Supporting dentists' health and wellbeing – a qualitative study of coping strategies in 'normal times'

Jennifer E. Gallagher,*[1] Fiorella B. Colonio-Salazar[2] and Sandra White[3]

Key points

Conducted before the outbreak of COVID-19, this research highlights the urgent need for multi-level action to improve the workplace environment, the dental system and regulation of dentistry in support of professional fulfilment and career retention for dentists to enhance health and wellbeing.

Dentists' coping strategies, both emotional and practical, are required where significant meso- and macro-level challenges exist; this may involve drastic action, particularly among early-career dentists and those working in the NHS.

Building personal resilience alone is insufficient to raise morale and enhance the wellbeing of early-career dentists; however, there is a place to support active healthy coping mechanisms in those entering the profession.

Abstract

Background Research has highlighted multiple determinants of dentists' health and wellbeing, and has raised concerns over workforce morale and retention. Limited research has been undertaken on possible solutions. Thus, the aim was to explore the coping strategies used or advocated by dentists to protect and support their health and wellbeing.

Methods This qualitative study involved a purposive sample of dentists working in England taking account of age, gender, career stage, work sector, geographical area, position and route of entry to registration. Dentists were approached via gatekeepers across England to participate in semi-structured interviews. A topic guide, informed by past research, was used to guide the discourse. Informants' views were audio-recorded and field notes were made. Data were transcribed and analysed using an interpretative phenomenological approach to generate theory with the support of the framework methodology.

Results Twenty dentists were interviewed from a range of backgrounds. Self-reported coping strategies included a range of strategies for 'taking control', including 'embracing self-care' and 'seeking professional support', while drawing on 'supportive personal and social networks'. Managing professional careers included diversifying through greater 'mixing' of NHS with private work, privatising, specialising, or combining dentistry with another role. Strengthening job security and facilitating diversity of experience remain important for supporting the health and wellbeing of dentists. Selling practices or, in the extreme, completely leaving the profession were considered practical options. At organisational level, building sustainable teams and transforming culture were advocated as important; while at systems level, reforming the NHS and bridging the gap between the profession and regulatory body were considered vital. Additionally, the need for strong professional leadership and wider societal debate was advocated as part of a whole systems approach to enable job satisfaction in delivering high-quality, patient-centred, evidence-based care in future.

Conclusion While dentists demonstrated a range of coping mechanisms, multi-level action was advocated to enhance the health, wellbeing and retention of dentists. Systems reform at macro- and meso-levels is urgently advocated to enable fulfilling careers within dentistry, particularly for those at the front line of primary dental care in the public sector. Personal resilience alone will not suffice and recommendations for action are explored to avert a public health catastrophe. This is a time for reflection, debate and action.

[1]Dean for International Affairs, Newland-Pedley Professor of Oral Health Strategy/Honorary Consultant in Dental Public Health, King's College London, Faculty of Dentistry, Oral & Craniofacial Sciences, Centre for Host Microbiome Interactions, Denmark Hill Campus, Bessemer Road, London, SE5 9RS, UK; [2]Former Post-Doctoral Research Associate, King's College London, UK; [3]Former National Lead for Dental Public Health, Health Intelligence, Health Improvement Directorate, Public Health England, Skipton House, Area B, 2nd floor, 80 London Road, London, SE1 6LH, UK.
*Correspondence to: Jennifer Gallagher
Email address: jenny.gallagher@kcl.ac.uk

Refereed Paper.
Accepted 7 October 2020
https://doi.org/10.1038/s41415-021-3205-7

Background

This is the third in a series of papers exploring the health and wellbeing of dentists in the United Kingdom (UK)[1] and England.[2] While a career as a dentist can be incredibly rewarding, it can also be exceptionally demanding and stressful,[3,4,5,6,7,8,9] with dentists reported to be at increased risk of burnout,[10,11,12,13,14] depression and anxiety,[13,15,16] as well as poor morale.[13,17] Multiple factors ranging from personal to professional, involving job and workplace characteristics through to the National Health Service (NHS) dental system and professional regulation have been identified as affecting dentists' health and wellbeing.[1,4,14,18,19,20,21,22,23] These include concerns over lack of 'control'[14,24] and needing to feel valued, with professional expectations met.

Coping with stress is understood to mean the way in which individuals take steps to minimise the psychological, social or physical harm of a situation, both internal and external. It can take different forms, as shown in Box 1.

The literature on coping,[4,21,22,25,26,27,28] drawn largely from quantitative research, suggests that dentists use a wide range of self-reported coping strategies on a daily basis, both problem- and

Box 1 Types of coping

- Active coping: the active steps that are taken to reduce the stressors' negative impact on mental health. Active coping is either by making needed changes in the environment when possible or adapting one's inner or behavioural responses to the situation[54]
- Emotion-focused coping: a type of stress management that attempts to reduce negative emotional responses that occur due to exposure to stressors. Negative emotions such as fear, anxiety, aggression, depression and humiliation are reduced or removed by the individual by various methods of coping. Emotion-focused coping can be positive or negative. Positive examples include talking or writing about their emotions through therapy or journaling, mindful meditation, or distraction with other activities. Negative examples of emotion-focused coping (that typically are not beneficial or helpful in the long term) are suppression of emotions, avoidance, and alcohol or drug use in order to dull or avoid emotions[45]
- Problem-focused coping: when confronted with acute or chronic stressors, this is the steps (see active coping) that are possible to take to alter the situation to alleviate the impact. In some cases, adjusting one's schedule, eliminating unnecessary tasks, seeking alternative employment and detaching from troublesome relationships are necessary or possible. This differs from emotion-based coping in that it focuses on making actual permanent changes in life rather than finding constructive strategies (distractions, journaling etc) as stress relievers[46]
- Meaning-focused coping: where the individual draws on their beliefs, values and goals (for example, spirituality, religion, purpose in life or guiding principles) to motivate and sustain their wellbeing during a difficult time.[47]

emotion-focused including: 'interactions with people',[26] 'sports/exercises',[26,27,28] 'forgetting about work',[26] 'identifying positive and negative emotions',[22] 'adapting behaviours and mental (cognitive) processes',[21] 'zoning out from the patient', 'thinking aloud', 'sharing emotions',[24] 'resting' and 'entertainment',[27] 'trying to control one's own working situation/condition',[24] 'pursuing outside interests'[28] and 'avoiding the stressful situation'.[28] Research also suggests that dentists may lack awareness of managing stress[29,30] and healthy coping strategies,[31,32,33] and thus would benefit from further training and support.[21] The importance of meaning-making focused strategies is emerging in the health literature;[34] however, it has had little or no traction in dentistry.

