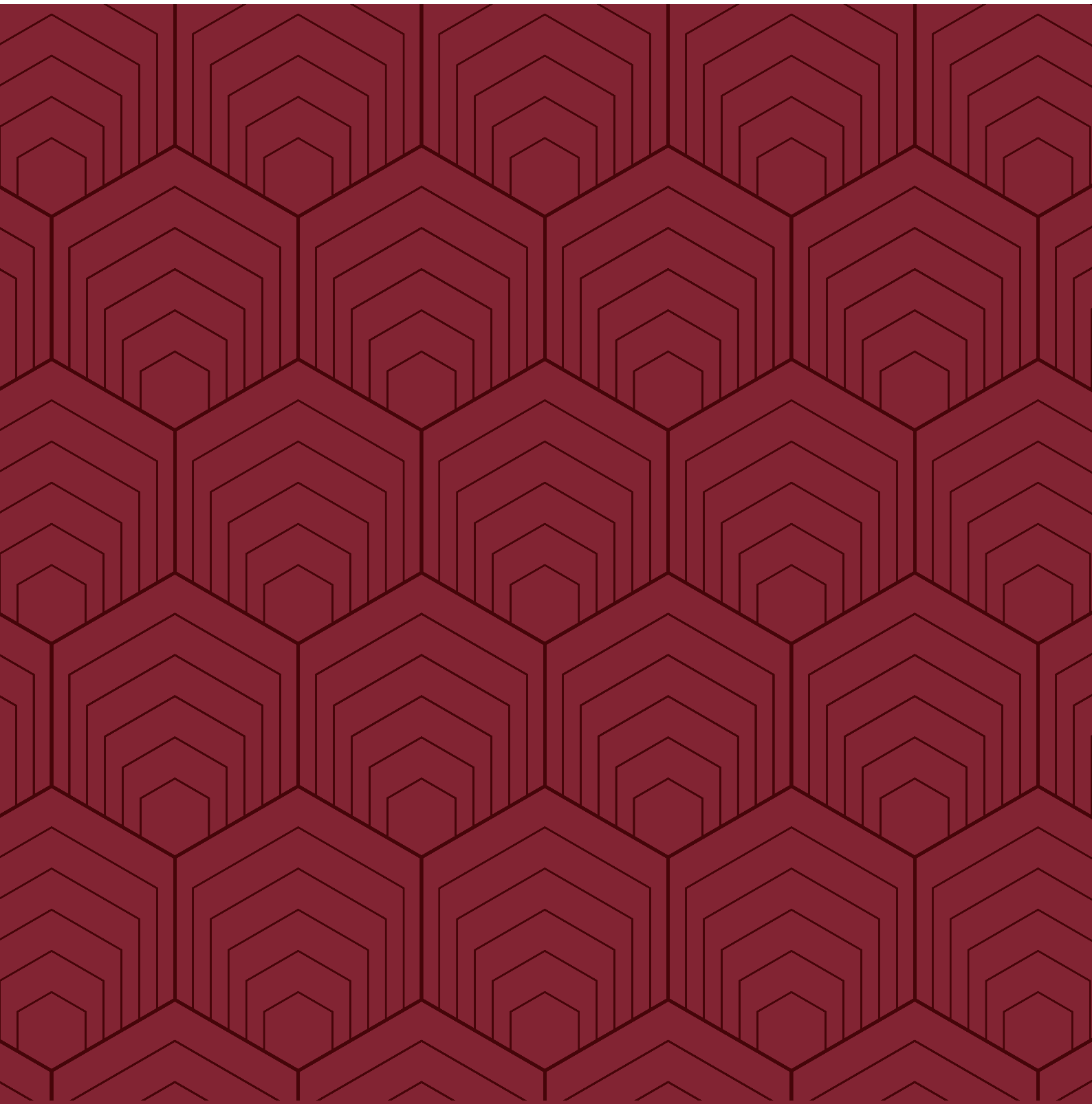
General Dental Council

Dental technicians working patterns inferential analysis



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Glossary of terms

Term	Meaning
Active in the UK dental sector	Whether someone is: • Currently working in the dental sector • Seeking work in the dental sector
Clinical / non-clinical	Whether someone is working in a role that is: • Clinical (fully or at least 75%) • Mix of clinical and non-clinical • Non-clinical (fully or at least 75%) • Other
Employment status	Whether someone works: • Employed • Self-employed / locum / agency • Business owner / part owner • In training • On parental leave • On sick leave • Working unpaid / pro-bono • Not applicable • Prefer not to say
Healthcare sector	Sector worked in: • NHS (fully or at least 75% of time) • Mix of NHS and private • Private (fully or at least 75% of time) • Other
Non-response bias	Is a bias that can happen when there is a significant difference between those who respond and those who don't respond to a survey
Weekly hours worked	Hours worked per week by range

Term	Meaning
Work setting	Setting worked in: • General dental practice • Specialist dental practice • Community dental services • Dental hospital • Other hospital settings • Laboratory • Oral public health • Armed forces • In education / training as a student • In education / training as a member of staff • Researcher / academic • Other • Not applicable • Prefer not to say

Acknowledgements

The GDC is grateful to all the dental professionals who responded to the working patterns questions. We would also like to thank the professional bodies, trade organisations, employers and other government stakeholders who supported the development of questions and encouraged dental professionals to complete this data.

Any further questions or suggestions related to the publication of working patterns data can be submitted via email at research@gdc-uk.org.

Executive summary

- Since November 2023, working patterns questions have been available on the GDC's online portal, eGDC, alongside the annual renewal process. Responses from dental care professionals were requested for the first time as part of their 2024 annual renewal (June – August). Following the publication of the working patterns dental care professional summary tables in October 2024[1], this report presents the results from further analysis of responses from dental technicians. Only statistically significant findings are focused on.
- Of the 4,935 dental technicians who completed their annual renewal in July 2024, 2,432 (49%) responded to the working patterns questions.
- Nearly all (99%) dental technicians who completed the working patterns data were working in the dental sector, and around 1% were looking for work in the sector.
