Professional organisations are aware of this and are endeavouring to address wellbeing by offering support (i.e., RACGP programmes and resources (20, 21)), and funding research into GP wellbeing.

Doctors' health research is typically informed by the clinical model, and there is a substantial body of literature aiming to explore and mitigate burnout, distress, and mental ill health (22-29), and improve doctors' uptake of health services across different settings (30-34). There is comparatively little research—particularly qualitative—that deliberately applies a positive lens, and explores how GPs keep well and thrive. Of note, research groups in the UK focused on psychological wellbeing in GPs (35, 36) whereby one publication was a survey, the other a systematic review; another group explored GP wellbeing as distinct from burnout (37, 38), publishing a qualitative exploration and survey results. We aimed to add to this burgeoning approach, and explore GPs wellbeing in the Australian context.

Overall, there is remarkably little evidence on how to effectively increase GP wellbeing (39). Our recent systematic review of both trials and policy changes showed interventions are typically aimed at the individual GP, involve mindfulness practice, and show low to moderate effectiveness. Very few interventions target organisations, or health systems (39).

OBJECTIVES

A robust and sustainable generalist workforce is important. In order to bolster the wellbeing of Australian GPs, and ultimately address the gap in the literature regarding effective wellbeing interventions for GPs as seen through a positive lens, we aimed to:

- apply a positive framework to explore GPs' wellbeing, and key, potentially modifiable, factors that determine it.
- qualitatively analyse how these determinants are inter-connected, and what the underlying drivers are.

METHODS

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Qualitative approach and research design

We applied a six-step qualitative thematic analysis (40-43), providing a flexible and accessible way of analysing qualitative data, enabling iterative exploration of patterns and relationships between different themes whilst ensuring research rigour.

The six steps included: 1) familiarising with data; 2) generating initial codes; 3) searching for themes and subthemes; 4) reviewing themes; 5) refining, defining and naming themes; and 6) writing the report (43).

We used an inductive data-driven (bottom-up), and a critical realist epistemological approach to our analysis (44). A COREQ (45) reporting checklist is provided.

Researcher characteristics and reflexivity

Our research team (four females and three males) consisted of a PhD candidate with background in medicine and coaching psychology (DN); two GPs, one (BG) a representative of a Primary Health Network (PHN), a GP led organisation responsible for the primary care of a large geographical location typically serving a few hundred thousand people, and a representative (LA) of a national private GP organisation; two psychiatrists (NG, IH); a psychologist/researcher (AM), and a researcher (CK) both with extensive qualitative expertise. Collaborating with GPs within our research team enabled reflexivity across personal, professional, organisational and systemic experiences (46).

Context & sampling strategy

Recruitment was aimed at GPs, and GP registrars working clinically in Australia. We chose a maximum variation sampling approach (47, 48), and purposely engaged PHNs and a private GP organisation to announce our study in e-newsletters and communications. Furthermore, we utilised flyers, social media, and snowballing.

Patient and Public involvement

Patients and public were not involved in the design or conduct of this research project.

Ethical issues

Participation was voluntary. All participants received a participant information sheet and provided consent prior to being interviewed. The University of Sydney HREC approved this study (2020/822).

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Data collection & management

DN interviewed GPs one-on-one online in password protected Zoom conferencing rooms. A semi-structured topic guide (Supplement 1)—developed by the entire team—provided a framework, whilst allowing for further explorative questions. Interview topics included demographic information about participants, GPs' conceptualisation of wellbeing, factors promoting their wellbeing on a personal, organisational and systems level, the impact of culture in health care on wellbeing, accessing information and support to assist with their wellbeing, and the impacts of COVID-19 on their wellbeing. We planned 20 interviews with the potential for further interviews. After independent analysis of half the transcripts (DN, CK) no new codes or themes were identified (49). Interviews were continued to capture GPs from various geographical locations and experience levels. No additional themes emerged, meeting the criteria for thematic data saturation (50). We concluded at 20 participants as intended.

Interviews were audio-recorded, and securely managed on University of Sydney research servers. Verbatim transcripts were checked for accuracy against original recordings and de-identified by DN before analysis.

Data analysis

Inductive thematic analysis (43) was facilitated by Nvivo12 software (51). DN, CK, AM, NG engaged in steps 1) to 3) as described above, based on three different, randomly selected transcripts that were allocated to each researcher. DN developed a preliminary codebook in consultation with the research team with themes and subthemes (step 4), and coded all transcripts using NVivo (51). CK independently reviewed all transcripts and double coded half of them. Inter-coder variability (52) ranged from $k = 0.48$ to $k = 0.99$ depending on the theme, providing the basis for further dialogue, reflexivity, and theme development (step 4 and 5). The codebook was iteratively refined throughout the process (DN, CK), and by triangulation with AM and NG (step 5); detailed descriptions of all codes were developed. For step 6, reporting of results, see below.

RESULTS

From March to September 2021, we interviewed 20 GPs (mean duration of 32 minutes; range 20 - 43 minutes) with diverse experience levels, backgrounds, geographical, and work arrangements (Table 1).

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The interviews captured participants' conceptualisation of wellbeing; determinants of wellbeing; and strategies for wellbeing. Running through each was a current focus on COVID-19 influences and impacts on GPs' wellbeing.

Here, we report on determinants of wellbeing that emerged in the interviews. For determinants we discerned five themes, each with several subthemes. We charted these (Figure 1), and important interconnections were analysed.

Strategies for wellbeing, and the COVID-19 specific influences on GP wellbeing are presented elsewhere.

Identity / Self

Determinants of wellbeing were related to GPs' identity as a person, and their identity as a professional with many seeing themselves as 'wellbeing experts' especially for physical and mental aspects of wellbeing (Table 2a). Personal determinants included exercise, sleep, nutrition, social and community connection, leisure activities, spiritual practice, and a 'sense of balance' overall (Table 2b) determined by participants beliefs, intentions, and behaviours. However, several participants stated not (always) heeding the wellbeing advice they gave their patients.

> *'...I've come to realise, actually, that what I'm imparting is good advice, but I need to follow it myself as well, because it does make sense, and it does improve my wellbeing as well. So, yeah, I think as GPs, I'm not sure we always do what's right for ourselves, you know, compared to what we impart to our patients.' (GP15)*

A strong professional identity—defined by a sense of duty, responsibility, and high self-expectations —was ubiquitous (Table 2c). GPs also saw themselves as high achieving, able and resilient (Table 2d).

> '*From an identity point of view, ... being a doctor sometimes subsumes my identity, and it's an important part of my identity. And therefore, my contentment at work and my recognition as a doctor, and the satisfaction I get at work impact on my identity as a doctor...' (GP14)*

Choosing variation in the type of work carried out was another determinant of keeping well, both through avoiding monotony and isolation, and by temporarily relinquishing the burden of patient responsibility (i.e., having academic days, pursuing teaching and management, or assisting surgeons in theatre) (Table 2e).

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Determinants of professional wellbeing were offset by a sense of being perceived as 'less than' a specialist by the system, the public, other doctors and often internalised by the GPs (Table 2f).

Organisation

For the organisational (practice) theme, the most important factor determining personal wellbeing was team and peer support. This included mostly informal debriefs with colleagues about challenging patients, medical management, staff, or personal issues, and was facilitated by organisational practices encompassing physical (e.g., having a common tea-room), social (e.g., protected breaks, and collegial social activities), and work domains (e.g., efficient practice management, routine workflow, and infrastructure).

> *'Ahh, having a good bunch of people to work with, people who are working together in an environment that is safe, there is timetabling of patients, that we are able to have a tea break, toilet break, lunch break, and be able to respond to patients' needs as they arise, at the same time. That is important in a clinical setting.' (GP3)*

GPs perceived working in competitive or negative team climates as highly detrimental to their wellbeing (Table 2g). This was more often expressed by participants in metropolitan practices, where practices reportedly skimp on tea-rooms, and doctors routinely work through lunch breaks due to financial strains related to significantly higher living expenses than in regional/rural areas (Table 2h). Effective practice leadership was helpful, whereas a lack of management understanding was detrimental.

High workload and the pressure to see patients, sometimes coupled with insufficient staffing were frequently cited as barriers to wellbeing.

> *'…I feel that there is a real sausage factory sort of approach to it in Sydney. It's just bang, bang, bang, go, go, go.' (GP12)*

Additionally, GPs frequently encountered unrealistic expectations from patients at their practice, including to receive services for free (Table 2i).

> *'…You see a number of patients that basically see you as the local Coles [supermarket]. "OK, doctor, I need my prescription, and I need my referral…" And*

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you know, you are just a dispensing machine, an ATM. And it doesn't cost them anything because you are bulk billing.' (GP14)

Having a mentor or supervisor who modelled how to maintain personal wellbeing was seen as important to learning how to prioritise personal wellbeing, particularly for GP registrars.

'...I think we need to be modelling. Because I think if people are going through the training and not experiencing any different, we shouldn't be surprised that they then become like 30, 40, 50-year-old GPs who are totally burnt out, and have no sense of what's actually important for their self-care.' (GP12)

Profession

This included determinants of wellbeing originating from within the GP community, and their representative bodies. Many interviewees were dissatisfied with their professional college because they felt ill-represented, or even that the college was actively working against them. Consequently, several participants withdrew their college membership.

'And I do find that the college completely useless at sticking up for GPs. I refuse to join them. I find them very frustrating. They don't, in my opinion, act as a good voice for us. So, mostly I work around them.' (GP6)

GPs were either only vaguely aware of college support resources for wellbeing, or, weren't interested (Table 2j). The college representing rural practitioners, GP training organisations were seen to offer more tangible support.

System

The subtheme most frequently emphasised by GPs during the interviews was a sense of not being valued, and a lack of appreciation, respect, and support. Whilst this mostly related to the systems theme, it was found throughout.

'And I think the government just think we are a disorganised bunch, and who we can just brush aside, and they will go the extra mile for their patients… Unless GPs get organised, and more militant, then we're just going to be ground.' (GP9)

Participants expressed, that others' lack understanding of what a GP does on a daily basis, and the importance GPs play in the provision of population health (Table 2k).

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3 *'I think if more people had a concept of what general practice actually can do, and*
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5 *what it does, there would be a lot more respect.' (GP17)*
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8 This lack of understanding was exemplified by limited GP consultation by the government
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10 concerning the Covid-19 response, and vaccination rollout (Table 2l).
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13 The fear of billing audits by Medicare (definition, Supplement 2), formal patient complaints
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15 (Table 2m & 2n), litigation threats, and bad media press compounded the lack of valuation.
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17 *'Well, I think the Medicare audits – although I've been lucky enough not to receive an*
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19 *audit letter yet – I think that has sent … a whole load of fear through a lot of GPs*
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21 *who've tried to do the right thing'. (GP11)*
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24 Over-specialisation (Table 2f) and GP shortages, as well as working in silos, rather than hand
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26 in hand (i.e., with other healthcare providers, between federal and state agencies) were
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28 mentioned by a small proportion of GPs.
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31 *Finances*
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33 Financial aspects were interlinked with all themes, and directly and indirectly determined
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35 wellbeing (Figure 2). Two drivers were external, one was internal: Firstly, Medicare rebate
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37 structure that determined fee for services (Supplement 2) was closely tied to a sense of being
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39 valued, and personal wellbeing. Secondly, fee structure drove patient behaviour, which
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41 impacted on GPs overall and financial wellbeing. And thirdly, remuneration influenced GPs'
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43 behaviour. In our sample, several GPs responded to low rebate structure and high patient
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45 expectations with increasing patient throughput and foregoing work breaks, with implications
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47 for their wellbeing.
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50 Remuneration was perceived as a direct reflection of the value of a profession, a service, and
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52 a proxy for the outright value of a GP individually.
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54 *"…To me, so, I'm really sort of fed up [with the Medicare rebate] —disillusioned*
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56 *with—where we're at this stage, you know. And that, doesn't help our wellbeing*
57
58 *because we don't—we feel undervalued. And the government has done nothing to*
59
60 *really, you know, show any positive change in that respect. So definitely, and I don't*

really know the way out of that, because, you know, even if they were to increase the

rebate a small amount, it still doesn't really reflect, you know, the amount of effort

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> *that we put into our patients, and the preventative side of things, I mean the amount of work we're doing to prevent hospitalisations and, all of that sort of thing.' (GP15)*

GPs voiced frustration with the cutbacks of billable Medicare items (Supplement 2) crucial to general practice, and the impact that had on their wellbeing (Table 2o).

GPs described two factors that influenced their income: the volume of patients seen; and how, and what they billed. High patient throughput was sometimes driven by practice owners, but more often by personal financial pressures. Particularly, when the GP was the main breadwinner, lived in a metropolitan area, and/or the practice bulk billed only, there was significant pressure to see as many patients as possible. For example, one participant saw over one thousand bulk billed patients per month. Some GPs charged patient gap payments above the Medicare rebate, to reflect the value they attributed to their expertise and services (Table 2p). Whilst others reported a reluctance to privately bill their patients, or unwillingness to argue with patients over charging the gap between private and bulk billing (Table 2q).
'Time is money' was a frequently reported concept, which directly impacted on some GPs' willingness to work less, and spend time on activities that they knew improved wellbeing, such as taking breaks, engaging in reflective practice, or attending peer review groups.

> '*Fundamentally, I think the issue is … the way that we're paid. And because we only generate billings when we're seeing patients it just sort of warps your whole view of, you know, what's worthwhile doing.' (GP12)*

According to one participant, GPs were ill-informed about Medicare's billing structure available to general practice (Table 2r). Indeed, several interviewees stated not being well versed or interested in financial management, so some deliberately engaged an accountant. For GP registrars the financial pressures were compounded, as they are salaried, and remuneration is typically lower than for a fully qualified GP. Unpaid maternity leave was a relevant consideration (Table 2s), however, high autonomy and flexible working arrangements were specifically stated by women as key benefits of going into general practice (Table 2t).

Overall, what was most striking, was the tension and complex balancing act required between all determinants, at the centre of which stood the individual GP. We didn't observe a

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simplistic 'work-life balance', i.e., predicted on reducing hours and demands at 'work' to enable more 'life'. In this cohort much of GPs' sense of self—and wellbeing—lay in how they viewed themselves professionally, including their working life. Seen through this lens, it becomes clear that simple interventions, i.e., to offer resilience and wellbeing seminars will not suffice (Table 2j).

DISCUSSION

Summary

Determinants of wellbeing were qualitatively explored in the interviews. We presented five themes each with subthemes: identity / self, organisation, profession, system, and finances. They are all are strongly interconnected, and each has several subthemes (see figure 1). GPs provided numerous examples of the tension they navigate between competing interests: their own, as well as those imposed by others. If the balance is off kilter, wellbeing suffers.

GP wellbeing—or lack thereof —is a complex interplay between different determinants, and stakeholders. The main, underlying determinant of wellbeing—correlated with, and represented by remuneration—seems to be inadequate professional value and recognition. Our participants reported feeling unappreciated from several sources, but consistently reported that by far the most impactful effects on their wellbeing were those emanating from the system. If GPs and their services are undervalued, personally and professionally, it depletes their wellbeing. GPs largely counter-balance this personally as best they can, and crucially, through informal peer support. When these mechanisms are exhausted or impossible, wellbeing quickly deteriorates. Furthermore, several GPs compensate low remuneration, inadequate professional recognition, and high patient demand with means detrimental to their wellbeing (i.e., by working harder, Figure 2).

GPs' inherent resilience, ability, and sense of duty are in large parts responsible for good health outcomes. However, for many it may be a delicate balance, one that expends much energy, and hence likely isn't sustainable indefinitely. Above mechanisms may also explain why resilience and mindfulness interventions are not overly effective (39), nor welcomed by practitioners. GPs are the backbone of primary healthcare, and yet this service appears to rely on GPs' good-will, and professional dedication. Primary care is the most (cost-) effective

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avenue to manage population health (53), hence policy makers must do their utmost to value and enable GPs, particularly given the added strain, and GPs role, during the pandemic.