Given that nearly half of dentists in the UK report being unable to cope with the level of stress in their job and are considering leaving the profession,[14,35] we have a major public health challenge. The importance of supporting the health and wellbeing of dentists was underpinned by a recent well-attended workshop in February 2020 led by the then President of the British Dental Association, Roz McMullan, in conjunction with Public Health England.[36]

The ability to adapt well in the face of adversity or significant stress is important for preventing errors in healthcare generall[37,38] and for dentists.[23] Given that recent reports from the UK,[39] and the US,[40] highlight the extent of professional burnout in the medical workforce, with implications for patient care and health outcomes, this is not just an issue for individuals within a profession, as many of the influences lie beyond the control of individuals. A seminal report from Massachusetts Medical Society *et al.*[41] terms this a public health crisis in healthcare, calling for multi-level action to address burnout and its consequences. The report *Caring for doctors, caring for patients* from the UK General Medical Council (GMC) in 2020 has recognised the pressures in medicine and is seeking to transform organisations with an emphasis on building and protecting 'autonomy/control', 'belonging' and 'competence'.[39]

The aim of this research, conducted alongside exploration of contemporary challenges, was to report on the coping strategies used or advocated by dentists working in England to protect and support their health and wellbeing.

Methods and methodology

The detailed methodology for this qualitative study is available in our previous paper.[2] In summary, following ethical approval from King's College Research Ethics Committee (KCL RESCM-18/19-4379), a purposive sample of dentists working in England was sought through a range of national gatekeepers, with additional recruitment supported by 'snowball' sampling.[42] Representation was sought in relation to gender, route of entry to registration, position in the practice, sector of work, geographical area and length of time since qualification, with recruitment continuing until all key categories were covered.

Having explored the challenges to health and wellbeing at macro (system), meso (organisational) and micro (individual) levels, coping strategies employed by dentists to protect and support their health and wellbeing were investigated. Semi-structured interviews were conducted by one female post-doctoral researcher (FCS) trained in qualitative research. Interviews were held in the participants' dental practice or by phone and lasted between 30–75 minutes in total, exploring both influences and solutions. Data were audio-recorded and transcribed verbatim using a confidential transcription service.

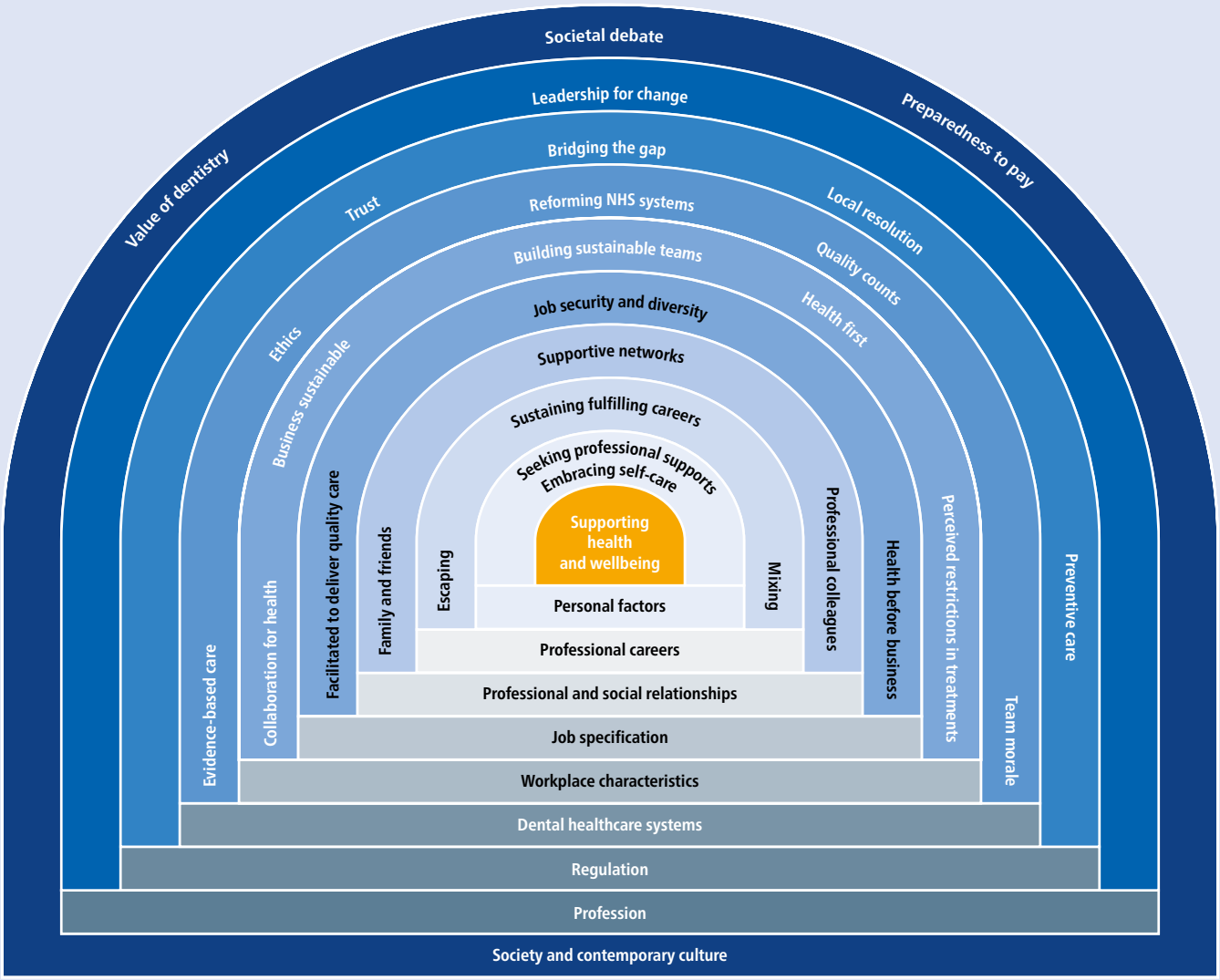
An interpretative phenomenological approach[43] was employed to describe the strategies employed or advocated by dentists and to generate theory through examining their 'lived experiences'. Framework methodology drawing on the literature was used to support initial thematic analysis, which was used to facilitate data management in a systematic manner.[43] NVivo and Microsoft Excel were employed as tools for organising the data, facilitating analysis, and enabling comparisons and associations within (and between) cases. Dual analysis was undertaken within the team, with differences resolved by discussion.[43]

Results

Characteristics of participants

Twenty participants were interviewed in total during 2018/19, all of whom consented to participate. A majority had qualified in the UK (n = 17) and were early-career dentists (n = 12), women (n = 12) and working in primary dental care settings (n = 12). Just under half held mixed roles (n = 8) and were based in London (n = 9). While five other dentists from a range of backgrounds provided consent to be interviewed, three cancelled without providing any reason. Two withdrew because they were unwell and chose not to reschedule. Recruitment continued until all identified categories in the purposive sample had been covered. All participants provided written consent to publication of their data.