- Most (86%) dental technicians reported their primary field of practice as being dental technician, 10% reported their primary field of practice as clinical dental technician, 2% as dental therapist and 2% as dental nurse.
- More than four-fifths (84%) of dental technicians reported working in one setting, with that setting usually being a laboratory (79%). Those working in two settings were more likely to work in general dental practice (37%) or dental hospitals (23%), than was the case for those working in one setting (4% and 9% respectively).
- Most (89%) dental technicians had one workplace, 7% had two workplaces and 3% had three or more workplaces. Nearly all (99%) dental technicians were working in only one UK country.

1. Working patterns data

1 Introduction

The General Dental Council (GDC) has undertaken further analyses of our working patterns data, bringing it together with equality, diversity and inclusion (EDI), registration and Fitness to Practise (FtP) data to derive greater insight and value from our working patterns responses. This report provides further analysis of dental technicians' responses to the working pattern questions.

Of the 4,935 dental technicians who completed their annual renewal in July 2024, 2,432 (49%) answered the working patterns questions. This analysis includes:

- Employment status
- Where dental technicians work (location and setting)
- Healthcare sector dental technicians deliver care in (NHS v private)
- Weekly hours worked by dental technicians
- Whether dental technicians work in clinical or non-clinical roles
- Variations by equality, diversity and inclusion characteristics
- Correlations between working patterns questions and incidence of FtP cases (at the aggregate level)

1.1 Methodology

Working patterns data is being collected using questions made available on the GDC's online portal (eGDC). This was done to maximise response rates, and data completeness, and was arrived at in dialogue with professional organisations, registrants and governmental stakeholders. We launched the data capture process by encouraging dental professionals to provide their data when they completed their annual renewal, beginning with dentists in 2023, and then dental care professionals in 2024. Completion of the working patterns questions is voluntary.

Analyses reported here are derived from dental technicians' responses received up to 10 August 2024. Responses received after this date will be included in future outputs. Only dental technicians who reported that they were either 'working in the dental sector' or 'looking for work in the dental sector' in the United Kingdom (UK) are included in these analyses.

For the analysis of responses, we tested if a difference in results was statistically significant at a 95% confidence level and only statistically significant results are reported.