Comparison with existing literature

We contextualised our findings within qualitative research on wellbeing, as seen through a positive lens, and related constructs such as satisfaction. We contrasted our findings with selected quantitative research directly relevant to the Australian general practice landscape. A UK group conducted focus groups with 25 GPs to identify factors that contribute to burnout and poor wellbeing, and strategies to improve both. Similar to our results, they identified the importance of team support, taking breaks, variety of, and control over their work, on an internal level; and wider governmental and public support, resources, and funding on an external level (54). British GP trainee focus groups (n=16) discussed the benefits of supportive professional relationships (i.e., supportive trainers), control over workload, and barriers to wellbeing of 'not being valued', and work-life imbalance (55). The European General Practice Research Network interviewed 183 GPs across eight countries, and described factors that promote job satisfaction: freedom to organise and choose their practice environment; professional education; and establishing strong patient-doctor relationships (56). Interestingly, patient-doctor relationships and professional education were not mentioned in our cohort. It was more a case of patient expectations being detrimental to wellbeing, and role modelling for registrars being useful. Female rural family doctors in the USA were interviewed regarding practice attributes that promote satisfaction, whereby supportive professional relationships were crucial (57). Our interviewees described the importance of professional peer support, and particularly women appreciated the autonomy and flexibility to choose when, and where to work.

In the UK, a qualitative study examined why GPs leave direct patient care. Reasons were complex, but in alignment with our cohort, included personal and professional identity issues, the value perception of general practice within the health system, and risk (i.e., medical litigation) (58). In our interviews, stress of formal patient complaints and audits surfaced repeatedly. Similarly, a patients' complaints culture, and defensive practice were also described as stressors in focus groups exploring GP resilience and coping (59).

A systematic review thematically analysed studies broadly focusing on positive factors related to general practice. They discerned general medical workforce themes, general practice specific themes, and professional/personal issues impacting on GP satisfaction in clinical practice (60). Subthemes included balance between income and workload; flexibility,

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variety, and freedom to choose work; responsibility, competency, recognition; positive self-image, personality, and values; and relationships with community, patients, carers, and other professionals (60). So overall, previous qualitative research in different contexts demonstrate alignment with our results.

Our data also shows similarities with important Australian quantitative data on life and job satisfaction, particularly regarding remuneration, value, and the strain of maintaining balance. The 'Medicine in Australia – Balancing Employment and Life' (MABEL) surveys, were conducted annually from 2008 to 2018 with yearly participant numbers of >3000 GPs (11, 61-68), and the RACGP regularly commissions surveys, and reports (14, 69). GPs are most satisfied with variety and choosing how to work, least satisfied with remuneration and recognition, and about half of surveyed GPs report that maintaining work-life balance is a challenge (14, 67, 69, 70). Over several years, >40% of GPs have identified Medicare rebates as a top priority for policy action (14). Positive associations for job satisfaction in all doctor types include doctor characteristics (age close to retirement, Australian trained, good health); social characteristics (living with a partner, social interaction); and job characteristics (part-time work, opportunities for professional development, support networks, realistic patient expectations) (63, 64).

Whilst surveys highlight correlations, they do not demonstrate causation. Our nuanced, qualitative exploration sheds light on multiple determinants of Australian GPs' wellbeing and, most importantly, how they are interrelated and which mechanisms (i.e., financial drivers, lack of value) underpin everything.

Strengths and limitations

Strengths include the diversity of participants and their combined wealth of experience (Table 1). GPs rich and nuanced recounts enabled in-depth analysis of determinants of their personal wellbeing.

Limitations include selection bias often inherent in qualitative research with voluntary participation. We purposely only included GPs working in Australia for practicability reasons, and local relevance. These results may not equally apply to GPs working elsewhere, different factors may be present for GPs in other countries, particularly around funding structures and policy.

There are many definitions of wellbeing in the literature (71), which adds complexity to research in this space. For quantitative studies a wellbeing definition and dedicated measure

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can should be selected (39). We did not define wellbeing for our participants, but rather let them use their own conceptualisation, so as to not bias participants' answers.

Mean interview duration was 32 minutes. Conducting longer interviews with busy GPs during a global pandemic was impossible.

Sample sizes in qualitative research are generally small (n=20 in this study), hence, we suggest these findings be verified more broadly in an Australia-wide survey, using a dedicated wellbeing metric.

Implications for research and/or practice

To prioritise GP wellbeing, we need to understand determinants and how they interplay. GPs expend effort to navigate internal and external forces that impact on their wellbeing.

Our data suggests it does not suffice to address the individual GP by offering wellbeing workshops to them. Instead, organisational, and professional structures need to be targeted and this will require policy advocacy. The determinants that need to change in order to fundamentally shift the perceived value of general practice, and avoid band-aid solutions must be prioritised. Strategies to advance these issues were raised in the interviews, and are detailed in our subsequent publication.

Regarding research implications, we recommend a focus on organisational, professional, and systemic interventions. This is more complex and costly than interventions on the individual (GP) level, but presumably more useful and sustainable. Research into interventions for health care professionals necessitates the same dedication and funding as research aimed at improving patient outcomes because a general practitioner who is well and satisfied, is better equipped to provide quality care to others.

CONCLUSION

GPs are walking a tight rope that requires careful balance between complex and interconnected determinants of wellbeing, whereby value, remuneration, and peer support are crucial.

Organisations, professional bodies, and policy makers have an untapped opportunity to enable and support GPs' wellbeing, with benefits to practitioners, their families, their patients, the sustainability of the general practice workforce, and population health.

ACKNOWLEDEGMENTS

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Registration

Not applicable.

Ethics approval statement

This study was approved by the University of Sydney Human Research and Ethics Committee (2020/822).

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Competing interest statement

Beyond the Raymond Seidler PhD scholarship for DN, and support for NG, AM and CK through ARC's Centre of Excellence for Children and Families over the Life Course (Project ID CE200100025) there was no support from any organisation for the submitted work. Ian Hickie has competing interests to declare. All other authors have no competing interests to declare.

Contributorship statement

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DNA is the guarantor and corresponding author and attests that DN, NG, CK, LA, BG, IH, AM meet authorship criteria and that no others meeting the criteria have been omitted. All authors critically revised and approved the final version of the manuscript to be published. Specifically, DN devised, and contributed to the study conception and design, acquisition of data, analysis of the data, interpretation of the data, drafted the manuscript, finalised the manuscript for reporting, and acts as corresponding author.

NG contributed to the study conception and design, acquisition of data, analysis of the data, interpretation of the data, assisted in drafting the manuscript, and revising the final manuscript for reporting.

CK contributed to analysis of the data, interpretation of the data, assisted in drafting the manuscript, and revising the final manuscript for reporting.

LA contributed to the study conception and design, acquisition of data, interpretation of the data, assisted in drafting the manuscript, and revising the final manuscript for reporting.

BG contributed to the study conception and design, acquisition of data, assisted in drafting the manuscript, and revising the final manuscript for reporting.

IH contributed to the study conception and design, and revising the final manuscript for reporting.

AM contributed to the study conception and design, acquisition of data, analysis of the data, interpretation of the data, assisted in drafting the manuscript, and revising the final manuscript for reporting.

Transparency declaration

Dr Diana Naehrig (the manuscript's guarantor) affirms that the manuscript is an honest, accurate, and transparent account of the study being reported.

Data sharing statement

We will consider sharing de-identified data upon reasonable request.

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Figure 1. Determinants of wellbeing in General Practitioners and their interaction.

Figure 2. Mechanisms of the negative impact of finances on the wellbeing of General Practitioners.

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REFERENCES

1. Wallace JE, Lemaire JB, Ghali WA. Physician wellness: a missing quality indicator. The Lancet. 2009;374(9702):1714-21.
2. Dunn PM, Arnetz BB, Christensen JF, Homer L. Meeting the imperative to improve physician well-being: Assessment of an innovative program. J Gen Intern Med. 2007;22(11):1544-52.
3. Luchterhand C, Rakel D, Haq C, Grant L, Byars-Winston A, Tyska S, et al. Creating a Culture of Mindfulness in Medicine. Wmj. 2015;114(3):105-9.
4. Spinelli WM. The phantom limb of the triple aim. Mayo Clin Proc. 2013;88(12):1356-7.
5. Addicott R, Maguire D, Honeyman M, Jabbal J. Workforce planning NHS Kings Fund. London: The King's Fund; 2015.
6. Nussbaum C, Massou E, Fisher R, Morciano M, Harmer R, Ford J. Inequalities in the distribution of the general practice workforce in England: a practice-level longitudinal analysis. BJGP Open. 2021.
7. Abel GA, Gomez-Cano M, Mustafee N, Smart A, Fletcher E, Salisbury C, et al. Workforce predictive risk modelling: development of a model to identify general practices at risk of a supply-demand imbalance. BMJ Open. 2020;10(1):e027934.
8. Sandhu D, Blythe A, Nayar V. How can medical schools create the general practice workforce? An international perspective. MedEdPublish. 2020;9(1).
9. National Medical Workforce Strategy - Investing in our medical workforce to meet Australia's health needs. The Department of Health, Australian Government; 2021.
10. National Medical Workforce Strategy - Scoping Framework. Canberra: Australian Government. Department of Health.; 2019.
11. Scott A. The evolution of the medical workforce. ANZ Health Sector Report: Melbourne Institute: Applied Economic and Social Research, The University of Melbourne; 2021 03/06/2021.
12. General Practice Workforce providing Primary Care services in Australia. Statistics by calendar year 2014 - 2019. Canberra: Australian Government. Department of Health.; 2020.
13. Scott A, Witt J, Humphreys J, Joyce C, Kalb G, Jeon SH, et al. Getting doctors into the bush: general practitioners' preferences for rural location. Soc Sci Med. 2013;96:33-44.
14. RACGP. General Practice: Health of the Nation 2020. East Melbourne, Vic: The Royal Australian College of General Practitioners. ; 2020.
15. Medical Education and Training (MET) - 4th edition. Canberra: Australian Government. Department of Health.; 2019.
16. Beech J, Bottery S, Charlesworth A, Evans H, Gershlick B, Hemmings N, et al. Closing the gap. The Health Foundation. The King's Fund. Nuffield Trust.; 2019.
17. MSOD. National Data Report 2020, 2015-2019, Data from Final Year Medical Students at Australian Medical Schools. Medical Deans Australia and New Zealand. Medical Schools Outcome Database.; 2020.
18. Deloitte. General Practitioner workforce report. Deloitte access economics; 2019.
19. Scott A. The impact of COVID-19 on GPs and non-GP specialists in private practice. The University of Melbourne.: Melbourne Institute of Applied Economic and Social Research.; 2020.
20. RACGP. The Royal Australian College of General Practitioners. Annual report 2019–20. . East Melbourne, Vic: RACGP; 2020.

For peer review only

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21. RACGP. GP wellbeing Royal Australian College of General Practitioners Website. 2021 [Available from: https://www.racgp.org.au/running-a-practice/practice-management/gp-wellbeing.
22. Harvey SB, Epstein RM, Glozier N, Petrie K, Strudwick J, Gayed A, et al. Mental illness and suicide among physicians. The Lancet. 2021;398(10303):920-30.
23. Petrie K, Crawford J, Baker STE, Dean K, Robinson J, Veness BG, et al. Interventions to reduce symptoms of common mental disorders and suicidal ideation in physicians: a systematic review and meta-analysis. The Lancet Psychiatry. 2019;6(3):225-34.
24. West C, Dyrbye L, Erwin P, Shanafelt T. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. The Lancet. 2016;388(10057):2272-81.
25. West CP, Dyrbye LN, Shanafelt TD. Physician burnout: contributors, consequences and solutions. Journal of Internal Medicine. 2018;283(6):516-29.
26. Panagioti M, Geraghty K, Johnson J. How to prevent burnout in cardiologists? A review of the current evidence, gaps, and future directions. Trends Cardiovasc Med. 2018;28(1):1-7.
27. Panagioti M, Geraghty K, Johnson J, Zhou A, Panagopoulou E, Chew-Graham C, et al. Association Between Physician Burnout and Patient Safety, Professionalism, and Patient Satisfaction: A Systematic Review and Meta-analysis. JAMA Intern Med. 2018;178(10):1317-30.
28. Panagioti M, Panagopoulou E, Bower P, Lewith G, Kontopantelis E, Chew-Graham C, et al. Controlled interventions to reduce burnout in physicians: a systematic review and meta-analysis. JAMA internal medicine. 2017;177(2):195-205.
29. Riley R, Spiers J, Buszewicz M, Taylor AK, Thornton G, Chew-Graham CA. What are the sources of stress and distress for general practitioners working in England? A qualitative study. BMJ Open. 2018;8(1):e017361.
30. Kay M, Mitchell G, Clavarino A. What doctors want? A consultation method when the patient is a doctor. Australian Journal of Primary Health. 2010;16(1):52-9.
31. Kay M, Mitchell G, Clavarino A, Doust J. Doctors as patients: a systematic review of doctors' health access and the barriers they experience. Br J Gen Pract. 2008;58(552):501-8.
32. Kay M, Mitchell G, Clavarino A, Frank E. Developing a framework for understanding doctors' health access: a qualitative study of Australian GPs. Aust J Prim Health. 2012;18(2):158-65.
33. Clough B, March S, Leane S, Ireland M. What prevents doctors from seeking help for stress and burnout? A mixed-methods investigation among metropolitan and regional-based australian doctors. J Clin Psychol. 2019;75(3):418-32.
34. Spiers J, Buszewicz M, Chew-Graham CA, Gerada C, Kessler D, Leggett N, et al. Barriers, facilitators, and survival strategies for GPs seeking treatment for distress: a qualitative study. Br J Gen Pract. 2017;67(663):e700-e8.
35. Murray MA, Cardwell C, Donnelly M. GPs' mental wellbeing and psychological resources: a cross-sectional survey. Br J Gen Pract. 2017;67(661):e547-e54.
36. Murray MA, Murray L, Donnelly M. Systematic review of interventions to improve the psychological well-being of general practitioners. BMC Family Practice. 2016;17(1).
37. Hall LH, Johnson J, Heyhoe J, Watt I, Anderson K, O'Connor DB. Strategies to improve general practitioner well-being: findings from a focus group study. Fam Pract. 2018;35(4):511-6.

For peer review only

38. Hall LH, Johnson J, Watt I, O'Connor DB. Association of GP wellbeing and burnout with patient safety in UK primary care: a cross-sectional survey. Br J Gen Pract. 2019;69(684):e507-e14.
39. Naehrig D, Schokman A, Hughes JK, Epstein R, Hickie IB, Glozier N. Effect of interventions for the well-being, satisfaction and flourishing of general practitioners-a systematic review. BMJ Open. 2021;11(8):e046599.
40. Braun V, Clarke V. What can "thematic analysis" offer health and wellbeing researchers? Int J Qual Stud Health Well-being. 2014;9:26152.
41. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology. 2006;3(2):77-101.
42. Clarke V, Braun V. Thematic analysis. The Journal of Positive Psychology. 2016;12(3):297-8.
43. Braun V, Clarke V. Thematic analysis. APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological2012. p. 57-71.
44. Archer M, Bhaskar R, Collier A, Lawson T, (eds) NA. Critical realism: Essential readings2013.
45. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International journal for quality in health care. 2007;19(6):349-57.
46. Barry C, Britten N, Barber N, Bradley C, F. S. Using reflexivity to optimize teamwork in qualitative research. Qual Health Res. 1999(9):26-44.
47. Sandelowski M, Docherty S, Emden C. Focus on qualitative methods. Sample size in qualitative research Research in Nursing & Health. 1995;18:179-83.
48. Rice PL, Ezzy D. Qualitative research methods: A health focus. Melbourne, Australia. 1999.
49. Fusch PI, Ness LR. Are we there yet? Data saturation in qualitative research. The Qualitative Report. 2015;20(9):1408-16.
50. Francis JJ, Johnston M, Robertson C, Glidewell L, Entwistle V, Eccles MP, et al. What is an adequate sample size? Operationalising data saturation for theory-based interview studies. Psychology and health. 2010;25(10):1229-45.
51. NVivo 12: QSR International Pty Ltd.; 2020 [Available from: https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home.
52. O'Connor C, Joffe H. Intercoder Reliability in Qualitative Research: Debates and Practical Guidelines. International Journal of Qualitative Methods. 2020;19.
53. Scott A, S. J. Primary Care. Oxford: Oxford University Press; 2011.
54. Hall LH, Johnson J, Heyhoe J, Watt I, Anderson K, O'Connor DB. Strategies to improve general practitioner well-being: findings from a focus group study. Fam Pract. 2018;35(4):511-6.
55. Ansell S, Read J, Bryce M. Challenges to well-being for general practice trainee doctors: a qualitative study of their experiences and coping strategies. Postgrad Med J. 2020;96(1136):325-30.
56. Le Floch B, Bastiaens H, Le Reste JY, Lingner H, Hoffman R, Czachowski S, et al. Which positive factors give general practitioners job satisfaction and make general practice a rewarding career? A European multicentric qualitative research by the European general practice research network. BMC Fam Pract. 2019;20(1):96.