Fig. 1 Contemporary health and wellbeing solutions for dentists in the UK, adapted from Fiorella B. Colonio Salazar *et al.*, 'Key determinants of health and wellbeing of dentists within the UK: a rapid review of over two decades of research', *British Dental Journal*, 2019, Springer Nature[1] and inspired by the Dahlgren & Whitehead (1991) rainbow model of health and wellbeing



Managing health and wellbeing issues

Different personal or micro-strategies for protecting and supporting health and wellbeing, both reparative and preventive in nature, were shared by participants (Fig. 1). Other meso and macro solutions were advocated, often outside of their personal control. Each will be reported in turn, starting with micro-level and moving through to macro-level factors. Quotations will be illustrated by gender, role/occupation, workplace and interview number.

Embracing self-care

Positive health behaviours

Participants recognised the importance of protecting their health and wellbeing through positive health behaviours, such as exercising, healthy eating, sleeping, minimising alcohol intake and ensuring they took annual leave. This involved time and discipline, building it into their routine where possible. Being aware of their personal 'alarm signals' was also important for those learning from past experiences:

- *'I walk to work which I find when I'm in [location] a lot easier. It helps me get ready for the day. I've started, I've changed the way in which I exercise. It's through different ways, I'd say rather than just going to the gym, I try to do more classes with my friends'* (F-StR[Int1])
- *'Make sure you get enough sleep, make sure you eat well, meditate, get out in the sun, exercise, but do exercise you really enjoy. You know, treat yourself like you're your best friend […] and I just think just try and always keep on going, because you never know when things are going to turn round, and they always do get better in the end'* (F-DO-CDS[Int16]).

Protecting their health extended to their clinical settings where adjustments included obtaining the necessary equipment to work comfortably and building in an exercise regimen to strengthen their bodies to cope with the physical challenges of clinical work. Some had obtained a more appropriate chair or equipment through the practice, while others had purchased it themselves as an important investment in health.

Seeking professional support

Participants recognised the importance of reaching out and seeking professional support, if required, in a timely manner and, where

necessary, taking appropriate medication. Practically, this included seeking support from psychiatry, physiotherapy, chiropractors or counsellors, as required. Interestingly, for those experiencing stress and/or depression, professional support was sometimes sought from private providers due to the challenge of NHS waiting lists and the benefit of anonymity:

- *'[...] I went to get some counselling...I think that helped a little bit...so it was just really for me, this last sort of year and a half, I guess it's just been about stress management to be honest'* (F-DO-CDS[Int16]).

Supportive networks

Most dentists commented on the importance of their social networks, including relationships with family (parents and supportive loving partners), relatives and friends. Relationships and connecting with others were perceived as useful in dissipating dentists' emotional concerns and stress. Sharing 'good', but also 'bad', events with friends was important:

- *'It's nice to have everyone around and… everyone's currently worried about the future and you just have a chat together so yes it's nice…we've all kind of come to the point now we all know what we're doing next year which is nice, but yes for the past few months we've all been […] trying to make decisions and trying to help each other out'* (M-DFT-GDS[Int9])
- *'[...] but I have two very close friends who both had serious depression. And they instantly knew, no explanation was needed, you could say, "I feel like this" and they were like, "Yes, we get it". So, they were very helpful'* (M-GDP-Mixed[Int10]).

Social gatherings were perceived to provide an effective antidote to a stressful day at work; avoidance-orientated coping mechanisms ensured they did not dwell on stressful situations at work as outlined below:

- *'[...] I tend to just go out for food with my friends and I would say I mainly socialise with non-dentists, so don't talk about work, don't think about work as much as possible'* (F-DCT-HDS[Int18]).

Among early-career dentists working in remote locations, maintaining their social network support was considered to be of tremendous importance for their health and wellbeing. They reported the efforts they made to meet family and relatives, and socialise with close friends every weekend, in order to feel re-energised and invigorated:

- *'You want your weekends to sit and relax, but on a Friday night I was straight out of there, on the train to go to my next meeting with friends, to sit and relax with them'* (F-DFT-GDS[Int12]).

Mid- and later-career dentists underlined the importance of having peers who understood their pressures and with whom they could talk frankly, as well as the benefits of being able to do so. These discussions formed an important coping mechanism. One dentist who had suffered depression, requiring medication and professional help, highlighted the importance of reaching out to others when things are getting bad, as suggested by the following quotation:

- *'First thing is to be completely honest with yourself and with other people that you can trust. I was in a position where I was sort of safe with myself and safe with patients but, you know, if you're worried that your stress level is going to hurt yourself or your patients then you need to talk to somebody about that. It's probably come through in the interview, I'm a pretty open and honest person, really, so I think that's very important'* (M-GDP-Mixed[Int10]).

Sustaining fulfilling professional careers

Among early-career dentists, discussions over fulfilling professional careers were particularly associated with problem-focused solutions involving removing themselves from NHS frontline care, in that specific context. The following quotation from a dentist working in the community dental service at the time of interview highlighted their sadness that this branch of dentistry was not sustainable and the importance of moving on as soon as possible:

- *'[...] Because they're just making it more difficult every day…and I don't know if even it will, erm, exist in a few years' time […] I think there's always talk about not having CDS and some areas don't have community dental service, which is a shame really. Yeah…there's just not enough NHS resources to provide that service…Yeah, I'm sad. It's unfortunate […] just seeing that there's no future and you don't want to be stuck in that situation. My plan is to try and get out of it as soon as I can'* (F-DO-CDS[Int19]).

Staying the course, particularly in an NHS primary care setting, was a minority view unless there was significant reform.

Moving on

Moving practice or context was considered as an option to change workload, facilities, culture and system; some had achieved a more positive move, while for others it was still aspirational. Among dental foundation trainees, working for NHS general dental services in the long term was not an option and many had explored alternative employment opportunities:

- *'I'll definitely apply to work in a hospital for a second year but yes, so it is a small number of options, it is a small number of options it's either going to be, after the one year if I can't get the MOD job it's either going to be work in a hospital another year or locum for the MOD on another different route on it. So that is, I wouldn't sign a UDA contract'* (F-DO-CDS[Int19]).