The appendices contain further details on data collection and question design (4.1 Question design and format), on data cleaning (4.2 Data cleaning), on the statistical linear models used to test hypotheses, *p* values and effect sizes[2] (4.3 Statistical analysis models), comparisons of the respondent numbers with GDC registration data across EDI characteristics and selected registration fields (4.4 Non-response bias), and notations for the statistically significant differences (4.5 Statistical notation).

2. The effect size measures the strength of a relationship between two or more variables (i.e. what proportion of the difference in the data is explained by this relationship).

2 Results

2.1 Active in the UK dental sector

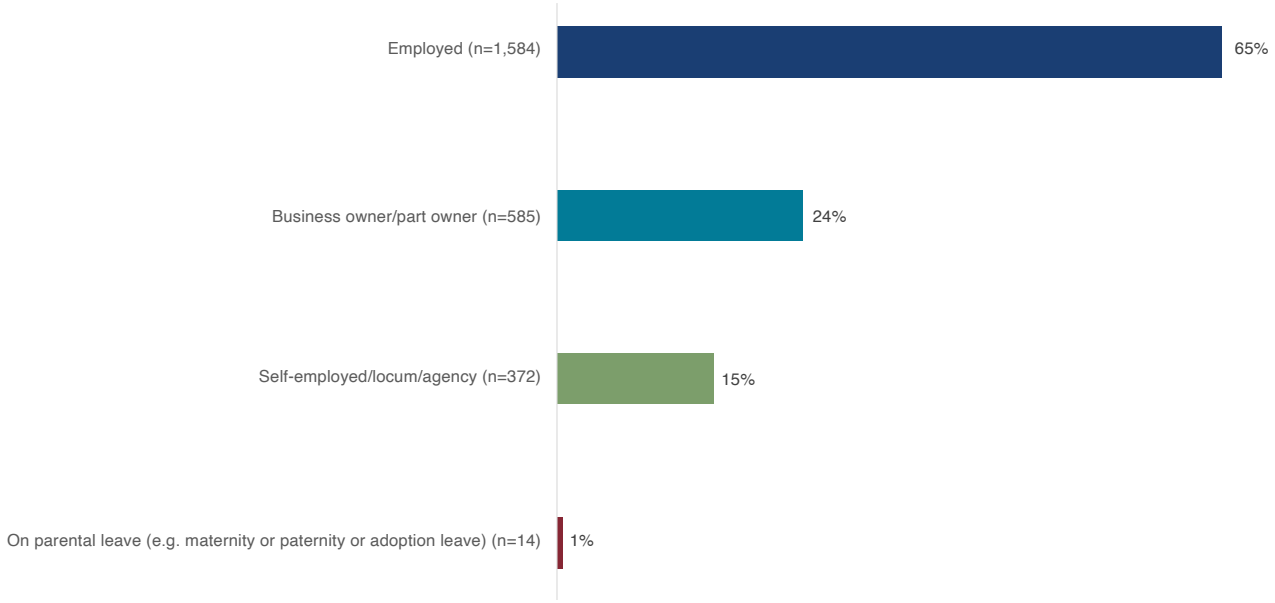
Of the 2,432 dental technicians included in this analysis, 99% were working in the dental sector and 1% reported that they were looking for work in the dental sector.

There were no differences in those looking for work by EDI characteristics, registration characteristics, route of qualification or time since primary qualification.

2.2 Employment status

Dental technicians were asked about their employment status within the dental sector (Figure 1). They could select multiple responses for this question. Most (95%) of the respondents selected only one employment status.

Figure 1 – Most common employment status[3]



Nearly two-thirds (65%) of dental technicians were employed, with the next largest employment status being a business owner / part owner (24%).

3. The employment status responses of 'on sick leave', 'in training', 'working unpaid' and 'not applicable' were less than 1% each and therefore have been omitted from the figure.

2.3 Primary field of practice

Dental technicians were asked about their primary field of practice[4]. Most (86%) dental technicians reported their primary field of practice as being 'dental technician'. A tenth (10%) of dental technicians reported working as a clinical dental technician, while 2% reported their primary field as dental therapist and 2% as dental nurse.

2.4 Clinical / non-clinical work

There were no correlations between working patterns, registration or EDI data and whether dental technicians were more likely to work in clinical or non-clinical roles.