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57. Hustedde C, Paladine H, Wendling A, Prasad R, Sola O, Bjorkman S, et al. Women in rural family medicine: a qualitative exploration of practice attributes that promote physician satisfaction. Rural Remote Health. 2018;18(2):4355.
58. Sansom A, Terry R, Fletcher E, Salisbury C, Long L, Richards SH, et al. Why do GPs leave direct patient care and what might help to retain them? A qualitative study of GPs in South West England. BMJ Open. 2018;8(1):e019849.
59. Cheshire A, Ridge D, Hughes J, Peters D, Panagioti M, Simon C, et al. Influences on GP coping and resilience: a qualitative study in primary care. Br J Gen Pract. 2017;67(659):e428-e36.
60. Le Floch B, Bastiaens H, Le Reste JY, Lingner H, Hoffman RD, Czachowski S, et al. Which positive factors determine the GP satisfaction in clinical practice? A systematic literature review. BMC Fam Pract. 2016;17(1):133.
61. Scott A. The impact of COVID-19 on GPs and non-GP specialists in private practice. Melbourne Institute: Applied Economic & Social Research, The University of Melbourne; 2020.
62. Scott A. General Practice Trends. The University of Melbourne, Melbourne.: Melbourne Institute: Applied Economic and Social Research; 2017.
63. Joyce C, Wang WC. Job satisfaction among Australian doctors: the use of latent class analysis. Journal of Health Services Research and Policy. 2015;20(4):224-30.
64. Joyce CM, Schurer S, Scott A, Humphreys J, Kalb G. Australian doctors' satisfaction with their work: results from the MABEL longitudinal survey of doctors. 2011.
65. Joyce CM, Scott A, Jeon SH, Humphreys J, Kalb G, Witt J, et al. The "medicine in Australia: balancing employment and life (MABEL)" longitudinal survey--protocol and baseline data for a prospective cohort study of Australian doctors' workforce participation. BMC Health Serv Res. 2010;10:50.
66. Rodwell J, Gulyas A. A taxonomy of primary health care practices: An avenue for informing management and policy implementation. Australian Journal of Primary Health. 2013;19(3):236-43.
67. Shrestha D, Joyce CM. Aspects of work–life balance of Australian general practitioners: determinants and possible consequences. Australian Journal of Primary Health. 2011;17(1):40-7.
68. Medicine in Australia: Balancing Employment and Life,
Australia's national longitudinal survey of doctors: Melbourne Institute, University of Melbourne; 2021 [Available from: https://melbourneinstitute.unimelb.edu.au/mabel/home.
69. RACGP GP Survey. Melbourne: EY Sweeney; 2020.
70. McGrail MR, Humphreys JS, Scott A, Joyce CM, & Kalb G. Professional satisfaction in general practice: does it vary by size of community? Medical Journal of Australia. 2010;193(2):94-8.
71. Dodge R, Daly A, Huyton J, Sanders L. The challenge of defining wellbeing. International Journal of Wellbeing. 2012;2(3):222-35.

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Table 1. Demographics of interviewed General Practitioners (GPs)

Demographic	**N=20**	**Sub demographic**
Sex	11	Women
	9	Men
Experience	2	GP registrars (trainees)
	2	GPs with 1 - 5 years of experience as a fellow
	4	GPs with 6 - 10 years of experience as a fellow
	4	GPs with 11 - 20 years of experience as a fellow
	4	GPs with 21 - 30 years of experience as a fellow
	4	GPs with 31 - 40 years of experience as a fellow
Current Location	15	NSW (11 metropolitan, 4 regional)
	3	VIC (2 metropolitan, 1 rural)
	1	QLD (metropolitan)
	1	SA (metropolitan)
Previous location AUS	9	GPs had previously worked in Australian locations that included regional, rural, and remote settings across different states (NSW, QLD, VIC, SA, WA, NT).
Previous location overseas	10	GPs trained and / or worked overseas (including the United Kingdom, New Zealand, the Middle East, the Indian Subcontinent, and Africa).
Special interests	18	GPs had special interests including one or several of the following: rural medicine, aboriginal health, mental health, women's health, parental care, paediatrics, skin, eye health, sports medicine, veteran's health, prison health.
Other professional roles	10	GPs held other professional roles, sometimes including several of the following: academic (research & education), GP training, corporate & management, policy, medico legal, RACGP, ACRRM, practice accreditation, Australian defence force.
Work arrangement	2	GP registrars were salaried.
	3	GPs currently were partners / principals in a practice, and several more had been practice-owners at some point during their career.
	15	GPs provided clinical work as contractors, or have mixed arrangements depending on their roles.
Billing	4	Practices bulk billed only.
	1	Practice billed privately only.
	4	Practices had mixed billing.
	2	Practices had other mixed means of funding (i.e., government grants)
	9	Interviewees did not discuss practice billing structure.

Table 1. *NSW: New South Wales, VIC: Victoria, QLD: Queensland, SA: South Australia, WA: Western Australia, NT: Northern Territory, AUS: Australia, RACGP: Royal Australian College of General Practice, ACRRM: Australian College of Rural and Remote Medicine, bulk billing: Medicare rebates cover practitioner charges (no out of pocket fees for patients).*

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Table 2. Determinants of Wellbeing - Verbatim Quotes

Quote	**Themes** Subthemes	**Verbatim Data (participant code)**
a	**Identity / Self** Wellbeing beliefs, intentions & behaviour	*'…I think it's probably a case of the medical profession has lost control of wellbeing and it's now the domain of Instagram influencers. … I think wellbeing as a principle is what we've been trying to do for years.' (GP9)*
b	**Identity / Self** Exercise, Nutrition Social connection Leisure, hobbies	*'So that's probably exercise, and eating healthy, and being with friends and family is probably what keeps me well. … I suppose having your work / life in balance, and still being able to function at work at an optimal level, and still be able to maintain all your responsibilities outside of work, with family and recreation, I suppose. And being happy with both aspects of your life.' (GP18)*
c	**Identity / Self** Responsibility, Expectations, Sense of duty	*'You know, you've just got to be professional. Doesn't matter how you're feeling, doesn't matter what's happening. Work is work. And, if you don't, bad things happen.' (GP5)*
d	**Identity / Self** Ability, High achiever, Performance, Resilience	*'I expect myself to be more resilient [than others]. And I expect myself to cope with hardships.' (GP8)*
e	**Identity / Self** Variation of work	*'If I work five, six, seven days [per week] in a general practice it really starts to affect you mentally. So, mixing it up is a fantastic way of keeping sane.' (GP5)*
f	**System** Specialisation	*'The other things around the health system that I find very difficult and concerning, … is the proliferation of sub-, sub-, super-specialists.… That puts an incredible strain on you as a GP because now suddenly, like a GP is supposed to know everything. …You know, you're a sub-doctor in everything, or you're less of a doctor in everything because here these super-specialists telling you about the micro-details of how you should manage this one. But it also creates this huge gap. You're the generalist, and the next step is to this super-specialist.' (GP14)*
g	**Organisation** Team & peer support	*'I think that's one of the most common causes of stress, depression, and mental illnesses in other practices, not having a good relationship with other GPs. … Belittling the other GP, and telling the patients that the other GP isn't good enough, or things like that. Or going against the medical advice of the other GP, even though that may have been correct, you know, trying to win over the patient, things like that.' (GP13)*

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h	**Organisation** Local differences Team & peer support	*'And I feel quite strongly that general practice, particularly in [a metro area], is in a really bad state in relation to the lack of collegial relationships that most GPs have. And I really sense that moving from [a regional area], you know I came from – I worked in two separate practices as a registrar, with huge, big tearooms. We'd all sit down for like a one-and-a-half-hour lunch, just chat, connect, all that stuff. And then, I came back to [a metro area], and started going to interviews, and I said to everybody, like, 'Where are your tearooms? Where do you guys have lunch?' And they said, 'Oh, I don't know. Well, we were going to put a tearoom in, but we decided that, you know, we couldn't really afford it. We just had to put another consulting room in'. Or others were like, 'Well, I think the doctors just eat at their own table.' And so, that I found really shocking. And I know that it's, it's just one thing. But I think that that really symbolizes just how much of a commodity that the general practitioner is seen as. You know, in most urban contexts… is you just come in, you sit at your table, you see the patients, and you go home. And I think that there's a huge cost to that. You know that you're, that you're not having those, you know, informal chats over morning or lunch.' (GP12)*
i	**Organisation** Patient expectations	*'Patients think that they can come in, and see you, and have a great amount of things dealt with. And if you deal with three of the sixteen things, they walk away feeling unhappy, even though they've booked 15 minutes [consultation].' (GP20)*
j	**Profession** Professional support & development	*'I mean [the term] 'work-life-balance' does me in. Because working 60 hours a week is fine for me. And being quiet drives me nuts. …' '…The college or the PHNs think they're fabulous when they put on a wellbeing weekend - and there's always a yoga class, you know, always a yoga class. I mean, what does that mean? That's a token, and the wellbeing industry is – the corporate life is all about talking about people's wellbeing, rather than providing real support. Communication, engagement, concern, yeah, the same as we look after our patients. And we don't get looked after by anyone.' (GP9)*
k	**System** Value, Understanding, Support	*'Maybe people who go into politics of general practice really have forgotten the basics. Yes, I think 'naïve' is the word. I don't think they have a great idea of the day to day.' (GP10)*
l	**System** Value, Understanding, Support	*'…With the vaccination programme…we weren't regarded as frontline workers, and we did Covid testing. We treat people with respiratory illness. And so, that was kind of - I think that was a diminishing thing, really, apart from you know, not feeling protected.' (GP16)*

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m	**System** Audits, Complaints, Liability	*'This complaint, and all the other ones I've had, and other people I've seen…* *There should be some sort of triage system [within the HCCC, Health Care Complaints Commission] where the crap is weeded out, to reduce the stress on GPs, and other doctors, and save time. And at the same time not discouraging complainants, but perhaps it could be dealt with at a lower level. (GP20)*
n	**System** Audits, Complaints, Liability	*'The other thing that can affect you, is probably if you get a few patient complaints to HCCC and AHPRA, or to the board. That actually brings your morale down quite a lot. It's one of the easiest things to complain against a doctor. You know, we're all soft targets.' (GP13).*
o	**Finances** System	*'But the wellbeing that GPs achieve, is by their own measures, and they are to counteract the negative pressures that come from outside this [consult] room. So … the forces that are negative, are Medicare, and the way GPs are treated. Like the telehealth items are just going to be cut… ECGs [electro-cardiograms], that item was just cut. Joint injections, they were just cut.' (GP9)*
p	**Finances** Organisation	*So, [we are] private billing … with discretion, so that there will be some patients that, you know, we'll bulk bill. But generally - And, I always have that mindset that I'm not going to undervalue myself. Otherwise, yeah, you know, yeah… And I think my patients have appreciated, that I do that extra bit for them and, you know, and they appreciate what they get. So, but I still will get occasional patients who will try [to get bulk billing].' (GP15)*
q	**Finances** Organisation	*'One of the things I like about a bulk billing practice, and it's good, I think, for my wellbeing - I have worked at some practices that charge. I hated the stress at the end of every consult where someone would be saying, "Please, can you just bulk bill me"? or "I just can't pay this week". And honestly, it was a very stressful situation at the end of every consult...' (GP2)*
r	**Finances** Personal	*'Ahhm, I think GPs themselves hinder themselves. … I think doctors' knowledge and understanding of Medicare, or GPs', is often appalling. … They claim wrongly, they act poorly, they spend the public money poorly, and they're scared of things they shouldn't be scared of, or conversely, they're not scared of things they should be scared of. I think it's GPs themselves, not Medicare. … It is ridiculous, because if you're a bulk billing GP your entire income is based on understanding that system, how can you possibly derive your income without understanding it? … There is tons of information, Medicare videos, tutorials, loads of stuff on there, regular webinars. GPs do not educate themselves, it's their fault.' (GP4)*

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s	**Finances** Personal	*'And obviously, none of us get maternity leave from work. … So financially, it's a huge source of stress, because - I'm lucky that my wife, who's also a doctor, works in the hospital system. She's put on and off about getting into general practice. Quite frankly, one of the things that puts her off is maternity leave and the thought of being completely unsupported by, you know, national government or any other organisation, if we were to take time off work.' (GP1)*
t	**Finances** Personal	*'And I think that in general practice we're lucky that we have somewhat well, we do have quite good control of our hours in that in that sense, particularly as a part time worker balancing a family at home.' (GP19)*

Table 2. *This table contains further verbatim quotes (overflow table) in addition to those embedded in the text.*
HCCC: Health Care Complaints Commission, Bulk billing: Medicare rebates cover practitioner charges (no out of pocket fees for patients).
PHNs: Primary Care Networks.

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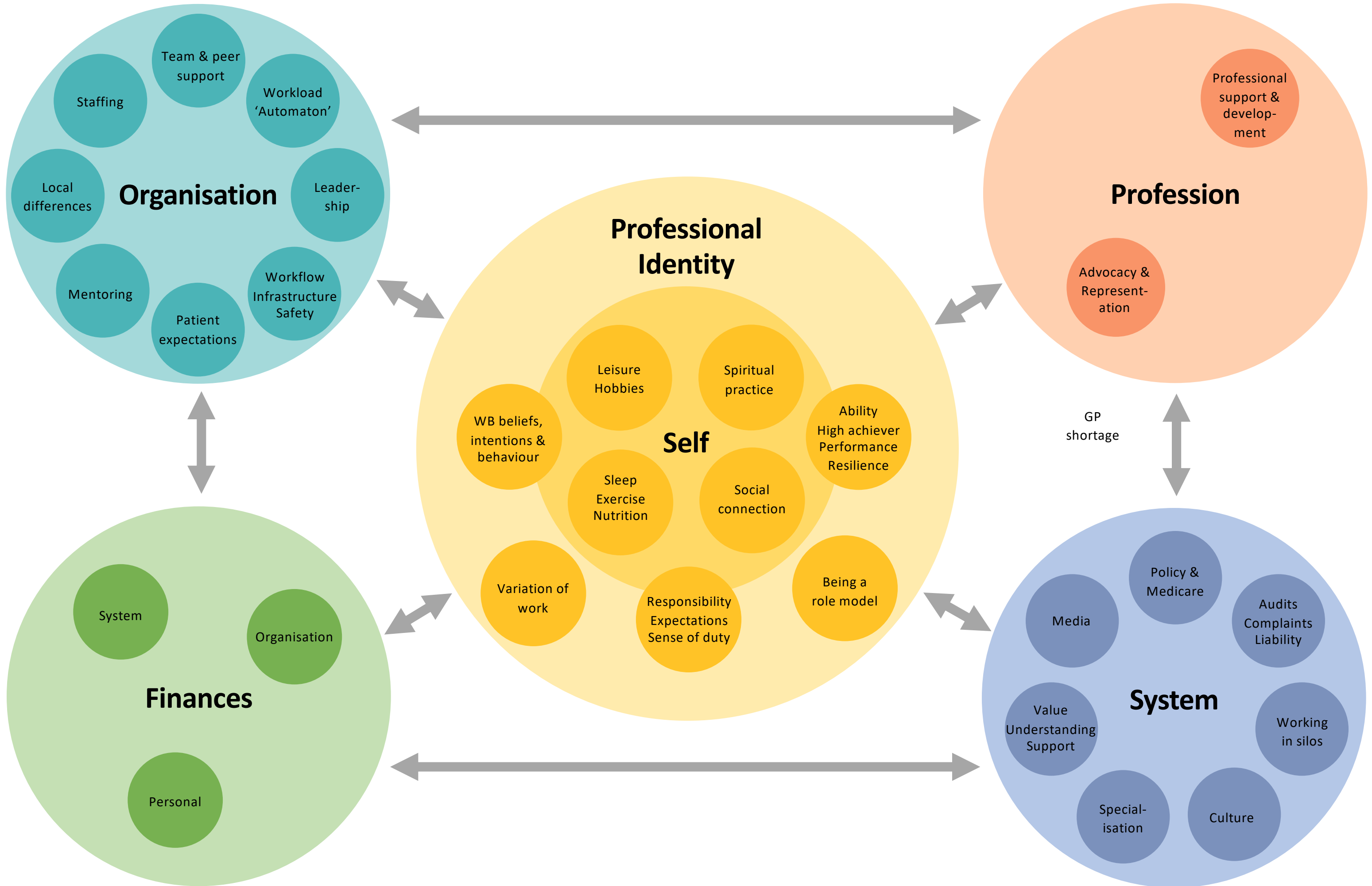

Fig. 1. Determinants of wellbeing in General Practitioners and their inter-connections.