Their rationale for leaving NHS general practice included being able to practise in a way that was perceived as ethical, putting patients at the centre of care, taking time to provide explanations and ensure understanding, doing things once and well, conforming with standards laid down in educations and professional guidance.

Specialising

Working towards gaining specialist status through obtaining a specialist training position was particularly attractive to early-career dentists, albeit not without its stresses:

- *'If I don't get that [speciality training] I really have enjoyed [discipline], so I could try and aim to do something academic. Or indeed just go into community services full-time, or if not full-time then part-time, and try and find something to do the rest of the week that's relevant but isn't working with patients…like project management'* (F-DFT-GDS[Int12]).

Privatisation

Moving at least partially, if not completely, to the private sector was attractive for those who wished to remain in primary care settings and it appeared to be driven more by the desire to escape from the NHS rather than merely a desire for money:

- *'I will do "that amount" of UDAs or NHS for the kids, but I would like to do more private. I would like to switch it from 80% NHS to maybe 25/30% NHS, rather than leave completely'* (F-GDP-Mixed[Int7]).

The private sector was perceived as providing additional opportunities where dentists are appreciated for enhancing health

or appearance, rather than merely providing reparative care, as suggested below:

- *'Also, facial aesthetics – when you do Botox, people can see, like "Wow, I look…" They feel it, yeah, so they appreciate it'* (F-GDP-Mixed[Int7]).

There were concerns, however, over preparedness for private care among foundation dentists who had no desire to return to NHS dental practice:

- *'[...] I also knew that I didn't want to stay in NHS practice…I haven't had a huge amount of experience in private dentistry […] and so I'm not sure why a private practice would want to employ someone like me…with such little experience […] and from what I've heard, patients can be quite demanding as well, and so you probably would need quite a lot of experience. Getting experience in private practice is really difficult. I had almost no experience last year in practice, with providing anything that I think would be appropriate in private practice'* (F-DCT-HDS[Int18]).

However, the private sector was not seen as the answer for many dentists who were really committed to delivering NHS dentistry and were keen that the contracting system should be reformed to enable them to do so well.

Diversification

In addition to the above options, teaching in a university at least one day per week was warmly embraced by a number of dentists who also worked in practice as generalists or specialists. Other options included taking further courses to build skills and confidence. So-called 'portfolio careers' were attractive, as options for starting their own practices were largely redundant. Retraining in project management or law to complement dentistry were considered attractive options so that dentists could continue to use their degree and not leave the profession entirely. There were recognised limitations to diversification within practice settings. While one younger dentist had the opportunity to take over a family practice in the longer term, this was not possible or desirable for others. Some sought greater balance outside of dentistry, but the option for practice ownership was not available if working for a corporate body, as demonstrated by the following quote from an associate who saw his present setting as a dead end:

- *'I would say yes, but it's a clinical career that you're going to need to find something to broaden it out as you get older and there are opportunities. It may not be dentistry, it could be law, it could be advice, it could be business, it could be something'* (F-DFT-GDS[Int12]).

Some participants openly discussed mixing dentistry with another role outside of the profession in order to protect their health and wellbeing, and enhance their work/life balance and break the monotony of working in practice full-time:

- *'I've ended up for the past few years like five years straight all through university, I've been teaching as well, teaching maths and science and stuff like that so that's another thing that I do. I could survive on that income as well, I don't need to sign a UDA contract, so I think I'm on [sic] a privileged position not to have to do that'* (M-DFT-GDS[Int9]).

There was a view among some younger dentists that they knew that they, and their peers, could earn money in other enjoyable occupations such as sport, music or teaching:

- *'So yes, a lot of us are pretty happy saying if I can't get a job I want to do, I will find something else [outside of dentistry]'* (M-DFT-GDS[Int9]).

Staying the course

Mid- and later-career dentists who had been able to mix clinical work with specialising, teaching, research or management tended to report having been more fulfilled and less likely to feel driven towards retirement. Also, reframing difficulties, a form of meaning-making, and looking at things positively in the light of experience were mentioned:

- *'Because I like what I do […] I regard every day as another opportunity rather than anything else'* (M-SP-Acad&HDS[Int4]).

Maintaining control of professional and ethical standards and learning to keep perspective included employing limits on work to balance with their ethical standards and priorities and honesty with others:

- *'I think the money that I earn is probably enough for me and is probably enough to still practise ethically and to still be respectful for the patient'* (F-SP&T-Private&Acad[Int5])
- *'Try and leave work at work, walk out the door and leave work behind you as much as possible'* (M-SP-Acad&HDS[Int4]).

The importance of leaving work behind and finding things that create a sense of distance and self-worth, including helping others and recognising the importance of one's own growth in the process, was noted:

- *'Helping people helps you, and equally nurturing your growth can help other people'* (F-DFT-GDS[Int12]).

Leaving the profession or country

For many, particularly those working within the NHS, options included resigning, selling the practice or leaving the profession, as outlined below. One dentist had tried resigning in despair and even that had not worked:

- *'[...] I saw my GP about it at the time […] she basically said to me, "Look you're going through a lot of stress at work" […] "I basically, I can't see anything wrong with your ears inside" [...] and then around the time I started thinking of actually leaving my job […] funnily enough, I actually wrote my resignation e-mail and I pressed send, and my computer shut itself down'* (F-DO-CDS[Int16]).

Selling their practice was an option for principals wishing to escape the pressures of running the system and moving to an associate role or ceasing dentistry completely:

- *'When I sold my practice, I had decided then to give up dentistry completely because I was fed up with it'* (F-GDPAssociate&FormerPrincipal-GDS[Int15]).

For international dentists who were struggling to cope with the NHS, a realistic option was always to leave the country if the alternative solutions did not prove possible:

- *'I told him that if you can give me four days here I […] I will still do, I will give all of that up [NHS practice] and even if I get 45/50,000 before tax I'll come and do this four days a week. I don't want to do that [NHS commitment] anymore…because it's killing me…If I don't get a good opportunity here, we're going to leave and move back to [country]'* (M-GDP&T-GDS&Acad[Int3]).

Problem-focused coping involved exiting the profession completely, possibly following diversification into management, family businesses, or health and wellbeing facilities. Participants talked about colleagues who had left dentistry and some were considering this route personally.

Job security and interest

Gaining a job with security that was either focused on an area of specific interest, or included variety, was considered very important for early-career dentists' health and wellbeing, as highlighted by the above findings involving moving onto different dental settings and/or mixing careers so that they felt in control of their professional lives, which was considered so important for health and wellbeing:

- *'[...] I'm looking for [permanent] vacancies to apply […] maybe with different services'* (F-DO-CDS[Int19]).

