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A survey of mental wellbeing and stress among dental therapists and hygienists in South West England

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Key points

- Dental therapists and hygienists in South West England experience low levels of mental wellbeing compared to the general population.
- The stress experienced by dental therapists and hygienists is predominantly workplace centred.
- A large proportion of the dental therapy profession in South West England are not working to their full scope of practice, efforts to improve this may be beneficial for their mental wellbeing and would bring wider benefits to team working and patient care.

Abstract

Introduction Mental health and wellbeing of the dental team has been brought into sharp focus during the Coronavirus pandemic. Despite this renewed interest there has been longstanding issues with poor mental health and wellbeing in the dental profession for some time. While there is some evidence that documents poor mental wellbeing amongst dentists, there appears to be a lack of evidence concerning dental care professionals.

Aims To explore the level of mental wellbeing and stress amongst dental hygienists and therapists in Southwest England.

Method An online survey was distributed to dental therapists and hygienists in Southwest England via two professional networks.

Results A total of 129 surveys were completed. The mean levels of reported wellbeing were lower amongst dental hygienists and therapists than the general population. 45% of respondents reported high anxiety levels. Younger respondents reported lower levels of life satisfaction. 43.5% of dental therapists reported performing solely dental hygiene treatments with those performing no dental therapy reporting lower happiness levels.

Conclusion Low mental wellbeing amongst dental therapists and hygienists in the Southwest has been identified in this survey and this is likely to impact negatively on the morale and motivation of the workforce, leading to increased levels of absenteeism and ultimately loss of colleagues from the dental workforce. The stress encountered by dental therapists and hygienists is largely workplace related and therefore there is an increased need for team and organisation delivered interventions to improve mental wellbeing for this group.

Introduction

It is widely accepted that dentistry is a stressful occupation[1,2,3,4] with a recent report suggesting that, "*the high levels of self-reported stress, burnout & psychological distress….are a serious concern to the profession*"[2]. The recent COVID-19 pandemic has undoubtedly led to many additional challenges within the dental working environment[1,5]. This has exacerbated existing stressors such as financial pressures, NHS targets, staffing, recruitment and retention, time management and patient complaints[6,7]. The decline in mental health and wellbeing was apparent before the COVID pandemic, with a recent GDC report highlighting the increasing number of dentists demonstrating signs of burnout, poorer wellbeing and suicide ideation[1,2] over the last decade. The GDC review also highlights that dentists working within general practice settings tended to be more affected by poor mental health than those in other settings[1,2] and those who work mainly for the NHS experience higher stress levels than those in other settings[4].

Reports on stress amongst GDPs have identified numerous systemic stressors including, time limitations, working in the NHS, working environment and conditions, fear of regulation and litigation, unrealistically high workload, and patient issues[3,4,8,9]. The risk of litigation or regulatory chastisement have increasingly been recognised as major stressors for many, with dentists reported to be operating "under constant fear of persecution"[2].

Anxiety, stress or mental health related issues can impact significantly on clinical performance, and although the evidence in dentistry is sparse, research in other areas of healthcare demonstrate a strong link between stress and impaired surgical competence and communication[10], with issues of burnout resulting in compromised work performance, absenteeism[11] and worsening patient safety[12,13].

Burnout will often lead to depression, and stress increases the risk of developing mental health conditions such as depression, alcoholism, sleeplessness and drug addiction[3,4,14,15,16]. The highest reported consequence of stress, and also the one reported to impact most on family life outside of work, is nervousness[3]. Mental health and wellness of the dental team is critical in maintaining and retaining a healthy workforce. A recent report published by Dental Protection suggests that as many as half of dentists have considered leaving the profession due to concerns over their own personal well-being[17].

Despite a growing evidence base relating to the mental health and wellbeing of dentists, the GDC report demonstrates a lack of evidence regarding the levels of mental wellbeing amongst dental care professionals.