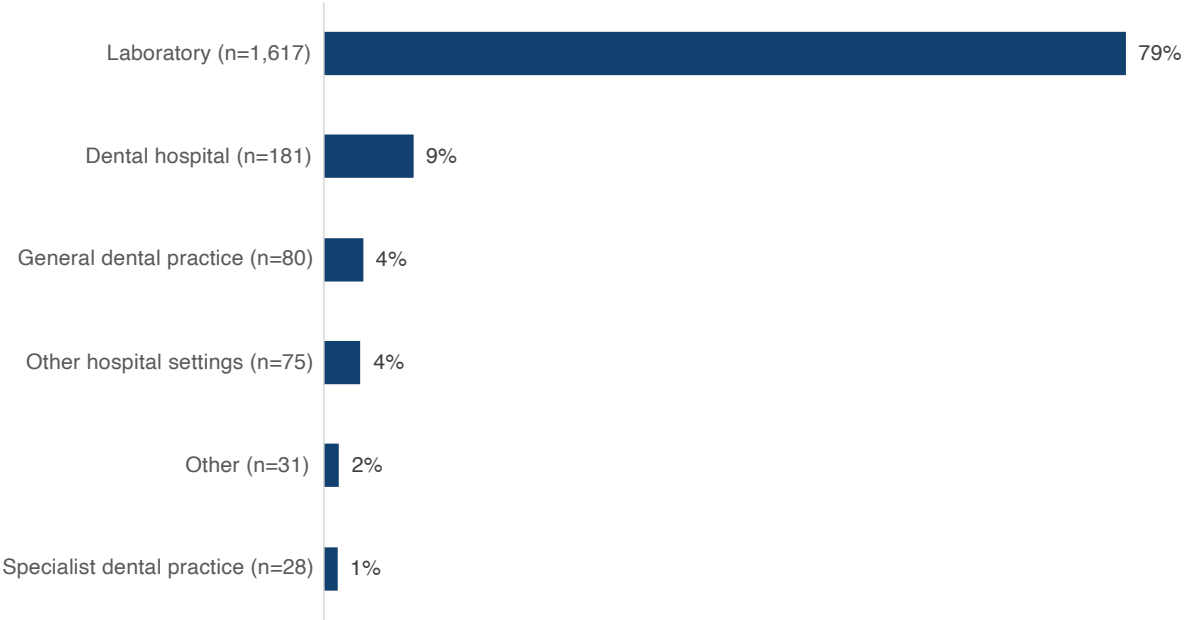
2.5 Weekly hours worked by dental technicians

There were no correlations between working patterns, registration or EDI data and whether dental technicians were more likely to work 'more than 30 hours a week' or 'less than 30 hours a week' delivering dental care.

2.6 Work setting

Most (84%) dental technicians who responded to the working patterns questions worked in only one setting. Of those working in only one setting, more than three-quarters (79%) worked in laboratories, followed by nearly a tenth (9%) working in dental hospitals (Figure 2).

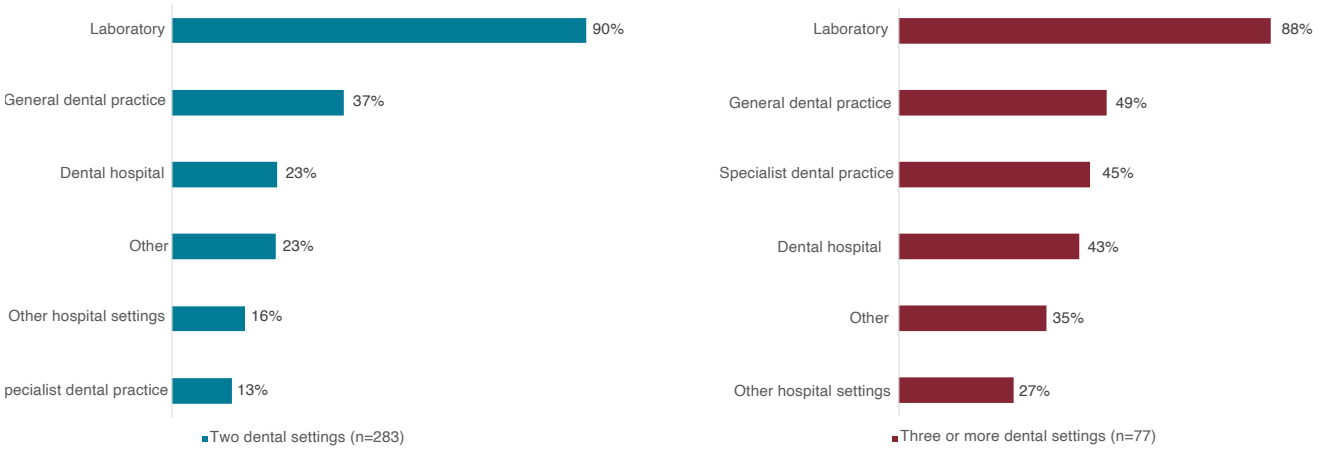
Figure 2 – Main work settings for dental technicians with only one reported setting[5]