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Remuneration / rebate structure is a proxy for being valued (external driver)

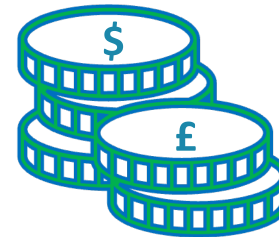
❖ Low remuneration, fees for item of service
❖ Exclusion from remuneration for 'specialist' services

This negatively impacts on GPs' perceived value, financial wellbeing and overall wellbeing.

Fee structure drives patient behaviour (external driver)

❖ Patients' unwillingness for co-payments
❖ Patients' expectations & regard for GPs providing free services

This negatively impacts on GPs' overall & financial wellbeing.



Remuneration drives GP behaviour (internal driver)

❖ High patient throughput
❖ Not taking breaks (working as an 'automaton')
❖ Working full-time (overall workload)

This creates stress over time, and negatively impacts on GPs' overall wellbeing.

Fig. 2. Mechanisms of the negative impact of finances on the wellbeing of General Practitioners.

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Supplement 1. Qualitative Interview Guide "Wellbeing of General Practitioners"

Introduction script:

- Hello, and thank you for your willingness to participate in this interview about GP wellbeing.
- This interview will take approximately 30 minutes.
- With your consent, a recording of this interview will be made for transcription and analysis. The video component of the recording is not necessary for transcription or analysis and can be turned off if you prefer. If you do decide to turn the camera off, you will still be able to participate in the interview. **indicate the video button on the bottom toolbar** Is that okay? Please note that I will ask you again once the recording starts to confirm that you have consented to recording.
- Then I will start the recording NOW.
- Can I confirm that you have consented to video / audio recording this interview?
- Have you read the Participant Information Statement?
- Do you have any further questions?
- Do you consent to take part in this research project?
- Great thank you. Let's start.

Question	Prompt	Rationale
1. I'll just start by asking some general information about yourself: a. Where do you work? b. How many years have you worked as a GP? c. Are you employed, contractor, owner?	• Where is the GP practice located (metro, rural, remote)? • Have you worked in any other type of practice or location? • Have you specialised or received training in any specific additional areas?	Understand the different demographic groups of Australian GPs that have volunteered to participate in this study.
2. How would you define wellbeing?	• What does the concept 'wellbeing' mean to you? • Does wellbeing mean the same thing when you think of your own personal wellbeing compared to the wellbeing of your patients? Do you use the same 'yardstick'?	Introduction. Lead into their understanding of the subject of wellbeing. Explore their personal meaning of wellbeing.
3. What promotes wellbeing for you on a personal level?	• What do you generally do to keep yourself well? • Are there any resources, people, strategies you use to help maintain your wellbeing? • How important is improving your own wellbeing to you? Why is this so? • Are there any differences in how you maintain your own wellbeing at work, compared to when you are not at work?	Explore how they stay well, what factors are involved to gain and maintain personal wellbeing. How important is this to them.

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4. What promotes your wellbeing on an organisational (GP practice) level?	• How does the environment at work support your wellbeing? • Is there anything in your work environment that hinders or does not support your wellbeing? [If yes] What is that? • What needs to change? • What would need to happen in your immediate work surroundings for your wellbeing to be optimally supported?	Explore what organisational factors need to be in place to gain and maintain personal wellbeing.
5. What promotes your wellbeing on a health systems level?	• Looking at the situation from a systemic perspective, what keeps you well? • If you could wave a magic wand, what would need to be in place (ie. how would you change the system for GPs)? • What support could policy makers, RACGP college, PHNs, Medicare, health insurances, etc) provide?	Explore what systemic factors need to be in place to gain and maintain personal wellbeing.
6. What is the impact of overall culture in health care on wellbeing?	• How does the culture in health care influence the wellbeing of GPs? • How would you change the culture in health care to promote the wellbeing of GPs more generally?	Explore cultural aspects to wellbeing.
7. Where do you access information and support to assist with your wellbeing?	• Do you access any information or services to assist in your wellbeing? • If yes, how useful is this? • If no, what would this information or service need to look like to be useful to you? • What sort of interventions (or support) do you think could be implemented to improve GPs wellbeing? ○ How should these be delivered?	Continuing personal and professional development.
8. Is there anything else about wellbeing for GPs or your personal experience that you would like to share?	• How has COVID-19 impacted GP wellbeing? • Has COVID-19 influenced any support/ interventions focused on GP wellbeing being provided?	Final question

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Supplement 2. Medicare terms explained.

All definitions are direct verbatim quotes from the sources in parenthesis. Accessed online on 16/09/2021.

Medicare

'Medicare is Australia's universal health insurance scheme. It guarantees all Australians (and some overseas visitors) access to a wide range of health and hospital services at low or no cost.' (Australian Government, Department of Health, https://www.health.gov.au/health-topics/medicare)

'Medicare was introduced by the Commonwealth Government in 1984 to provide eligible Australian residents with affordable, accessible and high-quality healthcare. Medicare is based on the understanding that all Australians should contribute to the cost of healthcare according to their ability to pay. It is financed through progressive income taxation and an income-related Medicare levy.' (State Government Victoria, Department of Health, https://www.racgp.org.au/download/Documents/e-health/Summary-of-new-MBS-item-numbers.pdf)

Medicare rebates and item numbers

'The Medicare Benefits Schedule (the MBS) is a list of the medical services for which the Australian Government will pay a Medicare rebate, to provide patients with financial assistance towards the costs of their medical services. Medicare rebates do not, and were never intended to, cover the full cost of medical services. The Government sets a Medicare Schedule Fee to determine the amount of the rebate that patients receive from the Government.' (Australian Medical Association, https://www.ama.com.au/sites/default/files/documents/Guide%20for%20Patients%20on%20How%20the%20Health%20Care%20System%20Funds%20Medical%20Care.pdf)

Bulk billing

'Bulk billing means you don't have to pay for your medical service from a health professional. They [health professionals] bill us [Medicare] instead and they accept the Medicare benefit as full payment for the service. … Not all health professionals bulk bill.' (Australian Government, Services Australia, https://www.servicesaustralia.gov.au/individuals/subjects/how-claim-medicare-benefit/bulk-billing)

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COREQ 32-item checklist

Authors: 1. D. Naehrig, 2. N. Glozier, 3. C. Klinner, 4. L. Acland, 5. B. Goodger, 6. I. Hickie, 7. A. Milton

Number	Item	Description	Page No.
1.	Interviewer	Author 1 conducted all interviews.	Title page, and page 5
2.	Researcher credentials	Author 1: Dr.med., FMH Radioonkologie, MSc Coach Psych. Author 2: Prof of Psychological Medicine. Author 3: Grad Cert QHR (Qualitative Health Research) Author 4: BA BMed MHM MPH FRACGP. Author 5: Dr Author 6: AM MD FRANZCP FASSA FAHM Author 7: BSc, MAppSc, PhD	Title page.
3.	Occupation	Author 1 is a PhD candidate in psychological medicine, with experience in mixed methods research, as a clinician-researcher, coaching psychology, and as medical communication skills facilitator. Author 3 is a research assistant and experienced qualitative researcher. Author 4 is a general practitioner and head of clinical governance. Author 5 is a general practitioner. Authors 2 and 6 are psychiatrists both with extensive expertise in mixed methods research. Author 7 is a post-doctoral researcher in psychology, with extensive experience in qualitative research design, conduct and analysis.	Title page, and page 5.
4.	Gender	Authors 1, 3, 4 and 7 are female. Authors 2, 5 and 6 are male.	Page 5
5.	Experience and training	Authors are experienced and active researchers with expertise in qualitative, quantitative, and mixed methods approaches. Authors have researched and published in the broad topic area previously.	Page 5
6.	Relationship established	Participants only had direct contact with author 1. GPs interested in participating in the research contacted author 1 via phone, text, or email. Prior to interviews, the participants had the opportunity to review the participant information and consent forms, and discuss any questions, before giving consent. After the interview there was one brief follow-up and thank you email sent out. Author 1's interest in, and perceived importance of the topic of GP wellbeing may have assisted in establishing a relationship built on trust and mutual understanding. Similarly, GPs who are particularly interested in the subject of wellbeing may have chosen to participate.	Page 5
7.	Participants' knowledge of the interviewer	Author 1 who conducted all interviews had no previous professional or personal relationship with any of the participants. Co-authors only reviewed de-identified transcripts thus had no personal relationship with, or knowledge of participants. Participants were informed about who the involved researchers are in the Participant Information Statement (PIS).	Page 5
8.	Interviewer characteristics	The interviewer is a PhD candidate, with a background in medicine and psychology. Author 1 chose to pursue the topic of GP wellbeing, because of perceived importance of the subject matter, and a personal belief that this is crucial in providing sustainable primary care to the population. As such she is aware of potential bias particularly in favour of GPs and their experience.	Page 5
9.	Methodological orientation and theory	Thematic framework analysis with an inductive, data-driven approach was taken.	Page 4
10.	Sampling	Maximum variation sampling was applied, as we aimed for a diverse mix of participants across Australia.	Page 5

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11.	Method of approach	We were supported by several organisations, who sent e-newsletters and communications to their members. Flyers, social media, and snowballing were also utilised.	Page 5
12.	Sample size	N=20	Page 7
13.	Non-participation	Three GPs that were initially interested, subsequently did not partake in the interview. One stated lack of time, the others simply didn't respond to follow-up emails. All interviews that were commenced, were also completed.	NA
14.	Setting of data collection	Interviews were conducted online one-on-one via a University of Sydney password-protected Zoom meeting room.	Page 5
15.	Presence of non-participants	NA	NA
16.	Description of sample	A diverse group of GPs working clinically in Australia.	Page 5
17.	Interview guide	Interviews were semi-structured, and included questions about GPs' own wellbeing.	Page 6
18.	Repeat interviews	NA	NA
19.	Audio/visual recording	Interviews were recorded via Zoom, either on audio, or audio and video setting, as per the preference of the GP. Only audio-recordings were saved.	Page 6
20.	Field notes	Notes were made for analysis and were updated during researcher discussions to inform the writing of the manuscript.	N/A
21.	Duration	Interviews ranged from 20 to 43 minutes (mean 32 minutes duration).	Page 7
22.	Data saturation	Interviews were continued until data saturation was achieved. Data saturation was discussed and agreed upon in a team of 2 researchers (author 1 and 3), in consultation with author 7.	Page 6
23.	Transcripts returned	Transcripts were not returned to participants.	N/A
24.	Number of data coders	Data was coded by authors 1 and 3.	Page 6
25.	Description of the coding tree	Codes, themes, and subthemes were iteratively refined and developed during regular research team meetings between authors 1 and 3, and were triangulated with authors 2 and 7. Descriptions of the themes, subthemes and codes were developed and captured in a codebook (or coding framework).	Page 6
26.	Derivation of themes	Themes and subthemes were derived from the data.	Page 6, 7
27.	Software	Microsoft Word and NVivo 12.1.0 were used to manage the data.	Page 6
28.	Participant checking	Participant checking was not applied.	NA
29.	Quotations presented	Participant quotations were used to exemplify (or illustrate) the finding. Quotations are identified with GP participant numbers, only to maintain anonymity.	Pages 7-14, Table 2.
30.	Data and findings consistent	Data and findings are consistent throughout.	Page 7-19
31.	Clarity of major themes	Themes are clearly described and presented in the manuscript and figure 1.	Pages 7,8, and figure 1.
32.	Clarity of minor themes	Subthemes are clarified in detail, and their interconnectedness described.	Pages 7-14, and figure 1.

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BMJ Open

Determinants of wellbeing and their interconnections in Australian general practitioners—a qualitative study

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Primary Subject Heading:	General practice / Family practice
Secondary Subject Heading:	General practice / Family practice
Keywords:	GENERAL MEDICINE (see Internal Medicine), MENTAL HEALTH, OCCUPATIONAL & INDUSTRIAL MEDICINE, PRIMARY CARE, PUBLIC HEALTH

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TITLE PAGE

Title	**Determinants of wellbeing and their interconnections in Australian general practitioners—a qualitative study**
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ABSTRACT

Objectives
The wellbeing of doctors is recognised as a major priority in health care, yet there is little research on how General Practitioners (GPs) keep well. We aimed to address this gap by applying a positive psychology lens, and exploring what determines GPs wellbeing, as opposed to burnout and mental ill health, in Australia.

Design
Semi-structured qualitative interviews.

From March to September 2021, we interviewed GPs working in numerous settings, using snowball and purposive sampling to expand recruitment across Australia. 20 GPs participated individually via Zoom. A semi-structured interview-guide provided a framework to explore wellbeing from a personal, organisational, and systemic perspective. Recordings were transcribed verbatim, and inductive thematic analysis was performed.

Results
Eleven female and nine male GPs with diverse experience, from urban and rural settings were interviewed (mean 32 minutes). Determinants of wellbeing were underpinned by GPs' sense of identity. This was strongly influenced by GPs seeing themselves as a distinct but often undervalued profession working in small organisations within a broader health system. Both personal finances, and funding structures emerged as important moderators of the inter-connections between these themes. Enablers of wellbeing were mainly identified at a personal and practice level, whereas systemic determinants were consistently seen as barriers to wellbeing. A complex balancing act between all determinants of wellbeing was evidenced.

Conclusions
GPs were able to identify targets for individual and practice level interventions to improve wellbeing, many of which have not been evaluated. However, few systemic aspects were suggested as being able to promote wellbeing, but rather seen as barriers, limiting how to develop systemic interventions to enhance wellbeing. Finances need to be a major consideration to prioritise, promote, and support GP wellbeing, and a sustainable primary care workforce.

Keywords

Wellbeing, determinants, general practitioner, family practitioner, primary health care, qualitative research.

Ethics approval statement
This study was approved by the University of Sydney Human Research and Ethics Committee (2020/822).

Funding source
Dr Diana Naehrig is funded through the Raymond Seidler PhD scholarship.

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This research was supported (partially or fully) by the Australian Government through the Australian Research Council's Centre of Excellence for Children and Families over the Life Course (Project ID CE200100025).

The funding sources did not have any influence on the design or conduct of this research.