Dental care professionals (DCPs) accounted for 62.9% of GDC registrants in January 2022[18] encompassing a wide range of professional groups including dental therapists, hygienists, orthodontic therapists, nurses and technicians, each with a very individual skill set. In a study conducted amongst Northern Irish dentists and DCPs in 2011, it was reported that 20% of DCPs experienced psychological ill-health, however this study fails to differentiate between the professional groups under the umbrella term of DCPs[19]. Nearly a decade later, in the midst of the global COVID-19 pandemic, mental wellbeing was again assessed in a UK dental hospital which revealed that 53.3% of staff demonstrated symptoms of generalised anxiety[5]. This study, undertaken in 2020, differentiates between the dental care professions, with dental nurses demonstrating the highest anxiety levels, however no dental therapists or hygienists were recruited in this study[5]. Despite dental therapists and hygienists accounting for a significant proportion of DCPs, it seems that this professional group is under represented in the literature and, with an increasing number of registrants year on year, this is an area that must be further investigated to ensure that this group of professionals are represented and included in mental wellness strategies.

Amongst healthcare staff, poor wellbeing and burnout is associated with decreased patient safety and an increased likelihood of medical errors[13,20,21]. In order to provide safe and effective healthcare, organisations must protect their staff against burnout and emotional exhaustion through targeted intervention and prevention strategies[13]. Within the dental sector, the Dental Professional Alliance has introduced the Mental Wellness in Dentistry framework which enables dental workplaces to prioritise staff mental health[22]. The framework provides guidance on how to promote mental wellbeing amongst the whole dental team and places emphasis on the importance of prevention and early intervention. This aligns with the NHS long term plan which aims to improve the NHS as a workplace and improve support offered to staff[23].

This report aims to improve the evidence base, particularly in regards to prevalence, for mental wellbeing and stress amongst dental hygienists and therapists to better inform future practice and prevention strategies.

Methodology

Sample

An online survey was distributed to dental therapists and hygienists in the South West England branches of the BADT (British Association of Dental Therapists) and the BSDHT (British Society of Dental Hygiene and Therapy). The survey was distributed via mailing list to the 207 members of the BADT (79 members) and BSDHT (128 members) in the South West region and was also publicised on social media including an open invitation on professional networking groups. Prior to distribution, the survey was piloted amongst dental therapists and hygienists practising in other regions of the UK.

The survey was initially distributed at the start of December 2021 and ran until the end of January 2022 with a reminder email sent in the first week of January 2022. Return of the survey was taken as assent to the process.

Participants

Survey participants were required to be registered dental therapists and hygienists currently providing dental services in the seven Integrated Care Systems of South West England which comprises Bristol, Cornwall, Dorset, Devon, Gloucestershire, Somerset and Wiltshire. Students and retired participants were not included in the sample. Similarly, those delivering care outside of South West England were not included regardless of home address.

Materials

The survey was distributed online using the Microsoft forms platform and included questions related to:

- Basic demographics
- Working patterns
- Qualification status
- Wellbeing
- Wellbeing in response to COVID-19 pandemic
- Stress

The survey was designed to incorporate a similar structure and pre-validated domains used in previous surveys of dentists, with permission sought and granted from previous survey authors. The ONS-4 tool was used to measure wellbeing amongst the respondents[24]. This is divided into 4 questions on a scale of 0 – 10 with questions relating to life satisfaction, worthwhileness, happiness and anxiety.

Questions related to life satisfaction, worthwhileness and happiness were scored as "very high" if respondents reported scores of 9-10 or "high" if the respondent reported a score of 7-8 whereas the question related to anxiety did not report "very high" levels, where a score of between 6-10 was reported as "high"[24]. Therefore, those reporting life satisfaction, worthwhile and happiness scores of 0-4 are categorised as "low"[24].

Following the questions relating to life satisfaction, worthwhileness and happiness, respondents were asked if they thought their answers would have been different prior to the COVID-19 pandemic. These were grouped into "Yes – higher scores since COVID-19 pandemic", "yes – lower scores since COVID-19 pandemic", "no – the same" or "not sure". The same question was asked following the anxiety section of the ONS-4 measure.

Stress

A single measure of stress was used, which has been utilised in many large-scale national surveys, which asked respondents "in general, how do you find your job?"[25]. The results of which were recorded on a Likert-scale ranging from "not at all stressful" to "extremely stressful".