4. A dental professional may be registered under multiple titles with the GDC, but the working patterns question specifically asks for their primary field of practice.
5. Respondents who did not select a setting or who selected more than one were not included in this figure. The 'Other' category in the figure refers to a setting that was not part of the list provided to the respondent. Settings that were less than 1% and are not included in this figure were: 'community dental service', 'researcher / academic', 'Armed Forces', 'oral public health', 'non-clinical', 'in education / training as a student', 'in education / training as a member of staff', 'not applicable' and 'prefer not to say'.

The distribution of dental technicians amongst work settings varied by number of settings (Figure 3)[a]. Dental technicians working in two settings were more likely to state they worked in general dental practice (37%) or dental hospitals (23%) compared to those who worked in one setting (4% and 9% respectively).

Figure 3 – Types of dental settings by number of settings[6]



The type of setting a dental technician worked in was found to statistically correlate with their sex, particularly in relation to dental hospitals and dental laboratories[b]. Just under 1 in 5 (17%) female dental technicians worked in dental hospitals compared to less than 1 in 10 (8%) of their male counterparts. Conversely, more than four-fifths (84%) of male dental technicians worked in laboratories compared to less than three-quarters (72%) of female dental technicians.

The proportion of dental technicians working in a dental hospital also varied by UK country of work[c]. Less than 1 in 10 (9%) of dental technicians working in England worked in a dental hospital, whereas the proportion was higher in Scotland (26%), Wales (18%) and Northern Ireland (15%).

2.7 Number of workplaces and number of countries of work

Most (99%) dental technicians were working in only one UK country. Just under 9 in 10 (89%) dental technicians had one workplace, 7% had two and 3% had three or more. There were no significant differences by EDI characteristics or registrant characteristics.

2.8 Fitness to Practise

The GDC does not use working patterns data in FtP case decision making. We matched our working patterns data to our FtP and EDI data to undertake pseudonymised[7] analysis to explore possible links to working pattern responses. We found no correlation between involvement in an FtP concern[8], working patterns responses or any respondent characteristics (such as EDI characteristics, time on the register or route of qualification)[9].

6. Setting types that accounted for fewer than 1% of responses were excluded from this figure. These include: 'Armed Forces', 'oral public health', 'community dental service', 'non-clinical', 'not applicable'.
7. The person responding was given a dummy ID so that they could not be identified.
8. Which was defined as a dental technician being involved in a case that had at least progressed beyond the triage stage within the previous two years.
9. Fewer than two percent of dental technicians who responded had an FtP case closed within the past two years.

3 Conclusions

Most dental technicians were working in the dental sector and were either ‘employed’ or working as a ‘business owner / part owner’. Dental technicians mainly stated their primary field of practice as being ‘dental technician’ with smaller proportions stating that they worked as clinical dental technicians, dental therapists or dental nurses. The proportion of dental technicians who stated they worked in general dental practice or dental hospitals was greater for those who had two work settings compared to those who worked in just one setting.

The proportion of male dental technicians working in laboratories was higher than female dental technicians. A higher proportion of female dental technicians worked in dental hospitals than male dental technicians.

There were no correlations between any working patterns questions and involvement in an FtP concern.

4 Technical appendix

4.1 Question design and format

GDC researchers looked at existing information on working patterns data including sources from the NHS, the Office for National Statistics (ONS), the Government Statistical Service (GSS) and the Institute for Social and Economic Research. This was combined with questions previously developed from GDC primary research.