STRENGTHS AND LIMITATIONS OF THIS STUDY

Strengths

- A positive framework—examining how GPs keep well and thrive—was deliberately selected to examine GPs' wellbeing, which complements literature on mitigating burnout.
- Qualitative inquiry assists in understanding complex interactions between different determinants of wellbeing.
- Our diverse sample includes GPs working in a wide range of clinical settings in Australia.

Limitations

- Our results may not be generalisable to all GPs, particularly those working outside of the Australian context.
- Selection bias needs to be considered in any voluntary research participation.

INTRODUCTION

Health care typically aims to improve patient care, population health and cost effectiveness (1, 2). The wellbeing of health care professionals has been recognised as a priority, and further key component of the wider goals for health care in the USA, and Canada (1-5). In Australia, the 'National medical workforce strategy' developed a joint vision to provide effective, universally accessible, and sustainable health care across the entire population (6), whereby doctor wellbeing, and insufficient generalist capacity, have been identified as top concerns (6, 7).

General practice is ideally placed to address health care goals by crucially providing cost-effective care to patients, and underpinning population health. However, demand for generalist services outweighs supply in many countries, including the UK, the USA, and Australia, with an even greater undersupply of Australian GPs forecast by 2030 (8-14). The additional strain of the pandemic (15) highlights the urgency of prioritising GP wellbeing.

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Professional organisations are aware, and endeavouring to address this by offering support (i.e., Royal Australian College of General Practitioners (RACGP) programmes and resources (16, 17)), and funding research into GPs' health and wellbeing.

Doctors' health research is typically informed by the clinical model, and there is a substantial body of literature aiming to explore and mitigate burnout, distress, and mental ill health (18-25), and improve doctors' uptake of health services across different settings (26-30). There is comparatively little research—particularly qualitative—that deliberately applies a positive lens, and explores how GPs keep well and thrive. We aim to explore this gap by drawing on positive psychology to complement the clinical model. The field of positive psychology provides several theories, definitions and measures of wellbeing, and most are defined as multi-dimensional constructs (31). Diener's theory of subjective wellbeing comprises cognitive, often assessed as (life) satisfaction, and affective (emotional) components (32). Cognitive wellbeing is more stable over time than affective wellbeing, and is linked to factors such as status, life events, and income that may involve an appraisal of wellbeing over time (33-35). Ryff's 'psychological wellbeing" (36) includes six dimensions: positive relations with others, autonomy, environmental mastery, purpose in life, personal growth, and self-acceptance. Flourishing or PERMA, as construed by Seligman is a wellbeing theory described by positive emotion, engagement, relationships, meaning, and accomplishment (37).

We conceptualise wellbeing, and mental ill health / burnout as distinct, albeit related constructs, which merit separate consideration. Other research groups have similarly recognised the importance of exploring wellbeing in its own right. For example, a UK group focused on 'psychological wellbeing', and 'mental wellbeing' in GPs (38, 39). Another group qualitatively explored 'wellbeing' in GPs as distinct from 'burnout' (40). We aimed to add to this burgeoning approach, and explore GPs wellbeing in the Australian context.

Overall, there is remarkably little evidence on how to effectively increase GP wellbeing, and related positive constructs (41). Our recent systematic review of both trials and policy changes exemplified the use of a wide variety of interventions, constructs, and metrics. (41). The review showed that these interventions had no consistent definition of wellbeing or its components, a lack of consensus on how to measure it (often with a scattergun set of measures), and few theoretical links between the intervention content and wellbeing target.

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Interventions were typically aimed at the individual GP, involved mindfulness practice, and showed low to moderate effectiveness. Very few interventions targeted organisations, or health systems yet much of the discourse suggests interventions to improve wellbeing should be delivered at these levels. If this is the case, we also need to know what determinants of wellbeing such interventions should focus on enhancing.

OBJECTIVES

A robust and sustainable generalist workforce is important. In order to bolster the wellbeing of Australian GPs, and ultimately address the gap in the literature regarding effective wellbeing interventions for GPs as seen through a positive lens, we aimed to:

- apply a positive framework to explore GPs' wellbeing, and key, potentially modifiable factors that determine it.
- qualitatively analyse how these determinants are inter-connected, and what the underlying drivers are.

METHODS

Qualitative approach and research design

We applied a six-step qualitative thematic analysis (42-45), providing a flexible and accessible way of analysing qualitative data, enabling iterative exploration of patterns and relationships between different themes whilst ensuring research rigour. The six steps included: 1) familiarising with data; 2) generating initial codes; 3) searching for themes and subthemes; 4) reviewing themes; 5) refining, defining and naming themes; and 6) writing the report (45). We used an inductive data-driven (bottom-up), and a critical realist epistemological approach to our analysis (46). A COREQ (47) reporting checklist is provided.

Researcher characteristics and reflexivity

Our research team (four females and three males) consisted of a PhD candidate with background in medicine and coaching psychology (DN); two GPs, one (BG) a representative of a Primary Health Network (PHN), a GP led organisation responsible for the primary care of a large geographical location typically serving a few hundred thousand people, and a representative (LA) of a national private GP organisation; two psychiatrists (NG, IH); a psychologist/researcher (AM), and a researcher (CK) both with extensive qualitative

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expertise. Collaborating with GPs within our research team enabled reflexivity across personal, professional, organisational and systemic experiences (48).

Context & sampling strategy

Recruitment was aimed at GPs, and GP registrars working clinically in Australia. We chose a maximum variation sampling approach (49, 50), and purposely engaged PHNs and a private GP organisation to announce our study in e-newsletters and communications. Furthermore, we utilised flyers, social media, and snowballing.

Patient and Public involvement

Patients and public were not involved in the design or conduct of this research project.

Ethical issues

Participation was voluntary. All participants received a participant information sheet and provided consent prior to being interviewed. The University of Sydney HREC approved this study (2020/822).

Data collection & management

DN interviewed GPs one-on-one online in password protected Zoom conferencing rooms. A semi-structured topic guide (Supplement 1)—developed by the entire team—provided a framework, whilst allowing for further explorative questions. Interview topics included demographic information about participants, GPs' conceptualisation of wellbeing, factors promoting their wellbeing on a personal, organisational and systems level, the impact of culture in health care on wellbeing, accessing information and support to assist with their wellbeing, and the impacts of COVID-19 on their wellbeing. We planned 20 interviews with the potential for further interviews. After independent analysis of half the transcripts (DN, CK) no new codes or themes were identified (51). Interviews were continued to capture GPs from various geographical locations and experience levels. No additional themes emerged, meeting the criteria for thematic data saturation (52). We concluded at 20 participants as intended.

Interviews were audio-recorded, and securely managed on University of Sydney research servers. Verbatim transcripts were checked for accuracy against original recordings and de-identified by DN before analysis.

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Data analysis

Inductive thematic analysis (45) was facilitated by Nvivo12 software (53). DN, CK, AM, NG engaged in steps 1) to 3) as described above, based on three different, randomly selected transcripts that were allocated to each researcher. DN developed a preliminary codebook in consultation with the research team with themes and subthemes (step 4), and coded all transcripts using NVivo (53). CK independently reviewed all transcripts and double coded half of them. Inter-coder variability (54) ranged from k = 0.48 to k = 0.99 depending on the theme, providing the basis for further dialogue, reflexivity, and theme development (step 4 and 5). The codebook was iteratively refined throughout the process (DN, CK), and by triangulation with AM and NG (step 5); detailed descriptions of all codes were developed. For step 6, reporting of results, see below.

RESULTS

From March to September 2021, we interviewed 20 GPs (mean duration of 32 minutes; range 20 - 43 minutes) with diverse experience levels, backgrounds, geographical, and work arrangements (Table 1). The interviews captured participants' conceptualisation of wellbeing; determinants of wellbeing; and strategies for wellbeing. Running through each was a current focus on COVID-19 impacts on GPs' wellbeing. Given the numerous definitions and metrics of wellbeing available we specifically did not provide these to the participants to let them generate their own conceptualisations. When asked GPs mostly equated wellbeing in a fairly concrete fashion with good physical health, mental health, happiness, and social connection, rather than some of the constructs e.g., achievement or engagement, in the literature. We then explored 'What promotes wellbeing for you on a personal, practice and systems level'?
For determinants we discerned five themes, each with several subthemes. We charted these (Figure 1), and important interconnections were analysed.
Strategies for wellbeing, and the COVID-19 specific influences on GP wellbeing are presented elsewhere.

Identity / Self

Determinants of wellbeing were related to GPs' identity as a person, and their identity as a professional with many seeing themselves as 'wellbeing experts' especially for physical and mental aspects of wellbeing (Table 2a). Personal determinants included exercise, sleep,

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nutrition, social and community connection, leisure activities, spiritual practice, and a 'sense of balance' overall (Table 2b) determined by participants beliefs, intentions, and behaviours. However, several participants stated not (always) heeding the wellbeing advice they gave their patients.

> *'...I've come to realise, actually, that what I'm imparting is good advice, but I need to follow it myself as well, because it does make sense, and it does improve my wellbeing as well. So, yeah, I think as GPs, I'm not sure we always do what's right for ourselves, you know, compared to what we impart to our patients.' (GP15)*

A strong professional identity—defined by a sense of pride, duty, responsibility, and high self-expectations —was ubiquitous (Table 2c). GPs also saw themselves as high achieving, able and resilient (Table 2d).

> '*From an identity point of view, ... being a doctor sometimes subsumes my identity, and it's an important part of my identity. And therefore, my contentment at work and my recognition as a doctor, and the satisfaction I get at work impact on my identity as a doctor...' (GP14)*

Choosing variation in the type of work carried out was another determinant of keeping well, through avoiding monotony and isolation, deliberately taking on different roles, and by temporarily relinquishing the burden of patient responsibility (i.e., having academic days, pursuing teaching and management, or assisting surgeons in theatre) (Table 2e).

Aforementioned enablers of professional wellbeing were offset by a sense of being perceived as 'less than' a specialist by the system, the public, other doctors and often internalised by the GPs (Table 2f).

Organisation

For the organisational (practice) theme, the most important factor determining personal wellbeing was team and peer support. This included mostly informal debriefs with colleagues about challenging patients, medical management, staff, or personal issues, and was facilitated by organisational practices encompassing physical (e.g., having a common tea-room), social (e.g., protected breaks, and collegial social activities), and work domains (e.g., efficient practice management, routine workflow, and infrastructure).

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'Ahh, having a good bunch of people to work with, people who are working together in an environment that is safe, there is timetabling of patients, that we are able to have a tea break, toilet break, lunch break, and be able to respond to patients' needs as they arise, at the same time. That is important in a clinical setting.' (GP3)

In contrast, GPs perceived working in competitive or negative team climates as highly detrimental to their wellbeing (Table 2g). This was more often expressed by participants in metropolitan practices, where practices reportedly skimp on tea-rooms, and doctors routinely work through lunch breaks due to financial strains related to significantly higher living expenses than in regional/rural areas (Table 2h). Effective practice leadership was helpful, whereas a lack of management understanding was detrimental.

High workload and the pressure to see patients, sometimes coupled with insufficient staffing were frequently cited as barriers to wellbeing.

'…I feel that there is a real sausage factory sort of approach to it in Sydney. It's just bang, bang, bang, go, go, go.' (GP12)

Having a mentor or supervisor who modelled how to maintain personal wellbeing was seen as important to learning how to prioritise personal wellbeing, particularly for GP registrars.

'…I think we need to be modelling. Because I think if people are going through the training and not experiencing any different, we shouldn't be surprised that they then become like 30, 40, 50-year-old GPs who are totally burnt out, and have no sense of what's actually important for their self-care.' (GP12)

Profession

Determinants of wellbeing also originated from within the GP community, and their representative bodies.

Several GP trainees, and educators described that training organisations, and the college representing rural practitioners offered tangible support. Examples included providing vouchers for gym memberships, facilitating discussion rounds on GP trainee days about keeping well, and the importance of self-care.

However, most GPs were either only vaguely aware of college support resources for wellbeing, or weren't interested.

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> *'…The college or the PHNs think they're fabulous when they put on a wellbeing weekend - and there's always a yoga class, you know, always a yoga class. I mean, what does that mean? That's a token, and the wellbeing industry is – the corporate life is all about talking about people's wellbeing, rather than providing real support. Communication, engagement, concern, yeah, the same as we look after our patients. And we don't get looked after by anyone.' (GP9)*

Many interviewees were dissatisfied with their professional college because they felt ill-represented, or even that the college was actively working against them. Consequently, several participants withdrew their college membership (Table 2i).

System

GPs' views on the Australian health system varied, yet nobody was able to identify support for wellbeing within the system.

> *'I'm not sure that there is anything from the system that supports my wellbeing...I think it's up to you to look after yourself.' (GP8)*

The subtheme most frequently emphasised by GPs during the interviews was a sense of not being valued, and a lack of appreciation, respect, and support.

> *'And I think the government just think we are a disorganised bunch, and who we can just brush aside, and they will go the extra mile for their patients… Unless GPs get organised, and more militant, then we're just going to be ground.' (GP9)*

Participants expressed, that others' lack understanding of what a GP does on a daily basis, and the importance GPs play in the provision of population health (Table 2j).

> *'I think if more people had a concept of what general practice actually can do, and what it does, there would be a lot more respect.' (GP17)*

This lack of understanding was exemplified by limited GP consultation by the government concerning the Covid-19 response, and vaccination rollout (Table 2k).

The fear of billing audits by Medicare (definition, Supplement 2), formal patient complaints (Table 2l & 2m), litigation threats, and bad media press compounded the lack of valuation.

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'Well, I think the Medicare audits – although I've been lucky enough not to receive an audit letter yet – I think that has sent … a whole load of fear through a lot of GPs who've tried to do the right thing'. (GP11)

Over-specialisation (Table 2f) and GP shortages, as well as working in silos, rather than hand in hand (i.e., with other healthcare providers, between federal and state agencies) were mentioned by a small proportion of GPs.

Lastly, GPs frequently encountered unrealistic expectations from patients, including to receive services for free (Table 2n).

'…You see a number of patients that basically see you as the local Coles [supermarket]. "OK, doctor, I need my prescription, and I need my referral…" And you know, you are just a dispensing machine, an ATM. And it doesn't cost them anything because you are bulk billing.' (GP14)

Finances

Financial aspects were interlinked with all themes, and directly and indirectly determined wellbeing (Figure 2). Firstly, Medicare rebate structure that determined fee for services (Supplement 2) was closely tied to a sense of being valued, and personal wellbeing. Secondly, fee structure drove patient behaviour, which impacted on GPs overall and financial wellbeing. And thirdly, remuneration influenced GPs' behaviour. In our sample, several GPs responded to low rebate structure and high patient expectations with increasing patient throughput and foregoing work breaks, with implications for their wellbeing.

Remuneration was perceived as a direct reflection of the value of a profession, a service, and a proxy for the outright value of a GP individually.

"…To me, so, I'm really sort of fed up [with the Medicare rebate] —disillusioned with—where we're at this stage, you know. And that, doesn't help our wellbeing because we don't—we feel undervalued. And the government has done nothing to really, you know, show any positive change in that respect. So definitely, and I don't really know the way out of that, because, you know, even if they were to increase the rebate a small amount, it still doesn't really reflect, you know, the amount of effort that we put into our patients, and the preventative side of things, I mean the amount of work we're doing to prevent hospitalisations and, all of that sort of thing.' (GP15)

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GPs voiced frustration with the cutbacks of billable Medicare items (Supplement 2) crucial to general practice, and the impact that had on their wellbeing (Table 2o).

GPs described two factors that influenced their income: the volume of patients seen; and how, and what they billed. High patient throughput was sometimes driven by practice owners, but more often by personal financial pressures. Particularly, when the GP was the main breadwinner, lived in a metropolitan area, and/or the practice bulk billed only, there was significant pressure to see as many patients as possible. For example, one participant saw over one thousand bulk billed patients per month. Some GPs charged patient gap payments above the Medicare rebate, to reflect the value they attributed to their expertise and services (Table 2p). Whilst others reported a reluctance to privately bill their patients, or unwillingness to argue with patients over charging the gap between private and bulk billing (Table 2q).