Where dentists had, usually over time, found a role that suited them, they felt that this was good for their health and wellbeing:

- *'I've chosen this job specifically because I know it suits me'* (F-GDP-Mixed[Int7]).

The importance of experience was recognised as building security within a job or role and minimising stress:

- *'Plus, as you get more and more experienced, you find a sweet spot, you know how to keep yourself out of trouble'* (M-GDP&T-GDS&Acad[Int3]).

Later-career dentists who reported good health and wellbeing, and enjoyed their work, tended to be members of the profession who had learnt to manage on the job and were juggling busy roles with multiple responsibilities. Generally, they had built good clinical skills and felt confident to diversify their roles within their organisation and/or dentistry:

- *'There were development opportunities for me'* (F-SP-HDS[Int2]).

Workplace characteristics

Opportunities for career progression within primary care settings, outlined above, together with service ethos appeared to influence dentists' decisions on future work plans. There were dramatic differences reported between the primary care workplace and hospital or university settings, with the former setting considered more deleterious to health and wellbeing. Where dental practices enabled associates to control their schedules, work at an optimal pace and deliver quality care for patients, albeit with a reduced income, this was welcomed.

Changes in practice ethos and culture were suggested as important to support health and wellbeing. Rather than being responsible to practice managers, having a clinical lead would be helpful. Furthermore, effective teamwork was recognised as an important contributor to health and wellbeing, both in practice and hospital settings:

- *'A happy team means happy individuals; happy individuals means happy teams, means happy patients and means happy institution'* (F-SP-HDS[Int2]).

This teamwork included recognising and enjoying one another's successes. Having a good working relationship with a dental nurse in the practice and engaging with the wider team was most important, and for some, it was really positive:

- *'We're fantastically close [dentists, nurses, receptionist] […] we go out once a month and we go and have dinner. And either we go to a local restaurant, or when money's tight, we'll go round to somebody's house and they'll cook'* (M-GDP-Mixed[Int10]).

Junior dentists 'escaping' from frontline NHS dental services had led to recruitment issues for practice owners, causing frustration and stress among recruiters due to the impact on business sustainability. Outside London, this appeared to be a particular source of stress.

Reforming NHS systems

The need for urgent reform to the NHS system was central to the discussion for the benefit of patients, associates and practices. While hospitals were not considered perfect settings, there was the recognition that the system enabled better patient-centred care:

- *'Whereas in a hospital it's all about them, the patient […] and that's the way it should be'* (F-SpT-HDS[Int11]).

Some later-career participants had learnt to take control of the pressures within the system and influence organisational reform:

- *'I mean it's up to me to control it to some extent […] It's like everything else, things don't stay perfect for very long. They don't even stay good for very long, but you have to go and sort it out again'* (M-SP-Acad&HDS[Int4]).

For most frontline dentists in primary dental care, there was a view that reform that rewarded the delivery of contemporary evidence-based dentistry and fostered prevention in support of patient outcomes would be welcomed:

- *'I think it's going to have to change because I won't do it and I know a lot of people that won't do it either and at the end of the day it's the people who designed the NHS system who need to sit down and think about what are we actually putting people through. I know they've also got the other pressure of what can we actually afford but yes, it's a tricky one to solve that one'* (M-DFT-GDS[Int9]).

Elements of reform proposed included: ensuring the necessary time and facilities to deliver 'patient-centred care' and 'evidence-based prevention'; 'clarity over what is available on the NHS'; capitation; salary for dentists; and greater use of skill mix within dentistry:

- *'[...] I think a real clarity about what's the money available, because we all have to be realistic, there isn't enough money to manage everybody […] for everything in their life […] Real clarity about what people have to pay for or don't have to pay for. And specialist services […] real clarity about what those services are and who they exist for so that patients don't get bounced around the system'* (F-SP-CDS[Int14]).

Enabling parental leave for younger dentists, the majority of whom are women, without undermining NHS dental practices was important for dentistry:

- *'So we need to reclaim this middle ground where the patient comes first rather than at one end where they [sic] NHS the UDA comes first and then at the other end where money comes first so that's yes, so the quality issue is really big for me and it's not just the technical quality on its own in isolation you know it's also about the safety for the patient and the patient experience'* (M-GDP&T-Mixed&Acad[Int20]).

An opportunity to work for the NHS general dental practice with a different contractual arrangement to England was considered attractive, as expressed by the following participant:

- *'[...] it's an NHS practice, but in Scotland they do fee per item…I'm sure it has its own stress, but it […] looks like a better system than the UDA system'* (F-DCT-HDS[Int18]).

There was a view, particularly among later-career dentists, of the importance of addressing the disconnect that exists between agencies:

- *'Big disconnect between the regulators, the people who design the curricula for dental school or dental schools and what happens at the far end which is the day-to-day life of a general dental practitioner who works for the National Health Service'* (M-PrincipalGDP-Mixed[Int13]).

Bridging the gap

There was a strong view that the current gap between the dental professional and its regulatory body, and the recent steps to strengthen professional relationships based on trust, were welcomed:

- *'So there's things being done at sort of grassroots level, up within the GDC they seem to put a lot of new processes in place in terms of triage to make sure that complaints aren't escalated up to a higher level unnecessarily so they're being picked up those that don't need to go to fitness to practise or can be dealt with further down the line are being picked up by case workers. I think my understanding is that the timeframe on that is reducing, they've invested quite a lot in the process and the staff, depending who you speak to you know some people will say it's too little too late but certainly my discussions with people at the GDC would seem to indicate that they do understand there's a problem and they are trying hard to fix it'* (M-GDP&T-Mixed&Acad[Int20]).

There was a call for greater local resolution of patient complaints, with only those which needed to be referred going to the General Dental Council (GDC). Fairness, transparency and swift action were commonly reported as the main changes needed to bridge the gap between dentists and the regulatory body, and to recover dentists' trust.

Leadership for change

Finally, later-career dentists in senior roles suggested that the combined efforts of organisations and dental professional leaders can, and should, play an important role in reforming the profession, and healthcare system, including setting standards for all dental professionals. One respondent proposed that leadership should come from early-career dentists, as part of their professional responsibility, and not just those in senior positions:

- *'I guess that's what I'm trying to very hard to encourage young dentists that there are fabulous opportunities within general dental practice and that they need to take control. So, they need to get involved with local dental committees (and national organisations) and fire up their enthusiasm or their passion because I think more and more many young dentists look at it not as a vocation but simply as a job'* (M-GDP&T-Mixed&Acad[Int20]).