The work stress in dentistry (WSID) measure, developed by Cooper at al[26], was also used to identify stressors in the workplace. Following the use of this measure by Collin et al, questions related to litigation and regulation were again utilised[2]. The questions were answered on a Likert-scale from "not at all stressful" to "extremely stressful" and were grouped into the following categories: work pressure, pay related, work content, dealing with patients and litigation and regulation. An additional response of "not applicable" was included as some areas may not be applicable to all respondents based on working patterns.

Finally, an open-ended free response question was added asking "are there other areas of your work that you feel are stressful?".

Ethical approval

Completion of the Health Research Authority decision tool determined that ethical approval for the survey was not required. Appropriate consent was obtained from each participant for use of their anonymous data.

Results

Overall, there were 129 responses to the survey representing a response rate of 62.3%.

Of the 129 responses, 4 respondents were not currently practising as dental therapists or hygienists and were therefore excluded from the final data analysis. Similarly, 11 respondents failed to complete the full survey and 1 respondent was working outside the area of interest and were similarly excluded. Therefore, 113 responses were used in the final analysis.

Frequency analyses were carried out to describe respondent characteristics and demographics using SPSS© v28. Two-sided Pearson chi-squared tests and Fischer's exact tests were used to compare variables. Statistical significance was set with a p value of 0.05. Figures presented with error bars are set at 95% confidence intervals.

Sample demographics are detailed in figure 1.

With regards to field of practice, 85% of respondents worked primarily in general dental practice with 8% based in teaching or research institutions, 2.7% in the community service, 1.8% in the armed forces, 1.8% in hospital services and 0.9% in specialist referral practices.

From the sampled dental therapists, 43.5% (N = 20) reported performing dental hygiene treatments only with 56.6% performing any aspect of dental therapy in their role.

Figure 1 - Characteristics of respondents

Respondent characteristics		Frequency	Percentage
Age	Under 25	3	3%
	25-34	29	26%
	35-44	27	24%
	45-54	31	27%
	55-64	22	19%
	65+	1	1%
Gender	Male (including transgender men)	2	2%
	Female (including transgender female)	111	98%
Qualifications held	BSc dental therapy and hygiene	26	23%
	Diploma in dental therapy and hygiene	20	18%
	Diploma in dental hygiene	64	57%
	None of the above	3	3%
Years qualified	Less than 5 years	26	23%
	5-10 years	21	19%
	10-20 years	20	18%
	20-30 years	37	33%
	40+ years	9	8%
Region of qualification	Scotland	6	5%
	Wales	15	13%
	Northern Ireland	1	1%
	North West England	4	4%
	North East England	6	5%
	Midlands	3	3%
	South East England	38	34%
	South West England	38	34%
	Overseas	2	2%