'Time is money' was a frequently reported concept, which directly impacted on some GPs' willingness to work less, and spend time on activities that they knew improved wellbeing, such as taking breaks, engaging in reflective practice, or attending peer review groups.

> '*Fundamentally, I think the issue is … the way that we're paid. And because we only generate billings when we're seeing patients it just sort of warps your whole view of, you know, what's worthwhile doing.' (GP12)*

According to one participant, GPs were ill-informed about Medicare's billing structure available to general practice (Table 2r). Indeed, several interviewees stated not being well versed or interested in financial management, so some deliberately engaged an accountant.

For GP registrars the financial pressures were compounded, as they are salaried, and remuneration is typically lower than for a fully qualified GP. Unpaid maternity leave was a relevant consideration (Table 2s), however, high autonomy and flexible working arrangements were specifically stated by women as key benefits of going into general practice.

> *'And I think that in general practice we're lucky that we have somewhat well, we do have quite good control of our hours in that in that sense, particularly as a part time worker balancing a family at home.' (GP19)*

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Overall, what was most striking, was the tension and complex balancing act required between all determinants, at the centre of which stood the individual GP. We didn't observe a simplistic 'work-life balance', i.e., predicted on reducing hours and demands at 'work' to enable more 'life'. In this cohort much of GPs' sense of self—and wellbeing—lay in how they viewed themselves professionally, including how they designed their working life.

DISCUSSION

Summary

Determinants of wellbeing were qualitatively explored in the interviews. We presented five themes each with subthemes: identity / self, organisation, profession, system, and finances. They are all are strongly interconnected, and each has several subthemes (see figure 1). GP wellbeing—or lack thereof—is a complex interplay between different determinants, and stakeholders. GPs provided examples of both enablers and barriers to their wellbeing. What clearly emerged is that enablers of wellbeing were mostly attributed to their personal lives, and for some, their immediate practices. A sense of pride in their abilities, performance, and resilience were key enablers of wellbeing. The main, underlying barriers—inadequate professional value and recognition—predominantly emanated from the system, and were underpinned by remuneration. GPs largely counter-balance barriers to wellbeing as best they can personally, and crucially, through informal peer support. When these mechanisms are exhausted or impossible, wellbeing quickly deteriorates. Furthermore, several GPs compensate low remuneration, inadequate professional recognition, and high patient demand with means detrimental to their wellbeing (i.e., by working harder, Figure 2).

It is noteworthy, that without guidance or provision of a definition of wellbeing, many GPs tended to focus on aspects of the system as barriers, rather than enablers of wellbeing. This was likely due to significant systemic pressures, GPs' perceived lack of agency regarding systemic and professional issues, and the frustration this causes. It may also be that GPs expect to look after themselves, or don't see how the system and professional bodies could bolster their wellbeing for example by co-designing organisational or policy interventions. Seen through this lens, it becomes clear that resilience and wellbeing seminars designed for individual practitioners will not suffice, nor be embraced, especially when they are offered by the very organisations and systems that GPs deem responsible for hindering their wellbeing.

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Comparison with existing literature

Although GPs defined wellbeing in fairly limited ways they described components of affective wellbeing (32), psychological wellbeing (36), and flourishing (37) when discussing what promotes wellbeing on a personal and practice level (i.e., social connections at work, autonomy and flexibility of work, sense of pride in their abilities). Interpreting the barriers to wellbeing is more complex. Whilst, for example, remuneration and valuation are determinants of how one might appraise cognitive wellbeing, these seemed viewed as something that could only detracted from wellbeing, i.e. as drivers of burnout? If we conceptualise wellbeing as a distinct construct—albeit related to burnout, then the answer is likely more nuanced than both being directly opposing sides of the same spectrum. Could improving remuneration or valuation actually improve wellbeing? Whilst some may see the answer as obvious (as life satisfaction continues to rise with income, albeit slowly at the income level of doctors (34)) this remains an empirical question.

We compared our findings with qualitative research on wellbeing, and related positive constructs such as satisfaction, and with selected quantitative research directly relevant to the Australian general practice landscape.

A UK group conducted focus groups with 25 GPs to identify factors that contribute to burnout and poor wellbeing, and strategies to improve both. Similar to our results, they identified the importance of team support, taking breaks, variety of, and control over their work, on an internal level; and wider governmental and public support, resources, and funding on an external level (40). British GP trainee focus groups (n=16) discussed the benefits of supportive professional relationships (i.e., supportive trainers), control over workload, and barriers to wellbeing of 'not being valued', and work-life imbalance (55). The European General Practice Research Network interviewed 183 GPs across eight countries, and described factors that promote job satisfaction: freedom to organise and choose their practice environment; professional education; and establishing strong patient-doctor relationships (56). Interestingly, patient-doctor relationships and professional education were not mentioned in our cohort. It was more a case of patient expectations being detrimental to wellbeing, and role modelling for registrars being useful. Female rural family doctors in the USA were interviewed regarding practice attributes that promote satisfaction, whereby supportive professional relationships were crucial (57). Our interviewees described the

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importance of professional peer support, and particularly women appreciated the autonomy and flexibility to choose when, and where to work.

In our interviews, stress of formal patient complaints and audits surfaced repeatedly. Similarly, a patients' complaints culture, and defensive practice were also described as stressors in focus groups exploring GP resilience and coping (58).

A systematic review thematically analysed studies broadly focusing on positive factors related to general practice. They discerned general medical workforce themes, general practice specific themes, and professional/personal issues impacting on GP satisfaction in clinical practice (59). Subthemes included balance between income and workload; flexibility, variety, and freedom to choose work; responsibility, competency, recognition; positive self-image, personality, and values; and relationships with community, patients, carers, and other professionals (59). So overall, previous qualitative research in international contexts demonstrate alignment with our results, despite vastly different health care systems across countries.

Our data also shows similarities with Australian quantitative data on life and job satisfaction, particularly regarding remuneration, value, and the strain of maintaining balance. The 'Medicine in Australia – Balancing Employment and Life' (MABEL) surveys, were conducted from 2008 to 2018 with annual participant numbers of >3000 GPs (12, 60-67), furthermore the RACGP regularly commissions surveys, and reports (68, 69). GPs are most satisfied with variety and choosing how to work, least satisfied with remuneration and recognition, and about half of surveyed GPs report that maintaining work-life balance is a challenge (66, 68-70). Over several years, >40% of GPs have identified Medicare rebates as a top priority for policy action (68). Positive associations for job satisfaction in all doctor types include doctor characteristics (age close to retirement, Australian trained, good health); social characteristics (living with a partner, social interaction); and job characteristics (part-time work, opportunities for professional development, support networks, realistic patient expectations) (62, 63).

Strengths and limitations

Strengths include the diversity of participants and their combined wealth of experience (Table 1), which allowed for a broad exploration and analysis of multiple determinants of GP wellbeing, and their interconnections. Sample sizes in qualitative research are generally small (n=20 in this study), however data saturation was reached.

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3 Limitations include selection bias often inherent in qualitative research with voluntary participation. We purposely only included GPs working in Australia for practicability reasons, and local relevance. These results may not equally apply to GPs working elsewhere, different factors may be present for GPs in other countries, particularly around funding structures and policy.

There are many definitions and metrics of wellbeing in the literature (31, 71), which adds complexity to research in this space. For quantitative studies a wellbeing definition and dedicated measure can and should be selected (31, 41). We did not define wellbeing for our participants, but rather let them use their own conceptualisation, so as to not bias participants' answers.

Mean interview duration was 32 minutes. Conducting longer interviews with busy GPs during a global pandemic was impossible. Ethnicity of participants was not recorded.

Implications for research and/or practice

To prioritise Australian GPs' wellbeing, we need to understand the full breadth of determinants (enablers and barriers) of wellbeing, and how they interplay. Moving beyond individual wellbeing interventions, our data suggests why organisational, professional, and systemic structures need to be targeted. This will require advocacy, commitment, and funding. It will take careful planning by professional bodies, organisations and policy makers in collaboration with practitioners.

In terms of research implications, wellbeing must be clearly defined, it must be distinguished from burnout both when it comes to designing interventions, and selecting metrics to assess their effectiveness.

Strategies to advance wellbeing were discussed in the interviews, and are detailed in our subsequent publication.

CONCLUSION

GPs balance complex and interconnected determinants of wellbeing, whereby value, remuneration, and peer support are crucial. Organisations, professional bodies, and policy makers have an untapped opportunity to enable GPs' wellbeing, with benefits to practitioners, their patients, the sustainability of the general practice workforce, and population health.

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Registration

Not applicable.

Ethics approval statement

This study was approved by the University of Sydney Human Research and Ethics Committee (2020/822).

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Competing interest statement

Beyond the Raymond Seidler PhD scholarship for DN, and support for NG, AM and CK through ARC's Centre of Excellence for Children and Families over the Life Course (Project ID CE200100025) there was no support from any organisation for the submitted work. Ian Hickie has competing interests to declare. All other authors have no competing interests to declare.

Contributorship statement

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DNA is the guarantor and corresponding author and attests that DN, NG, CK, LA, BG, IH, AM meet authorship criteria and that no others meeting the criteria have been omitted. All authors critically revised and approved the final version of the manuscript to be published. Specifically, DN devised, and contributed to the study conception and design, acquisition of data, analysis of the data, interpretation of the data, drafted the manuscript, finalised the manuscript for reporting, and acts as corresponding author.

NG contributed to the study conception and design, acquisition of data, analysis of the data, interpretation of the data, assisted in drafting the manuscript, and revising the final manuscript for reporting.

CK contributed to analysis of the data, interpretation of the data, assisted in drafting the manuscript, and revising the final manuscript for reporting.

LA contributed to the study conception and design, acquisition of data, interpretation of the data, assisted in drafting the manuscript, and revising the final manuscript for reporting.

BG contributed to the study conception and design, acquisition of data, assisted in drafting the manuscript, and revising the final manuscript for reporting.

IH contributed to the study conception and design, and revising the final manuscript for reporting.

AM contributed to the study conception and design, acquisition of data, analysis of the data, interpretation of the data, assisted in drafting the manuscript, and revising the final manuscript for reporting.

Transparency declaration

Dr Diana Naehrig (the manuscript's guarantor) affirms that the manuscript is an honest, accurate, and transparent account of the study being reported.

Data sharing statement

We will consider sharing de-identified data upon reasonable request.

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Figure 1. Determinants of wellbeing in General Practitioners and their interaction.

Figure 2. Mechanisms of the negative impact of finances on the wellbeing of General Practitioners.

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REFERENCES

1. Bodenheimer T, Sinsky C. From Triple to Quadruple Aim: Care of the Patient Requires Care of the Provider. The Annals of Family Medicine. 2014;12(6):573-6.
2. Spinelli WM. The phantom limb of the triple aim. Mayo Clin Proc. 2013;88(12):1356-7.
3. Wallace JE, Lemaire JB, Ghali WA. Physician wellness: a missing quality indicator. The Lancet. 2009;374(9702):1714-21.
4. Dunn PM, Arnetz BB, Christensen JF, Homer L. Meeting the imperative to improve physician well-being: Assessment of an innovative program. J Gen Intern Med. 2007;22(11):1544-52.
5. Luchterhand C, Rakel D, Haq C, Grant L, Byars-Winston A, Tyska S, et al. Creating a Culture of Mindfulness in Medicine. Wmj. 2015;114(3):105-9.
6. National Medical Workforce Strategy - Investing in our medical workforce to meet Australia's health needs. Australian Government. Department of Health.; 2021.
7. National Medical Workforce Strategy - Scoping Framework. Canberra: Australian Government. Department of Health.; 2019.
8. Addicott R, Maguire D, Honeyman M, Jabbal J. Workforce planning NHS Kings Fund. London: The King's Fund; 2015.
9. Nussbaum C, Massou E, Fisher R, Morciano M, Harmer R, Ford J. Inequalities in the distribution of the general practice workforce in England: a practice-level longitudinal analysis. BJGP Open. 2021.
10. Abel GA, Gomez-Cano M, Mustafee N, Smart A, Fletcher E, Salisbury C, et al. Workforce predictive risk modelling: development of a model to identify general practices at risk of a supply-demand imbalance. BMJ Open. 2020;10(1):e027934.
11. Sandhu D, Blythe A, Nayar V. How can medical schools create the general practice workforce? An international perspective. MedEdPublish. 2020;9(1).
12. Scott A. The evolution of the medical workforce. ANZ Health Sector Report: Melbourne Institute: Applied Economic and Social Research, The University of Melbourne; 2021 03/06/2021.
13. Scott A, Witt J, Humphreys J, Joyce C, Kalb G, Jeon SH, et al. Getting doctors into the bush: general practitioners' preferences for rural location. Soc Sci Med. 2013;96:33-44.
14. Deloitte. General Practitioner workforce report. Deloitte access economics; 2019.
15. Scott A. The impact of COVID-19 on GPs and non-GP specialists in private practice. The University of Melbourne.: Melbourne Institute of Applied Economic and Social Research.; 2020.
16. RACGP. The Royal Australian College of General Practitioners. Annual report 2019–20. . East Melbourne, Vic: RACGP; 2020.
17. RACGP. GP wellbeing Royal Australian College of General Practitioners Website. 2021 [Available from: https://www.racgp.org.au/running-a-practice/practice-management/gp-wellbeing.
18. Harvey SB, Epstein RM, Glozier N, Petrie K, Strudwick J, Gayed A, et al. Mental illness and suicide among physicians. The Lancet. 2021;398(10303):920-30.
19. Petrie K, Crawford J, Baker STE, Dean K, Robinson J, Veness BG, et al. Interventions to reduce symptoms of common mental disorders and suicidal ideation in physicians: a systematic review and meta-analysis. The Lancet Psychiatry. 2019;6(3):225-34.

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20. West C, Dyrbye L, Erwin P, Shanafelt T. Interventions to prevent and reduce physician burnout: a systematic review and meta-analysis. The Lancet. 2016;388(10057):2272-81.
21. West CP, Dyrbye LN, Shanafelt TD. Physician burnout: contributors, consequences and solutions. Journal of Internal Medicine. 2018;283(6):516-29.
22. Panagioti M, Geraghty K, Johnson J. How to prevent burnout in cardiologists? A review of the current evidence, gaps, and future directions. Trends Cardiovasc Med. 2018;28(1):1-7.
23. Panagioti M, Geraghty K, Johnson J, Zhou A, Panagopoulou E, Chew-Graham C, et al. Association Between Physician Burnout and Patient Safety, Professionalism, and Patient Satisfaction: A Systematic Review and Meta-analysis. JAMA Intern Med. 2018;178(10):1317-30.
24. Panagioti M, Panagopoulou E, Bower P, Lewith G, Kontopantelis E, Chew-Graham C, et al. Controlled interventions to reduce burnout in physicians: a systematic review and meta-analysis. JAMA internal medicine. 2017;177(2):195-205.
25. Riley R, Spiers J, Buszewicz M, Taylor AK, Thornton G, Chew-Graham CA. What are the sources of stress and distress for general practitioners working in England? A qualitative study. BMJ Open. 2018;8(1):e017361.
26. Kay M, Mitchell G, Clavarino A. What doctors want? A consultation method when the patient is a doctor. Australian Journal of Primary Health. 2010;16(1):52-9.
27. Kay M, Mitchell G, Clavarino A, Doust J. Doctors as patients: a systematic review of doctors' health access and the barriers they experience. Br J Gen Pract. 2008;58(552):501-8.
28. Kay M, Mitchell G, Clavarino A, Frank E. Developing a framework for understanding doctors' health access: a qualitative study of Australian GPs. Aust J Prim Health. 2012;18(2):158-65.
29. Clough B, March S, Leane S, Ireland M. What prevents doctors from seeking help for stress and burnout? A mixed-methods investigation among metropolitan and regional-based australian doctors. J Clin Psychol. 2019;75(3):418-32.
30. Spiers J, Buszewicz M, Chew-Graham CA, Gerada C, Kessler D, Leggett N, et al. Barriers, facilitators, and survival strategies for GPs seeking treatment for distress: a qualitative study. Br J Gen Pract. 2017;67(663):e700-e8.
31. Linton MJ, Dieppe P, Medina-Lara A. Review of 99 self-report measures for assessing well-being in adults: exploring dimensions of well-being and developments over time. BMJ Open. 2016;6(7):e010641.
32. Diener E. Assessing subjective well-being: Progress and opportunities. Social indicators research. 1985;31(2):103-57.
33. Kettlewell N, Morris RW, Ho N, Cobb-Clark DA, Cripps S, Glozier N. The differential impact of major life events on cognitive and affective wellbeing. SSM Popul Health. 2020;10:100533.
34. Morris RW, Kettlewell N, Glozier N. The increasing cost of happiness. SSM Popul Health. 2021;16:100949.
35. Diener E, Ng W, Harter J, Arora R. Wealth and happiness across the world: material prosperity predicts life evaluation, whereas psychosocial prosperity predicts positive feeling. J Pers Soc Psychol. 2010;99(1):52-61.
36. Ryff CD. Happiness is Everything, or is it. Explorations, Meaning of Psychological Well-Being. Journal of Personality and Social Psychology. 1989;57(6):1069-81.