Societal debate

From those dentists who wanted to change the system, there was a desire for wider debate over what we are prepared to pay for as a society and the value of dentistry – recognising that if there isn't a change, the dental workforce may not be there to provide care for them:

- *'[...] patients really undervalue dentistry and I think you know they'll pick up a bill for dentistry and they'll be like wow that's a lot of money and then the dental profession look at it and think that's barely anything considering what we're doing. So, there's quite a large disparity between what a lot of people I think are willing to pay for dentistry and what a lot of dentists consider as reasonable, so I think there's a pretty big gap to bridge, I don't know the best way of doing that either, that's pretty tricky'* (M-DFT-GDS[Int9]).

Emerging theory on supportive action

At an individual level, a range of coping strategies were apparent among the dentists interviewed. These ranged from self-care, drawing on social networks to disclose or share their struggles, obtaining professional support, where necessary, to using other activities including social networks as a form of avoidance or distraction. While promoted as helpful for approach-orientated health and wellbeing, emotion-focused coping and practical action within their setup did not, however, appear sufficient to overcome the challenges that many dentists interviewed were experiencing, or saw others experiencing. Inevitably, this led some towards problem-focused coping including taking control of their professional lives through escaping from frontline NHS primary dental care, or considering doing so, through specialising, privatising, diversifying, mixing careers, leaving the country, selling the practice or removing themselves from dentistry, prematurely.

Whilst some primary care dentists had learnt to set their boundaries or find roles that worked for them within the system – later-career participants in specialist, academic and leadership roles appeared much more secure in themselves and their careers, with a range of coping strategies. They had learnt to deal with pressure through managing system pressures, reframing difficulties and demonstrating control in achieving change; they were visibly energised by being able to do so, making a difference in their organisations and beyond.

The importance of reforming NHS systems as a matter of urgency was recognised across participants from all stages of their career and systems, as was the importance of bridging the gap and gaining trust between the profession and the regulatory body. Additionally, leadership for change and the importance of engaging with society were recognised as important by those with a strategic perspective.

Discussion

The findings of this study (pre-COVID-19) provide further insight into the views of dentists within England who are finding themselves caught in a profession, a system, organisations and job roles which many perceive as impacting negatively on their health and wellbeing, or that of their colleagues. The qualitative findings amplify published research[1,12,14,44] and require an urgent response. In doing so, we need to stop and reflect seriously before we act, recognising that we are not alone in healthcare,[39] or as a nation.[41] One of the principal issues appears to be a lack of 'control' and the limited range of coping strategies open to dentists, particularly those who are working on the NHS frontline in primary dental care.

Coping strategies

In interpreting the findings of this study, it is helpful to draw on the literature on coping[32,33,34] and the types of actions used by individuals to cope with stressors in an attempt to manage disillusionment, avoid burnout, or both.

Emotion-focused coping,[45] among participants, included seeking the support of friends and colleagues in talking through their challenges or in providing a distraction. While distraction may be helpful in the short term, the literature suggests that it may not necessarily be healthy if it is merely suppressing emotions. Professional support provided an important avenue of coping for those in greater distress. However, ideally, steps to manage stressors at an earlier stage should be encouraged. Preparation during dental school and foundation training should be considered to equip new entrants to the profession to respond to stressors actively and in a healthy manner, given that 'it is tough being a dentist'.[24]

Participants reported examples of straightforward problem-focused coping,[46] at micro or personal level, taking action to purchase equipment or alter health behaviours to manage their stressors within their given situation. More actively, this included moving organisation, sector or system and seeking career development. Frontline practitioners in distress had little sense of having any control

over macro-level issues and they often reported limited control at meso or organisational level, hence their practical action to remove themselves from given situations. At the extreme, it involved leaving the profession, which could be argued as avoidance. Others, in contrast, reported engaging in organisational or professional advocacy to achieve change.

Examples of meaning-making focused coping,[47] were less evident but possibly present where individuals managed to find a 'good enough' practice and were able to balance their approach and philosophy with sufficient income to enable them to practise ethically, while recognising their service to patients as being worthwhile. Among later-career dentists who had been able to develop their role, there was evidence of working through challenges, acknowledging their role in effecting change, and therefore contributing to patients and organisations as part of contributing to something bigger.

Making a difference

It is clear that clinicians, educated and trained to deliver high-quality care, want to make a difference to patients and systems,[48] and are clearly energised to do so.[2] Overall, the NHS dental system appears to be challenged by the willingness of dentists to abandon the system and possibly the profession, combined with the availability of 'better' working conditions in other workplaces as part of active coping. Changing systems for the better requires emotional energy, which may be lacking in stressful times. With an increasing number of dentists taking avoidance as a coping strategy, which is demonstrated by their willingness to 'escape' from the system or 'mix' careers, the sustainability of the dental workforce is compromised. Therefore, instead of making a positive contribution, there is a significant risk of population health needs remaining unmet. While it could be argued that some think the grass may always be greener in another context, perhaps because of unrealistic professional expectations, there is enough evidence to support that academics and professionals in primary care are happier where they have found workable solutions, with more or sufficient autonomy and greater fulfilment.

Multi-level action

While individuals reported a range of coping strategies, the findings overall suggest the need for multi-level action. This provides policymakers, employers, workforce planners and educators with the challenge to better understand a new generation of dentists and to adjust the English dental health system accordingly, in order to offer working conditions that provide flexibility and enhance work/life balance with clearer progression pathways and a healthier practice environment. It is also particularly important that those in positions of leadership work together to provide training opportunities on resilience and coping strategies. Building resilience is important but should be accompanied by addressing the system weaknesses, as resilience has limits. Joint efforts would be beneficial to attract and retain dentists within the NHS, with the view to ensure dental workforce sustainability and capability to meet the evolving and diverse needs of an expanding and ageing population.[49]

As with medicine, reform of dentistry at systems and organisational levels is urgently required if we are to retain our frontline workforce.[35,50] Dame Clare Marx, Council Chair of the GMC, states in the introduction to *Caring for doctors, caring for patients* that 'organisations who prioritise staff wellbeing and leadership provide higher quality patient care, see higher levels of patient satisfaction, and are better able to retain the workforce they need'.[39] The solutions outlined by the regulator of our medical counterparts, which emphasise 'autonomy/control, belonging and competence',[39] have great relevance for us in dentistry. Given our findings, parallel work involving our regulator will be important for future health and wellbeing, as will the work of Health Education England in relation to career pathways,[51] and the NHS in relation to system design. Sustainability of the profession could helpfully involve greater preparation during the undergraduate programme, followed by mentorship during early career stages.[52]

The limitations of this project need to be acknowledged, including a relatively small sample, self-selection and the bias towards participation of people working in London, despite recruiting nationally.[2] However, it was not the purpose of this qualitative study to gain a numerically representative sample, but rather to gain a range of views across professional careers and disciplines. A major strength of this exploratory study is that it provides insight into contemporary strategies used or advocated by dentists to protect and support their health and wellbeing, and a wide range of perspectives was achieved.