The questions were designed to minimise the burden on respondents and to capture factual data about working patterns. They were fixed response questions and took on average five minutes or less to complete. They were voluntary and every question had a 'prefer not to say' option to ensure that respondents had the possibility of avoiding answering any question which they might find to be sensitive in nature.

The working patterns questions were piloted with an external group of dental professionals.

4.2 Data cleaning

Any values that were left blank or entered in an invalid format (e.g. for text entry) were coded to unknown during the data cleaning process.

4.3 Statistical analysis models

This analysis uses null hypothesis frequentist linear models to test for correlations in the data. The nine working patterns questions were combined with an additional 22 GDC registration fields and five fitness to practise fields. The large number of analyses has meant that only those with statistical significance ($p < 0.05$) and at least a small effect size have been highlighted as 'significant' (the model performance is included in 4.5 Statistical notation).

4.4 Non-response bias

Tables 1 to 5 show EDI category comparisons between the dental technicians who completed the working patterns questions and the numbers of dental technicians on the GDC's register.

The main difference between the dental technician register's EDI characteristics and working patterns sample were:

Ethnicity: Dental technicians who identified their ethnic group as 'White' accounted for 80% of working patterns dental technician respondents, compared to 75% of registered dental technicians (Table 2).

Sexual orientation: Dental technicians who identified their sexual orientation as 'Straight/heterosexual' represented 80% of the working patterns dental technician respondents, compared to 75% of registered dental technicians (Table 4).

Table 1 – Sex from working patterns compared with register data

	Dental technician working patterns respondents (10/8/2024) (n=2,432)	Dental technician register data (10/8/2024) (n=4,927)
Female	32%	29%
Male	65%	68%
Prefer not to say	3%	4%
Total	**100%**	**101%***

*due to rounding

Table 2 – Ethnicity from working patterns compared with register data

	Dental technician working patterns respondents (10/8/2024) (n=2,432)	Dental technician register data (10/8/2024) (n=4,927)
Asian or Asian British	6%	6%
Black, Black British, Caribbean or African	2%	2%
Mixed or multiple ethnic groups	1%	1%
Other ethnic group	2%	2%
White	80%	75%
Unknown	3%	6%
Prefer not to say	7%	8%
Total	**101%***	**100%**

*due to rounding

Table 3 – Marital status from working patterns compared with register data

	Dental technician working patterns respondents (10/8/2024) (n=2,432)	Dental technician register data (10/8/2024) (n=4,927)
Divorced	8%	6%
Formerly in a civil partnership which is now legally dissolved	<1%	0%
In a registered civil partnership	1%	1%
Married	54%	50%
Never married and never registered in a civil partnership	20%	18%
Separated, but still legally in a civil partnership	<1%	0%
Separated, but still legally married	1%	1%
Surviving partner from a registered civil partnership	0%	0%
Widowed	1%	1%
Unknown	6%	11%
Prefer not to say	10%	11%
Total	**101%***	**99%***

*due to rounding

Table 4 – Sexual orientation from working patterns compared with register data

	Dental technician working patterns respondents (10/8/2024) (n=2,432)	Dental technician register data (10/8/2024) (n=4,927)
Bisexual	1%	1%
Gay/Lesbian	1%	1%
Other sexual orientation	<1%	0%
Straight/Heterosexual	85%	80%
Unknown	3%	6%
Prefer not to say	10%	12%
Total	**100%**	**100%**