For peer review only

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37. Seligman M. PERMA and the building blocks of well-being. The Journal of Positive Psychology. 2018;13(4):333-5.
38. Murray MA, Cardwell C, Donnelly M. GPs' mental wellbeing and psychological resources: a cross-sectional survey. Br J Gen Pract. 2017;67(661):e547-e54.
39. Murray MA, Murray L, Donnelly M. Systematic review of interventions to improve the psychological well-being of general practitioners. BMC Family Practice. 2016;17(1).
40. Hall LH, Johnson J, Heyhoe J, Watt I, Anderson K, O'Connor DB. Strategies to improve general practitioner well-being: findings from a focus group study. Fam Pract. 2018;35(4):511-6.
41. Naehrig D, Schokman A, Hughes JK, Epstein R, Hickie IB, Glozier N. Effect of interventions for the well-being, satisfaction and flourishing of general practitioners-a systematic review. BMJ Open. 2021;11(8):e046599.
42. Braun V, Clarke V. What can "thematic analysis" offer health and wellbeing researchers? Int J Qual Stud Health Well-being. 2014;9:26152.
43. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative Research in Psychology. 2006;3(2):77-101.
44. Clarke V, Braun V. Thematic analysis. The Journal of Positive Psychology. 2016;12(3):297-8.
45. Braun V, Clarke V. Thematic analysis. APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological2012. p. 57-71.
46. Archer M, Bhaskar R, Collier A, Lawson T, (eds) NA. Critical realism: Essential readings2013.
47. Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International journal for quality in health care. 2007;19(6):349-57.
48. Barry C, Britten N, Barber N, Bradley C, F. S. Using reflexivity to optimize teamwork in qualitative research. Qual Health Res. 1999(9):26-44.
49. Sandelowski M, Docherty S, Emden C. Focus on qualitative methods. Sample size in qualitative research Research in Nursing & Health. 1995;18:179-83.
50. Rice PL, Ezzy D. Qualitative research methods: A health focus. Melbourne, Australia. 1999.
51. Fusch PI, Ness LR. Are we there yet? Data saturation in qualitative research. The Qualitative Report. 2015;20(9):1408-16.
52. Francis JJ, Johnston M, Robertson C, Glidewell L, Entwistle V, Eccles MP, et al. What is an adequate sample size? Operationalising data saturation for theory-based interview studies. Psychology and health. 2010;25(10):1229-45.
53. NVivo 12: QSR International Pty Ltd.; 2020 [Available from: https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home.
54. O'Connor C, Joffe H. Intercoder Reliability in Qualitative Research: Debates and Practical Guidelines. International Journal of Qualitative Methods. 2020;19.
55. Ansell S, Read J, Bryce M. Challenges to well-being for general practice trainee doctors: a qualitative study of their experiences and coping strategies. Postgrad Med J. 2020;96(1136):325-30.
56. Le Floch B, Bastiaens H, Le Reste JY, Lingner H, Hoffman R, Czachowski S, et al. Which positive factors give general practitioners job satisfaction and make general practice a

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rewarding career? A European multicentric qualitative research by the European general practice research network. BMC Fam Pract. 2019;20(1):96.
57. Hustedde C, Paladine H, Wendling A, Prasad R, Sola O, Bjorkman S, et al. Women in rural family medicine: a qualitative exploration of practice attributes that promote physician satisfaction. Rural Remote Health. 2018;18(2):4355.
58. Cheshire A, Ridge D, Hughes J, Peters D, Panagioti M, Simon C, et al. Influences on GP coping and resilience: a qualitative study in primary care. Br J Gen Pract. 2017;67(659):e428-e36.
59. Le Floch B, Bastiaens H, Le Reste JY, Lingner H, Hoffman RD, Czachowski S, et al. Which positive factors determine the GP satisfaction in clinical practice? A systematic literature review. BMC Fam Pract. 2016;17(1):133.
60. Scott A. The impact of COVID-19 on GPs and non-GP specialists in private practice. Melbourne Institute: Applied Economic & Social Research, The University of Melbourne; 2020.
61. Scott A. General Practice Trends. The University of Melbourne, Melbourne.: Melbourne Institute: Applied Economic and Social Research; 2017.
62. Joyce C, Wang WC. Job satisfaction among Australian doctors: the use of latent class analysis. Journal of Health Services Research and Policy. 2015;20(4):224-30.
63. Joyce CM, Schurer S, Scott A, Humphreys J, Kalb G. Australian doctors' satisfaction with their work: results from the MABEL longitudinal survey of doctors. 2011.
64. Joyce CM, Scott A, Jeon SH, Humphreys J, Kalb G, Witt J, et al. The "medicine in Australia: balancing employment and life (MABEL)" longitudinal survey--protocol and baseline data for a prospective cohort study of Australian doctors' workforce participation. BMC Health Serv Res. 2010;10:50.
65. Rodwell J, Gulyas A. A taxonomy of primary health care practices: An avenue for informing management and policy implementation. Australian Journal of Primary Health. 2013;19(3):236-43.
66. Shrestha D, Joyce CM. Aspects of work–life balance of Australian general practitioners: determinants and possible consequences. Australian Journal of Primary Health. 2011;17(1):40-7.
67. Medicine in Australia: Balancing Employment and Life,
Australia's national longitudinal survey of doctors: Melbourne Institute, University of Melbourne; 2021 [Available from: https://melbourneinstitute.unimelb.edu.au/mabel/home.
68. RACGP. General Practice: Health of the Nation 2020. East Melbourne, Vic: The Royal Australian College of General Practitioners. ; 2020.
69. RACGP GP Survey. Melbourne: EY Sweeney; 2020.
70. McGrail MR, Humphreys JS, Scott A, Joyce CM, & Kalb G. Professional satisfaction in general practice: does it vary by size of community? Medical Journal of Australia. 2010;193(2):94-8.
71. Dodge R, Daly A, Huyton J, Sanders L. The challenge of defining wellbeing. International Journal of Wellbeing. 2012;2(3):222-35.

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Table 1. Demographics of interviewed General Practitioners (GPs)

Demographic	**N=20**	**Sub demographic**
Sex	11	Women
	9	Men
Experience	2	GP registrars (trainees)
	2	GPs with 1 - 5 years of experience as a fellow
	4	GPs with 6 - 10 years of experience as a fellow
	4	GPs with 11 - 20 years of experience as a fellow
	4	GPs with 21 - 30 years of experience as a fellow
	4	GPs with 31 - 40 years of experience as a fellow
Current Location	15	NSW (11 metropolitan, 4 regional)
	3	VIC (2 metropolitan, 1 rural)
	1	QLD (metropolitan)
	1	SA (metropolitan)
Previous location AUS	9	GPs had previously worked in Australian locations that included regional, rural, and remote settings across different states (NSW, QLD, VIC, SA, WA, NT).
Previous location overseas	10	GPs trained and / or worked overseas (including the United Kingdom, New Zealand, the Middle East, the Indian Subcontinent, and Africa).
Special interests	18	GPs had special interests including one or several of the following: rural medicine, aboriginal health, mental health, women's health, parental care, paediatrics, skin, eye health, sports medicine, veteran's health, prison health.
Other professional roles	10	GPs held other professional roles, sometimes including several of the following: academic (research & education), GP training, corporate & management, policy, medico legal, RACGP, ACRRM, practice accreditation, Australian defence force.
Work arrangement	2	GP registrars were salaried.
	3	GPs currently were partners / principals in a practice, and several more had been practice-owners at some point during their career.
	15	GPs provided clinical work as contractors, or have mixed arrangements depending on their roles.
Billing	4	Practices bulk billed only.
	1	Practice billed privately only.
	4	Practices had mixed billing.
	2	Practices had other mixed means of funding (i.e., government grants)
	9	Interviewees did not discuss practice billing structure.

Table 1. *NSW: New South Wales, VIC: Victoria, QLD: Queensland, SA: South Australia, WA: Western Australia, NT: Northern Territory, AUS: Australia, RACGP: Royal Australian College of General Practice, ACRRM: Australian College of Rural and Remote Medicine, bulk billing: Medicare rebates cover practitioner charges (no out of pocket fees for patients).*

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Table 2. Determinants of Wellbeing - Verbatim Quotes

Quote	**Themes** Subthemes	Verbatim Data (participant code)
a	**Identity / Self** Wellbeing beliefs, intentions & behaviour	*'…I think it's probably a case of the medical profession has lost control of wellbeing and it's now the domain of Instagram influencers. … I think wellbeing as a principle is what we've been trying to do for years.' (GP9)*
b	**Identity / Self** Exercise, Nutrition Social connection Leisure, hobbies	*'So that's probably exercise, and eating healthy, and being with friends and family is probably what keeps me well. … I suppose having your work / life in balance, and still being able to function at work at an optimal level, and still be able to maintain all your responsibilities outside of work, with family and recreation, I suppose. And being happy with both aspects of your life.' (GP18)*
c	**Identity / Self** Responsibility, Expectations, Sense of duty	*'You know, you've just got to be professional. Doesn't matter how you're feeling, doesn't matter what's happening. Work is work. And, if you don't, bad things happen.' (GP5)*
d	**Identity / Self** Ability, High achiever, Performance, Resilience	*'I expect myself to be more resilient [than others]. And I expect myself to cope with hardships.' (GP8)*
e	**Identity / Self** Variation of work roles	*'If I work five, six, seven days [per week] in a general practice it really starts to affect you mentally. So, mixing it up is a fantastic way of keeping sane.' (GP5)*
f	**System** Specialisation	*'The other things around the health system that I find very difficult and concerning, … is the proliferation of sub-, sub-, super-specialists.… That puts an incredible strain on you as a GP because now suddenly, like a GP is supposed to know everything. …You know, you're a sub-doctor in everything, or you're less of a doctor in everything because here these super-specialists telling you about the micro-details of how you should manage this one. But it also creates this huge gap. You're the generalist, and the next step is to this super-specialist.' (GP14)*
g	**Organisation** Team & peer support	*'I think that's one of the most common causes of stress, depression, and mental illnesses in other practices, not having a good relationship with other GPs. … Belittling the other GP, and telling the patients that the other GP isn't good enough, or things like that. Or going against the medical advice of the other GP, even though that may have been correct, you know, trying to win over the patient, things like that.' (GP13)*

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h	**Organisation** Local differences Team & peer support	*'And I feel quite strongly that general practice, particularly in [a metro area], is in a really bad state in relation to the lack of collegial relationships that most GPs have. And I really sense that moving from [a regional area], you know I came from – I worked in two separate practices as a registrar, with huge, big tearooms. We'd all sit down for like a one-and-a-half-hour lunch, just chat, connect, all that stuff. And then, I came back to [a metro area], and started going to interviews, and I said to everybody, like, 'Where are your tearooms? Where do you guys have lunch?' And they said, 'Oh, I don't know. Well, we were going to put a tearoom in, but we decided that, you know, we couldn't really afford it. We just had to put another consulting room in'. Or others were like, 'Well, I think the doctors just eat at their own table.' And so, that I found really shocking. And I know that it's, it's just one thing. But I think that that really symbolizes just how much of a commodity that the general practitioner is seen as. You know, in most urban contexts… is you just come in, you sit at your table, you see the patients, and you go home. And I think that there's a huge cost to that. You know that you're, that you're not having those, you know, informal chats over morning or lunch.' (GP12)*
i	**Profession** Advocacy and representation	*'And I do find that the college is completely useless at sticking up for GPs. I refuse to join them. I find them very frustrating. They don't, in my opinion, act as a good voice for us. So, mostly I work around them.' (GP6)*
j	**System** Value, Understanding, Support	*'Maybe people who go into politics of general practice really have forgotten the basics. Yes, I think 'naïve' is the word. I don't think they have a great idea of the day to day.' (GP10)*
k	**System** Value, Understanding, Support	*'…With the vaccination programme…we weren't regarded as frontline workers, and we did Covid testing. We treat people with respiratory illness. And so, that was kind of - I think that was a diminishing thing, really, apart from you know, not feeling protected.' (GP16)*
l	**System** Audits, Complaints, Liability	*'This complaint, and all the other ones I've had, and other people I've seen…* *There should be some sort of triage system [within the HCCC, Health Care Complaints Commission] where the crap is weeded out, to reduce the stress on GPs, and other doctors, and save time. And at the same time not discouraging complainants, but perhaps it could be dealt with at a lower level. (GP20)*

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m	**System** Audits, Complaints, Liability	*'The other thing that can affect you, is probably if you get a few patient complaints to HCCC and AHPRA, or to the board. That actually brings your morale down quite a lot. It's one of the easiest things to complain against a doctor. You know, we're all soft targets.' (GP13).*
n	**System** Patient expectations	*'Patients think that they can come in, and see you, and have a great amount of things dealt with. And if you deal with three of the sixteen things, they walk away feeling unhappy, even though they've booked 15 minutes [consultation].' (GP20)*
o	**Finances** System	*'But the wellbeing that GPs achieve, is by their own measures, and they are to counteract the negative pressures that come from outside this [consult] room. So … the forces that are negative, are Medicare, and the way GPs are treated. Like the telehealth items are just going to be cut… ECGs [electro-cardiograms], that item was just cut. Joint injections, they were just cut.' (GP9)*
p	**Finances** Organisation	*So, [we are] private billing … with discretion, so that there will be some patients that, you know, we'll bulk bill. But generally - And, I always have that mindset that I'm not going to undervalue myself. Otherwise, yeah, you know, yeah… And I think my patients have appreciated, that I do that extra bit for them and, you know, and they appreciate what they get. So, but I still will get occasional patients who will try [to get bulk billing].' (GP15)*
q	**Finances** Organisation	*'One of the things I like about a bulk billing practice, and it's good, I think, for my wellbeing - I have worked at some practices that charge. I hated the stress at the end of every consult where someone would be saying, "Please, can you just bulk bill me"? or "I just can't pay this week". And honestly, it was a very stressful situation at the end of every consult...' (GP2)*
r	**Finances** Personal	*'Ahhm, I think GPs themselves hinder themselves. … I think doctors' knowledge and understanding of Medicare, or GPs', is often appalling. … They claim wrongly, they act poorly, they spend the public money poorly, and they're scared of things they shouldn't be scared of, or conversely, they're not scared of things they should be scared of. I think it's GPs themselves, not Medicare. … It is ridiculous, because if you're a bulk billing GP your entire income is based on understanding that system, how can you possibly derive your income without understanding it? … There is tons of information, Medicare videos, tutorials, loads of stuff on there, regular webinars. GPs do not educate themselves, it's their fault.' (GP4)*

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s	**Finances** Personal	*'And obviously, none of us get maternity leave from work. ... So financially, it's a huge source of stress, because - I'm lucky that my wife, who's also a doctor, works in the hospital system. She's put on and off about getting into general practice. Quite frankly, one of the things that puts her off is maternity leave and the thought of being completely unsupported by, you know, national government or any other organisation, if we were to take time off work.' (GP1)*

Table 2. *This table contains further verbatim quotes (overflow table) in addition to those embedded in the text.*
HCCC: Health Care Complaints Commission, Bulk billing: Medicare rebates cover practitioner charges (no out of pocket fees for patients).
PHNs: Primary Care Networks.