These interesting findings raise important future research questions about the relative effectiveness of coping strategies in dealing with complex, interrelated micro-, meso- and macro-level challenges impacting on dentists' health and wellbeing. Further research is important and should ideally follow dentists over time as we seek innovative solutions to address the long-term challenges outlined by our research and the additional pressures of the COVID-19 pandemic,[50,53] which has seriously limited the delivery of dental care, impacting on mental health,[50] businesses and professional careers.[53]

Finally, surely this major disruption must provide us with the opportunity to reshape dentistry for the better and support dentists in developing healthy coping strategies. Strong leadership is required to ensure that we protect our workforce and provide a better service to patients in order to improve population health.[49]

Conclusion

Dentists have described a range of coping mechanisms that they use to help themselves to manage stressors and have highlighted the need for change. Support for building personal resilience of individuals, particularly for those at the frontline of primary dental care in the public sector, is important; however, multi-level action is suggested to enhance the health, wellbeing and retention of a highly qualified dental workforce. Radical systems reform is urgently required to improve the dental system, working conditions and environment. As with our medical colleagues, we require action on developing autonomy/control, enhancing belonging and developing our competence, including healthy coping mechanisms. As a profession, we have a shared responsibility to understand and address these issues proactively and seek appropriate solutions. This is a time for reflection, debate and action.

Acknowledgements

The authors would like to thank Public Health England for funding this project, key gatekeepers for their support in the recruitment process, and all dentists who participated in this study for taking time to share their views and experiences. Finally, Sukriti KC who helped during its revision.

Conflict of interest

SW and JEG work for Public Health England and FCS for the National Audit Office. The views expressed do not represent the views of the above organisations.