Wellbeing

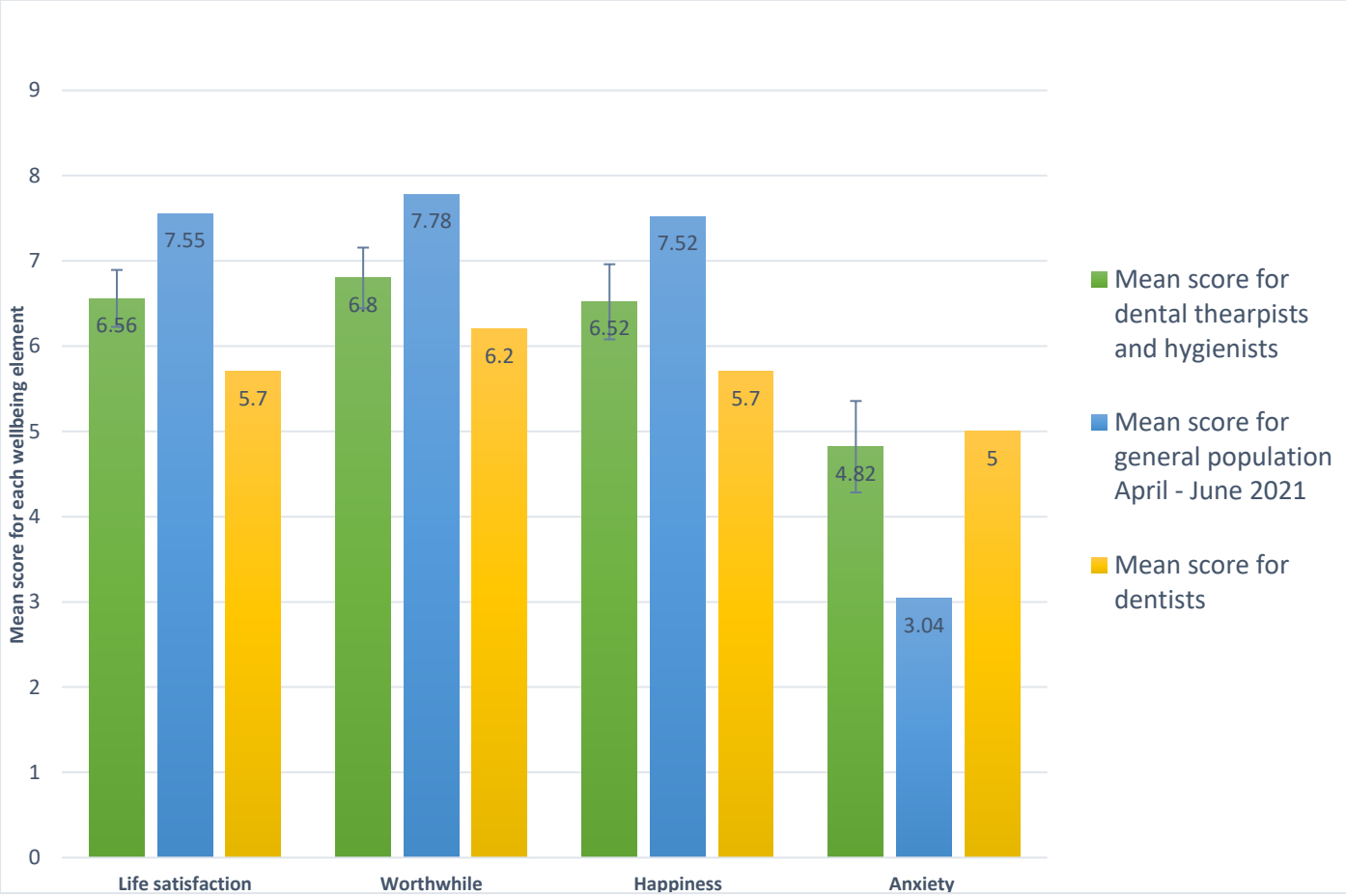
The mean score reported by dental therapists and hygienists for life satisfaction was 6.56 (SD = 1.81), worthwhile 6.8 (SD = 1.93), happiness 6.52 (SD = 2.39) and anxiety 4.82 (SD = 2.91).

14% (n = 16) of respondents reported low life satisfaction scores. 12% (n = 14) of respondents reported low worthwhile scores and 22% (n = 25) reported low happiness scores. 45% (n = 51) of those surveyed reported high anxiety levels.

The number of respondents reporting low life satisfaction, worthwhile and happiness scores were analysed by age, the number of years' post-qualification and scope of practice delivered in their role. When comparing low life satisfaction scores against age, a significant difference was observed between those aged 45 or under and those aged above 45 (p = 0.049) indicating a higher frequency of younger dental therapists and hygienists reporting low life satisfaction compared with their older colleagues.

Dental therapists who routinely provided care within their scope of practice reported similar levels of wellbeing compared to those who provided hygiene treatments only. Where dental therapists only provided hygiene treatments, they reported statistically significant lower levels of happiness (p = 0.038).

Figure 2 - Measures of wellbeing comparing dental therapists and hygienists, the general population in April-June 2021[27] and dentists[2] with 95% confidence intervals for dental therapists and hygienists



COVID-19 pandemic

35.4% (N = 40) of respondents reported that their scores for life satisfaction, worthwhileness and happiness are lower since the COVID-19 pandemic. Similarly, 46% (N = 52) reported that their anxiety scores are higher since the COVID-19 pandemic.