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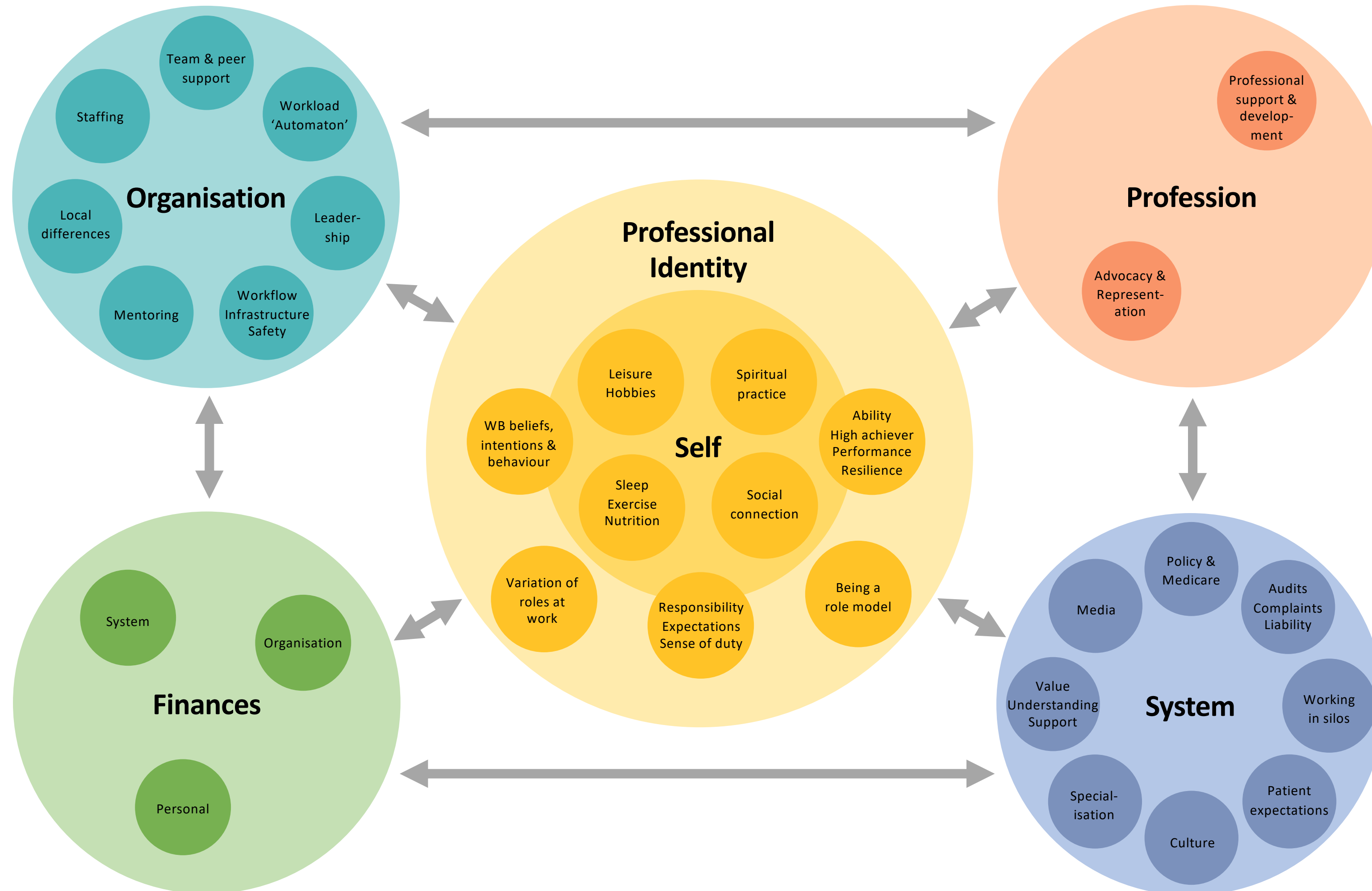

Fig. 1. Determinants of wellbeing in General Practitioners and their inter-connections.

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Remuneration / rebate structure is a proxy for being valued (external driver)

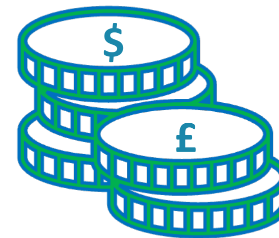
❖ Low remuneration, fees for item of service
❖ Exclusion from remuneration for 'specialist' services

This negatively impacts on GPs' perceived value, financial wellbeing and overall wellbeing.

Fee structure drives patient behaviour (external driver)

❖ Patients' unwillingness for co-payments
❖ Patients' expectations & regard for GPs providing free services

This negatively impacts on GPs' overall & financial wellbeing.



Remuneration drives GP behaviour (internal driver)

❖ High patient throughput
❖ Not taking breaks (working as an 'automaton')
❖ Working full-time (overall workload)

This creates stress over time, and negatively impacts on GPs' overall wellbeing.

Fig. 2. Mechanisms of the negative impact of finances on the wellbeing of General Practitioners.

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Supplement 1. Qualitative Interview Guide "Wellbeing of General Practitioners"

Introduction script:

- Hello, and thank you for your willingness to participate in this interview about GP wellbeing.
- This interview will take approximately 30 minutes.
- With your consent, a recording of this interview will be made for transcription and analysis. The video component of the recording is not necessary for transcription or analysis and can be turned off if you prefer. If you do decide to turn the camera off, you will still be able to participate in the interview. **indicate the video button on the bottom toolbar** Is that okay? Please note that I will ask you again once the recording starts to confirm that you have consented to recording.
- Then I will start the recording NOW.
- Can I confirm that you have consented to video / audio recording this interview?
- Have you read the Participant Information Statement?
- Do you have any further questions?
- Do you consent to take part in this research project?
- Great thank you. Let's start.

Question	Prompt	Rationale
1. I'll just start by asking some general information about yourself: a. Where do you work? b. How many years have you worked as a GP? c. Are you employed, contractor, owner?	• Where is the GP practice located (metro, rural, remote)? • Have you worked in any other type of practice or location? • Have you specialised or received training in any specific additional areas?	Understand the different demographic groups of Australian GPs that have volunteered to participate in this study.
2. How would you define wellbeing?	• What does the concept 'wellbeing' mean to you? • Does wellbeing mean the same thing when you think of your own personal wellbeing compared to the wellbeing of your patients? Do you use the same 'yardstick'?	Introduction. Lead into their understanding of the subject of wellbeing. Explore their personal meaning of wellbeing.
3. What promotes wellbeing for you on a personal level?	• What do you generally do to keep yourself well? • Are there any resources, people, strategies you use to help maintain your wellbeing? • How important is improving your own wellbeing to you? Why is this so? • Are there any differences in how you maintain your own wellbeing at work, compared to when you are not at work?	Explore how they stay well, what factors are involved to gain and maintain personal wellbeing. How important is this to them.

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4. What promotes your wellbeing on an organisational (GP practice) level?	• How does the environment at work support your wellbeing? • Is there anything in your work environment that hinders or does not support your wellbeing? [If yes] What is that? • What needs to change? • What would need to happen in your immediate work surroundings for your wellbeing to be optimally supported?	Explore what organisational factors need to be in place to gain and maintain personal wellbeing.
5. What promotes your wellbeing on a health systems level?	• Looking at the situation from a systemic perspective, what keeps you well? • If you could wave a magic wand, what would need to be in place (ie. how would you change the system for GPs)? • What support could policy makers, RACGP college, PHNs, Medicare, health insurances, etc) provide?	Explore what systemic factors need to be in place to gain and maintain personal wellbeing.
6. What is the impact of overall culture in health care on wellbeing?	• How does the culture in health care influence the wellbeing of GPs? • How would you change the culture in health care to promote the wellbeing of GPs more generally?	Explore cultural aspects to wellbeing.
7. Where do you access information and support to assist with your wellbeing?	• Do you access any information or services to assist in your wellbeing? • If yes, how useful is this? • If no, what would this information or service need to look like to be useful to you? • What sort of interventions (or support) do you think could be implemented to improve GPs wellbeing? o How should these be delivered?	Continuing personal and professional development.
8. Is there anything else about wellbeing for GPs or your personal experience that you would like to share?	• How has COVID-19 impacted GP wellbeing? • Has COVID-19 influenced any support/ interventions focused on GP wellbeing being provided?	Final question

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Supplement 2. Medicare terms explained.

All definitions are direct verbatim quotes from the sources in parenthesis. Accessed online on 16/09/2021.

Medicare

> 'Medicare is Australia's universal health insurance scheme. It guarantees all Australians (and some overseas visitors) access to a wide range of health and hospital services at low or no cost.' (Australian Government, Department of Health, https://www.health.gov.au/health-topics/medicare)
>
> 'Medicare was introduced by the Commonwealth Government in 1984 to provide eligible Australian residents with affordable, accessible and high-quality healthcare. Medicare is based on the understanding that all Australians should contribute to the cost of healthcare according to their ability to pay. It is financed through progressive income taxation and an income-related Medicare levy.' (State Government Victoria, Department of Health, https://www.racgp.org.au/download/Documents/e-health/Summary-of-new-MBS-item-numbers.pdf)

Medicare rebates and item numbers

> 'The Medicare Benefits Schedule (the MBS) is a list of the medical services for which the Australian Government will pay a Medicare rebate, to provide patients with financial assistance towards the costs of their medical services. Medicare rebates do not, and were never intended to, cover the full cost of medical services. The Government sets a Medicare Schedule Fee to determine the amount of the rebate that patients receive from the Government.' (Australian Medical Association, https://www.ama.com.au/sites/default/files/documents/Guide%20for%20Patients%20on%20How%20the%20Health%20Care%20System%20Funds%20Medical%20Care.pdf)

Bulk billing

> 'Bulk billing means you don't have to pay for your medical service from a health professional. They [health professionals] bill us [Medicare] instead and they accept the Medicare benefit as full payment for the service. … Not all health professionals bulk bill.' (Australian Government, Services Australia, https://www.servicesaustralia.gov.au/individuals/subjects/how-claim-medicare-benefit/bulk-billing)

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COREQ 32-item checklist

Authors: 1. D. Naehrig, 2. N. Glozier, 3. C. Klinner, 4. L. Acland, 5. B. Goodger, 6. I. Hickie, 7. A. Milton

Number	Item	Description	Page No.
1.	Interviewer	Author 1 conducted all interviews.	Title page, and page 5
2.	Researcher credentials	Author 1: Dr.med., FMH Radioonkologie, MSc Coach Psych. Author 2: Prof of Psychological Medicine. Author 3: Grad Cert QHR (Qualitative Health Research) Author 4: BA BMed MHM MPH FRACGP. Author 5: Dr Author 6: AM MD FRANZCP FASSA FAHM Author 7: BSc, MAppSc, PhD	Title page.
3.	Occupation	Author 1 is a PhD candidate in psychological medicine, with experience in mixed methods research, as a clinician-researcher, coaching psychology, and as medical communication skills facilitator. Author 3 is a research assistant and experienced qualitative researcher. Author 4 is a general practitioner and head of clinical governance. Author 5 is a general practitioner. Authors 2 and 6 are psychiatrists both with extensive expertise in mixed methods research. Author 7 is a post-doctoral researcher in psychology, with extensive experience in qualitative research design, conduct and analysis.	Title page, and page 5.
4.	Gender	Authors 1, 3, 4 and 7 are female. Authors 2, 5 and 6 are male.	Page 5
5.	Experience and training	Authors are experienced and active researchers with expertise in qualitative, quantitative, and mixed methods approaches. Authors have researched and published in the broad topic area previously.	Page 5
6.	Relationship established	Participants only had direct contact with author 1. GPs interested in participating in the research contacted author 1 via phone, text, or email. Prior to interviews, the participants had the opportunity to review the participant information and consent forms, and discuss any questions, before giving consent. After the interview there was one brief follow-up and thank you email sent out. Author 1's interest in, and perceived importance of the topic of GP wellbeing may have assisted in establishing a relationship built on trust and mutual understanding. Similarly, GPs who are particularly interested in the subject of wellbeing may have chosen to participate.	Page 5
7.	Participants' knowledge of the interviewer	Author 1 who conducted all interviews had no previous professional or personal relationship with any of the participants. Co-authors only reviewed de-identified transcripts thus had no personal relationship with, or knowledge of participants. Participants were informed about who the involved researchers are in the Participant Information Statement (PIS).	Page 5
8.	Interviewer characteristics	The interviewer is a PhD candidate, with a background in medicine and psychology. Author 1 chose to pursue the topic of GP wellbeing, because of perceived importance of the subject matter, and a personal belief that this is crucial in providing sustainable primary care to the population. As such she is aware of potential bias particularly in favour of GPs and their experience.	Page 5
9.	Methodological orientation and theory	Thematic framework analysis with an inductive, data-driven approach was taken.	Page 4
10.	Sampling	Maximum variation sampling was applied, as we aimed for a diverse mix of participants across Australia.	Page 5

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11.	Method of approach	We were supported by several organisations, who sent e-newsletters and communications to their members. Flyers, social media, and snowballing were also utilised.	Page 5
12.	Sample size	N=20	Page 7
13.	Non-participation	Three GPs that were initially interested, subsequently did not partake in the interview. One stated lack of time, the others simply didn't respond to follow-up emails. All interviews that were commenced, were also completed.	NA
14.	Setting of data collection	Interviews were conducted online one-on-one via a University of Sydney password-protected Zoom meeting room.	Page 5
15.	Presence of non-participants	NA	NA
16.	Description of sample	A diverse group of GPs working clinically in Australia.	Page 5
17.	Interview guide	Interviews were semi-structured, and included questions about GPs' own wellbeing.	Page 6
18.	Repeat interviews	NA	NA
19.	Audio/visual recording	Interviews were recorded via Zoom, either on audio, or audio and video setting, as per the preference of the GP. Only audio-recordings were saved.	Page 6
20.	Field notes	Notes were made for analysis and were updated during researcher discussions to inform the writing of the manuscript.	N/A
21.	Duration	Interviews ranged from 20 to 43 minutes (mean 32 minutes duration).	Page 7
22.	Data saturation	Interviews were continued until data saturation was achieved. Data saturation was discussed and agreed upon in a team of 2 researchers (author 1 and 3), in consultation with author 7.	Page 6
23.	Transcripts returned	Transcripts were not returned to participants.	N/A
24.	Number of data coders	Data was coded by authors 1 and 3.	Page 6
25.	Description of the coding tree	Codes, themes, and subthemes were iteratively refined and developed during regular research team meetings between authors 1 and 3, and were triangulated with authors 2 and 7. Descriptions of the themes, subthemes and codes were developed and captured in a codebook (or coding framework).	Page 6
26.	Derivation of themes	Themes and subthemes were derived from the data.	Page 6, 7
27.	Software	Microsoft Word and NVivo 12.1.0 were used to manage the data.	Page 6
28.	Participant checking	Participant checking was not applied.	NA
29.	Quotations presented	Participant quotations were used to exemplify (or illustrate) the finding. Quotations are identified with GP participant numbers, only to maintain anonymity.	Pages 7-14, Table 2.
30.	Data and findings consistent	Data and findings are consistent throughout.	Page 7-19
31.	Clarity of major themes	Themes are clearly described and presented in the manuscript and figure 1.	Pages 7,8, and figure 1.
32.	Clarity of minor themes	Subthemes are clarified in detail, and their interconnectedness described.	Pages 7-14, and figure 1.

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