References

1. Colonio Salazar F B, White S, Gallagher J E. Key determinants of health and wellbeing of dentists within the UK: A rapid review of over two decades of research. *Br Dent J* 2019; **227:** 127–136.
2. Gallagher J E, Colonio-Salazar F, White S. Supporting dentists' health and wellbeing – workforce assets under stress: a qualitative study in England. *Br Dent J* 2021; DOI: 10.1038/s41415-021-3130-9.
3. Blinkhorn A. Stress and the dental team: a qualitative investigation of the causes of stress in general dental practice. *Dent Update* 1992; **19:** 385–387.
4. Bretherton R, Chapman H R, Chipchase S. A study to explore specific stressors and coping strategies in primary dental care practice. *Br Dent J* 2016; **220:** 471–478.
5. Gorter R, Freeman R, Hammen S, Murtomaa H, Blinkhorn A, Humphris G. Psychological stress and health in undergraduate dental students: fifth year outcomes compared with first year baseline results from five European dental schools. *Eur J Dent Educ* 2008; **12:** 61–68.
6. Gorter R C, Albrecht G, Hoogstraten J, Eijkman M A J. Measuring work stress among Dutch dentists. *Int Dent J* 1999; **49:** 144–152.
7. Kumar S, Dagli R, Mathur A, Jain M, Prabu D, Kulkarni S. Perceived sources of stress among Indian dental students. *Eur J Dent Educ* 2009; **13:** 39–45.
8. Naidu R, Newton J, Ayers K. A comparison of career satisfaction among dental healthcare professionals across three health care systems: Comparison of data from the United Kingdom, New Zealand and Trinidad & Tobago. *BMC Health Serv Res* 2006; **6:** 32.
9. Wilson R F, Coward P Y, Capewell J, Laidler T L, Rigby A C, Shaw T J. Perceived sources of occupational stress in general dental practitioners. *Br Dent J* 1998; **184:** 499–502.
10. Montero-Marin J, Monticelli F, Casas M *et al.* Burnout syndrome among dental students: a short version of the" Burnout Clinical Subtype Questionnaire" adapted for students (BCSQ-12-SS). *BMC Med Educ* 2011; **11:** 1.
11. Brake H, Eijkman M, Hoogstraten J, Gorter R. Dentists' self assessment of burnout: an internet feedback tool. *Int Dent J* 2005; **55:** 119–126.
12. Denton D A, Newton J T, Bower E J. Occupational burnout and work engagement: A national survey of dentists in the United Kingdom. *Br Dent J* 2008; **205:** E13.
13. Larbie J, Kemp M, Whitehead P. *The Mental Health and Well-being of UK Dentists: being of UK Dentists: A Qualitative Study.* London: British Dental Association, 2017.
14. Toon M, Collin V, Whitehead P, Reynolds L. An analysis of stress and burnout in UK general dental practitioners: subdimensions and causes. *Br Dent J* 2019; **226:** 125–130.
15. Mathias S, Koerber A, Fadavi S, Punwani I. Speciality and sex as predictors of depression in dentists. *J Am Dent Assoc* 2005; **136:** 1388–1395.
16. Rada R E, Johnson-Leong C. Stress, burnout, anxiety and depression among dentists. *J Am Dent Assoc* 2004; **135:** 788–794.
17. NHS Digital. Dental Working Hours, 2014/15 and 2015/16 Motivation Analysis, Experimental Statistics. 2016. Available online at https://digital.nhs.uk/data-and-information/publications/statistical/dental-working-hours/dental-working-hours-2014-15-and-2015-16-motivation-analysis-experimental-statistics (accessed October 2020).
18. Collin V, Toon M, O'Selmo E, Reynolds L, Whitehead P. A survey of stress, burnout and well-being in UK dentists. *Br Dent J* 2019; **226:** 40.
19. NHS Digital. Dental Working Hours – 2016/17 and 2017/18: Working Patterns, Motivation and Morale. 2018. Available online at https://digital.nhs.uk/data-and-information/publications/statistical/dental-working-hours/2016-17-and-2017-18-working-patterns-motivation-and-morale (accessed October 2020).
20. Chapman H R, Chipchase S Y, Bretherton R. Understanding emotionally relevant situations in primary dental practice. 2. Reported effects of emotionally charged situations. *Br Dent J* 2015; **219:** E8.
21. Chapman H R, Chipchase S Y, Bretherton R. Understanding emotionally relevant situations in primary dental practice. 3. Emerging narratives. *Br Dent J* 2015; **219:** 491–496.
22. Chapman H R, Chipchase S Y, Bretherton R. The evaluation of a continuing professional development package for primary care dentists designed to reduce stress, build resilience and improve clinical decision-making. *Br Dent J* 2017; **223:** 261–271.
23. Chipchase S Y, Chapman H R, Bretherton R. A study to explore if dentists' anxiety affects their clinical decision-making. *Br Dent J* 2017; **222:** 277–290.
24. Bretherton R, Chapman H R, Chipchase S. A study to explore specific stressors and coping strategies in primary dental care practice. *Br Dent J* 2016; **220:** 471–478.
25. Rankin J, Harris M. Comparison of stress and coping in male and female dentists. *J Dent Pract Adm* 1990; **7:** 166–172.
26. Ayers K M S, Thomson W M, Newton J T, Rich A M. Job stressors of New Zealand dentists and their coping strategies. *Occup Med* 2008; **58:** 275–281.
27. Pouradeli S, Shahravan A, Eskandarizdeh A, Rafie F, Hashemipour M A. Occupational stress and coping behaviours among dentists in Kerman, Iran. *Sultan Qaboos Univ Med J* 2016; DOI: 10.18295/squmj.2016.16.03.013.
28. Choy H, Wong M. Occupational stress and burnout among Hong Kong dentists. *J Dent Res* 2017; **23:** 480–488.
29. Moore R, Brødsgaard I. Dentists' perceived stress and its relation to perceptions about anxious patients. *Community Dent Oral Epidemiol* 2001; **29:** 73–80.
30. Te Brake H, Gorter R, Hoogstraten J, Eijkman M. Burnout intervention among Dutch dentists: long-term effects. *Eur J Oral Sci* 2001; **109:** 380–387.
31. Möller A T, Spangenberg J J. Stress and coping among South African dentists in private practice. *J Dent Assoc S Afr* 1996; **51:** 347–357.
32. Folkman S, Lazarus R S, Gruen R J, DeLongis A. Appraisal, coping, health status, and psychological symptoms. *J Pers Soc Psychol* 1986; **50:** 571–579.
33. Folkman S, Lazarus R S. Coping as a mediator of emotion. *J Pers Soc Psychol* 1988; **54:** 466–475.
34. Folkman S, Moskowitz J T. Positive effect and meaning-focused coping during significant stress. *In The Scope of Social Psychology: Theory and Applications*. Hove: Psychology Press, 2007.
35. NHS Digital. Dentists' Working Patterns, Motivation and Morale – 2018/19 and 2019/20. 2020. Available online at https://digital.nhs.uk/data-and-information/publications/statistical/dental-working-hours/2018-19-and-2019-20-working-patterns-motivation-and-morale (accessed October 2020).
36. McMullan R. *Mental Health and Wellbeing Day report and actions: 20th February.* London: British Dental Association, 2020.
37. Shanafelt T D, Balch C M, Bechamps G *et al.* Burnout and medical errors among American surgeons. *Ann Surg* 2010; **251:** 995–1000.
38. Hall L H, Johnson J, Watt I, Tsipa A, O'Connor D B. Healthcare Staff Wellbeing, Burnout, and Patient Safety: A Systematic Review. *PLoS One* 2016; DOI: 10.1371/journal.pone.0159015.
39. General Medical Council. Caring for Doctors, Caring for Patients. 2020. Available at https://www.gmc-uk.org/about/how-we-work/corporate-strategy-plans-and-impact/supporting-a-profession-under-pressure/uk-wide-review-of-doctors-and-medical-students-wellbeing (accessed October 2020).
40. Shanafelt T D, Hasan O, Dyrbye L N *et al.* Changes in Burnout and Satisfaction With Work-Life Balance in Physicians and the General US Working Population Between 2011 and 2014. *Mayo Clin Proc* 2015; **90:** 1600–1613.
41. Massachusetts Medical Society, Massachusetts Health and Hospital Association, Harvard T. H. Chan School of Public Health and Harvard Global Health Institute. *A Crisis in Health Care: a call to action on Physician Burnout.* Boston: Harvard Global Health Institute, 2019.
42. Palinkas L A, Horwitz S M, Green C A, Wisdom J P, Duan N, Hoagwood K. Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Adm Policy Ment Health* 2015; **42:** 533–544.
43. Ritchie J, Lewis J, Nicholls C M, Ormston R. *Qualitative research practice: A guide for social science students and researchers.* London: Sage, 2013.
44. Collin V, Toon M, O'Selmo E, Reynolds L, Whitehead P. A survey of stress, burnout and well-being in UK dentists. *Br Dent J* 2019; **226:** 40–49.
45. Alleydog. Emotion-Focused Coping. 2020. Available at https://www.alleydog.com/glossary/definition.php?term=Emotion-Focused+Coping (accessed October 2020).
46. Alleydog. Problem-Focused Coping. 2020. Available at https://www.alleydog.com/glossary/definition.php?term=Problem-Focused+Coping (accessed October 2020).
47. Folkman S. The case for positive emotions in the stress process. *Anxiety Stress Coping* 2008; **21:** 3–14.
48. National Academies of Sciences, Engineering, and Medicine; National Academy of Medicine; Committee on Systems Approaches to Improve Patient Care by Supporting Clinician Well-Being. Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being. Washington (DC): National Academies Press, 2019.
49. Gallagher J E. *The Future Oral and Dental Workforce for England: Liberating human resources to serve the population across the life-course.* London: Health Education England, 2019.
50. Armstrong M. The dental profession's mental health crisis: what needs to happen. 2020. Available at https://bda.org/news-centre/blog/Pages/The-dental-professions-mental-health-crisis.aspx (accessed September 2020).
51. Health Education England. Advancing Dental Care (ADC) Review. 2018. Available at https://www.hee.nhs.uk/our-work/advancing-dental-care (accessed October 2020).
52. Osama O M, Gallagher J E. Role models and professional development in dentistry: an important resource: The views of early career stage dentists at one academic health science centre in England. *Eur J Dent Educ* 2018; DOI: 10.1111/eje.12261.
53. Armstrong M. Coronavirus: Bring Dentistry back from the brink. 2020. Available at https://bda.org/news-centre/blog/Pages/Coronavirus-Bringing-dentistry-back-from-the-brink.aspx (accessed September 2020).
54. Alleydog. Active Coping. 2020. Available at https://www.alleydog.com/glossary/definition.php?term=Active+Coping (accessed October 2020).