Stress

On the single item of stress measure, 37.2% (N = 42) of respondents reported scores equating to high stress levels.

No significant difference was observed in occupational stress levels between those who worked exclusively privately and those who performed elements of NHS care (p=0.128) or between therapists who performed solely hygiene procedures and those who performed elements of dental therapy (p=0.555).

Sources of stress

Sources of stress were examined using the WSID measure and this was used to determine the most frequent sources of stress at work reported as “very stressful” or “extremely stressful”. The top 10 sources of stress from the survey can be seen in figure 3.

Figure 3 - Top ten stressors reported by dental therapists and hygienists

Stressor	% of respondents who responded "very stressful/extremely stressful"
Running behind schedule	73%

Striving for perfection	65%
Late patients	62%
Equipment malfunction	61%
Working quickly to see as many patients as possible	59%
Working under constant time pressure	53%
Risk of making a mistake	51%
Red tape and bureaucracy	50%
Dissatisfied patients	49%
The threat of complaints	49%

Discussion

The findings of this survey indicate low levels of life satisfaction, worthwhileness and happiness in dental therapists and hygienists compared to the general population as demonstrated in figure 2. Additionally, reported levels of anxiety are also higher than the general population[27]. This may, in part, be attributed to the COVID-19 pandemic which has had far reaching effects on the dental sector, particularly on dental therapists and hygienists who perform primarily aerosol generating treatments. In this survey, 46% of respondents reported that their anxiety levels were higher since the start of the COVID-19 pandemic, a trend that is consistent in the general population with reported work-related stress and anxiety increasing on pre-pandemic levels[28]. Work-related anxiety, stress and depression accounted for 50% of work-related ill health in the general population in 2020/21[28] and this is likely to be similar, if not higher, in the dental sector where wellbeing is comparatively lower. Higher levels of staff suffering from work-related ill health is likely to have wider implications for patient care delivery through higher levels of absenteeism and sick leave.

This survey has revealed that, just over half of dental therapists are working to their full scope of practice, with 43.5% performing hygiene treatments only. These results demonstrate the underutilisation of dental therapists in the Southwest region, a finding that is consistent across the UK[29] and internationally[30]. With a lack of opportunities to deliver their full scope of practice, therapists risk losing confidence in the skills they have developed and been trained to deliver and this can have negative consequences at many different levels including effective team-working, patient care, future career development, professional fulfilment and on mental health and wellbeing. Dually qualified dental hygienist-therapists may also choose to work as hygienists due to local market factors and systemic barriers within the existing NHS contract currently do little to incentivise the use of therapists[31].

In this survey, dental therapists who performed hygiene treatments only reported significantly lower levels of happiness than their colleagues who performed elements of dental therapy. It has been previously reported that amongst UK dental hygienist-therapists, the most important predictor for overall job satisfaction is the variety of clinical activity performed with a lack of therapy procedures being a source of disappointment and frustration for many[32]. In terms of care provision, it is reported that approximately 70% of routine care provided under the current GDS NHS contract could be performed by dental therapists[33].

At a time when access to NHS dentistry is under unprecedented pressure, it is unfathomable that we have a highly-skilled workforce who are being under-utilised due to failings within the current NHS dental contract. It is hoped that when Dental Contract Reform is finally implemented, changes will support greater skill-mix, efficiency in care delivery and utilisation of all available workforce. There is clearly a sense of urgency to introduce change, however there is some debate as to the extent to which this can be provided in the NHS without significant structural reform[34]. Following the introduction of direct access for therapists and hygienists in 2013[35], two-thirds of those treating patients without prescription from a dentist felt that providing care in this manner increased their job satisfaction[34]. It has also been reported that patients feel more satisfied when being treated by dental therapists as opposed to dentists[36] and full utilisation of therapist's skill set is likely to bring improved satisfaction to not only the treating practitioner but also to dentists, employers and patients.