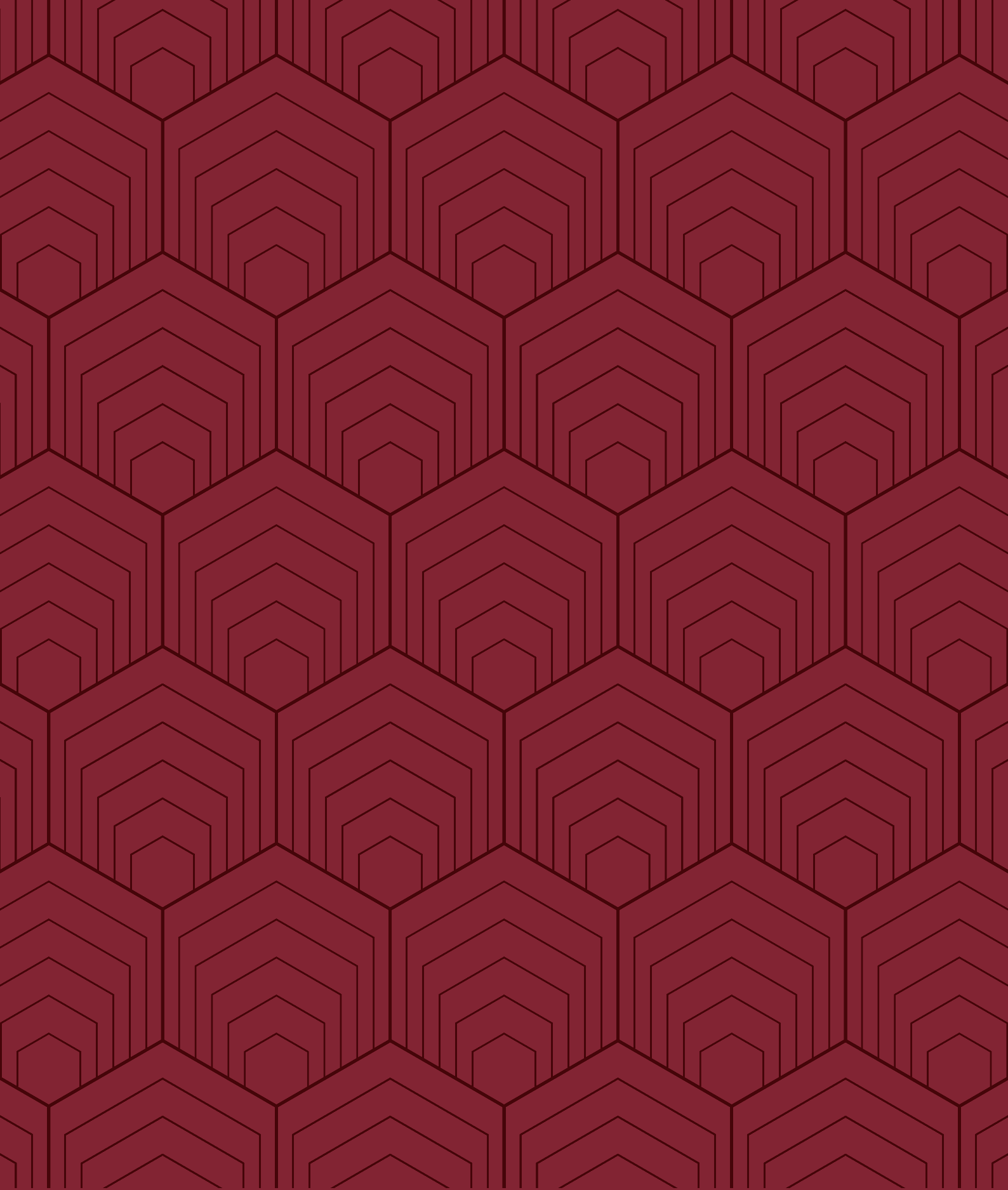
Table 5 – Age from working patterns compared with register data

	Dental technician working patterns respondents (10/8/2024) (n=2,432)	Dental technician register data (10/8/2024) (n=4,927)
16-21	<1%	<1%
22-30	7%	7%
31-40	20%	19%
41-50	28%	26%
51-60	30%	29%
61-65	10%	12%
65+	5%	6%
Total	**100%**	**99%***

*due to rounding

4.5 Statistical notation

[a] Pearson Chi-Square X^2 = 484.2 (n=2,413), df = 2, p = 0.01, Phi = 0.4 (strong effect size)
[b] Pearson Chi-Square X^2 = 31.7 (n=2,432), df = 2, p = 0.01, Phi = 0.11 (small effect size)
[c] Pearson Chi-Square X^2 = 60.7 (n=2,407), df = 3, p = 0.01, Cramer's V = 0.15 (small effect size)



General Dental Council
37 Wimpole Street
London
W1G 8DQ
020 7167 6000