Whilst this survey demonstrates fewer dental therapists and hygienists suffer from high work-stress compared to dentists, the sources of stress encountered vary considerably. Collin et al[2] reported that four of the top five stressors experienced by dentists involved the fear of litigation and over-regulation: threat of complaints, risk of making a mistake, bureaucracy and concern about the GDC. Comparing this to the top five stressors reported by dental therapists and hygienists in this survey (figure 3), it can be observed that these stressors are more focused within the workplace itself and are related to the structural and organisational factors experienced by therapists and

hygienists. Gallagher et al proposed a new model for categorising wellbeing influences into macro-level factors relating to professional regulation and systems, meso-level factors related to workplace and job specification and micro-level factors incorporating relationships and personal factors[37]. Using this model, it would appear that the predominant influences on the wellbeing of therapists and hygienists occur at the meso-level and involve workplace factors such as time pressures and patient factors, as opposed to dentists whose predominant influences occur at macro-level – system pressure and risk of litigation. It might therefore be inferred that the high stress experienced by dental therapists and hygienists relates more to the working environment and practice owners and managers should consider which elements of support are likely to be the most effective.

Ensuring that staff within the profession have improved levels of mental wellbeing is vital for recruitment and retention. High levels of work-stress and low wellbeing reported in this survey have the potential to cause recruitment and retention problems for key members of the dental team. The UK dental sector faces imminent problems with staff retention, with 40% of dentists in a BDA study anticipating a change in career or early retirement in the next 12 months[38]. Similarly, it is anticipated that one third of UK dental nurses also plan on leaving the profession in the next 2 years[39] resulting in a significantly depleted dental workforce. The impending dental workforce crisis is reflected by fear amongst new graduates, with under half of newly qualified dentists reporting feeling positive about their future[40].

In respect to this survey, younger dental therapists and hygienists reported significantly lower levels of life satisfaction than their older colleagues which may reflect the lack of social interaction during the COVID-19 pandemic and the resultant isolation. These findings are mirrored in studies conducted over two decades ago, indicating there may be deeper seated reasons for this observation[41]. Lower job satisfaction, disengagement and exhaustion are all factors that increase intent to leave the profession[42]. This is already having implications for staff retention in the USA where 8% of dental hygienists left the workforce at the start of the COVID-19 pandemic[43]. Promoting wellbeing and improving job satisfaction is likely to slow the flow of dental professionals leaving the industry and this should therefore be a priority for employers and commissioners.

There are limitations to this survey; the overall response rate of 62% was moderate although this rate is consistent with other questionnaire-based studies of health professionals[44]. The results may therefore be subject to selection bias and caution should be applied to their generalisability. There may also be some individuals who received the invitation to participate twice as they featured in both professional networks and although there is a theoretical risk of duplicate responses we feel this is unlikely. There is no demographic data available locally to compare the profile of non-responders to the sampling frame and so the results must be interpreted with caution as the issues identified here may not be representative of other therapists and hygienists locally or nationally in England. Nevertheless this survey provides some useful information on this important and underreported issue in the dental therapy and hygienist workforce.

Conclusion

This survey demonstrates that mental wellbeing amongst the dental therapy and hygiene community in Southwest England is poorer than the general population. Lower rates of wellbeing, higher stress levels and increased anxiety amongst the workforce is likely to result in increased rates of absenteeism and a steady stream of professionals leaving the dental workforce. The survey also highlights the underutilisation of dental therapists in the region. Without significant structural reform, this situation is unlikely to resolve in the near future. While dentists' wellbeing is primarily influenced by regulatory pressures, dental therapists and hygienists experience most stress in the workplace and this is where efforts to enhance wellbeing must be concentrated. Improving mental wellbeing at a practice level, through strategies such as the Mental Wellness in Dentistry Framework[22], is likely to have benefits for clinicians, their employers and the communities they serve.

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The study was conceptualised by Georgia Hallett, Robert Witton and Ian Mills. The survey was developed by Georgia Hallett and reviewed by Robert Witton and Ian Mills. Data analysis was performed by Georgia Hallett with assistance from the University of Plymouth medical statistics team. The draft manuscript was prepared by Georgia Hallett and was finalised after receiving critical feedback and additions from Robert Witton and Ian Mills.

Conflict of interest

No conflicts of interest noted.

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