

# The career intentions, work-life balance and retirement plans of UK dental undergraduates

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## Key points

Reports the findings of a national survey of UK dental undergraduates.

Presents results which reinforce findings of an earlier local study highlighting differing views between gender that may have an impact on access to dentistry.

Suggests that future generations of dentists may have a pattern of professional life that could have the effect of reducing their clinical commitment.

Suggests that the views of UK dental undergraduates should continue to be researched.

**Introduction** The views of undergraduates should be considered when planning the future UK dental workforce, especially as the impact of the UK withdrawing from the EU (Brexit) is still unknown. **Aim** To investigate the career intentions, work-life balance and retirement plans of UK dental undergraduates. **Method** Cross-sectional survey of all UK dental undergraduates using an anonymous online self-report questionnaire. **Results** There were 422 responses from 13 dental schools. Response rate 8.9%. Of the respondents, 71.3% were female. Overall, most (89.1%) respondents reported that they were either 'satisfied' or 'extremely satisfied' with their career choice. Almost all (97.4%) participants indicated they would undertake dental foundation training. Seventy percent of participants would like to specialise. The majority (82.7%) intend to carry out both NHS and private treatment, with only 6.2% indicating that they would carry out NHS-only work. Five years after qualifying, the majority (83.2%) intend to work full time and after fifteen years, only 54.3% intend to work full time. There are significant gender differences between full- and part-time work patterns. Over one third of respondents (40%) intend to retire between the ages of 61–66 and 19.9% intend to retire after age 66. Over a half (54.9%) would like to start a family and 93.6% believe that childcare is a shared responsibility. Over one third (38.6%) believe having a child would 'considerably affect their careers', with more females indicating that they would take more time to raise children. **Conclusion** The low response rate questions the generalisability of the results. Further widespread research is needed to explore the career intentions of current undergraduates and dental care professionals as their plans will impact on the future UK dental workforce.

## Introduction

The number of registered dentists within the UK is rising every year, and this number will have a profound impact upon the delivery of oral healthcare in the UK. In 2015, there were 40,953 UK registered dentists, including both those trained overseas as well as UK graduates.<sup>1</sup> In October 2015, there were over four thousand (N = 4,342) UK registered specialists, and in December 2015, 1,693 new UK graduates registered with the General Dental Council (GDC).<sup>1</sup> Dentistry, in terms

of its workforce, is changing with increasing numbers of both ethnic minority and female graduates.<sup>2</sup> It is important to consider these demographic changes, as they will have wider implications for the roles of dentists.<sup>3</sup>

The UK will undoubtedly undergo significant economic and political change within the next few years as the country negotiates its exit (Brexit) from the European Union (EU). The current arrangement of free movement of people saw an annual increase from dentists coming from the European Economic Area (EEA) from 2007 to 2015. In December 2011, out of 39,306 dentists who were registered with the GDC, 6,722 obtained their primary qualification from an EEA dental school. In terms of post-Brexit workforce planning, potential UK labour shortages must be considered and the ability of UK undergraduates to seek jobs and education within the EU may also be affected.

The number of new entrants to the GDC from outside the UK outnumbers those registering with qualifications from UK dental schools.<sup>4</sup> Furthermore, there is already an oversaturation of dentists in many urban areas and scarcity of dentists in some rural areas.<sup>4</sup> However, a decrease in the number of EU dentists may increase the number of jobs available to UK graduates.

The changing dental needs of the UK population<sup>5</sup> may not reflect the career plans of graduating dentists, creating an imbalance of the needs of the population compared to resources available. Some dentists choose to specialise, and this decision to embark upon a specialist career can be influenced by their undergraduate experience.<sup>6</sup> Changes to the current UDA contract<sup>7</sup> and the increase in student tuition fees, may result in a significant shift towards the private sector as financial

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debt can significantly affect the career choices of dental students.<sup>8</sup> Furthermore, dentists along with other health professionals migrate during their working career.<sup>9</sup> It is unknown how many UK registered specialists are EU nationals. Brexit may limit the number of specialists entering the UK and existing specialists within the UK may leave, contributing to ‘brain-drain,’ with the resultant loss of valuable healthcare specialists.<sup>10</sup>

Dental students are under increasing workload and stress,<sup>11</sup> giving their work-life balance increasing importance. In addition, the demographics of dental students, and in turn dentists, are rapidly changing as it is estimated that over half of dentists within the UK will be female by 2020.<sup>12</sup> The number of female dentists in the last five years has risen by 5%, and this is set to rise, with over 50% of dental students now being female. This shift in gender balance may affect the workforce as women are more likely to take time off or have career breaks<sup>13</sup> as well as work part time.<sup>14,15</sup>

The number of registered UK dentists may fluctuate in any one year. Some may retire early whereas others may prolong their retirement, both having an impact on the future delivery of dental services within local areas. There is currently limited research/data available on the retirement plans of dentists in the UK as well as those of UK dental undergraduates. A study carried out in Australia points to implications of a sudden loss of workforce where half the number of practising dentists will reach state pension age by 2026.<sup>16</sup> If this were to occur in the UK, a lack of experienced dentists may alter the skill-mix available to patients. Conversely, if the opposite were to happen and dentists were to phase out their retirement, then there may be an oversupply of dentists. A subsequent Australian study found that undergraduates were planning to retire later<sup>17</sup> but these findings cannot be generalised to the UK. However, a recent 2016 study<sup>18</sup> explored the career intentions, work-life balance and retirement plans of dental undergraduates at the University of Bristol. One limitation of this study was that the results were not generalisable to other dental schools which may have different demographics. In addition, the study was published before the UK referendum on Brexit. It is therefore important that the career intentions, work-life balance and retirement plans of all UK dental undergraduates are explored to help with future dental workforce planning to ensure the needs of the UK population are sufficiently met.<sup>18–20</sup>

## Aims and objectives

### Aim

To investigate the career intentions, work-life balance and retirement plans of all UK dental students.

### Objectives

- To investigate whether dental students are content with their career choice
- To investigate the future career plans of dental students, including intention to specialise
- To investigate whether dental students intend to work within the NHS and/or the private sector
- To investigate dental students’ intentions to work full time or part time
- To investigate the retirement plans of dental students
- To investigate whether dental students anticipate that their future domestic life will have an impact on their career.

### Method

An online questionnaire was developed, based on questions used in the previous 2016 study.<sup>18</sup> The questionnaire consisted of 26 questions split into four parts (participant information and general information, career plans, work-life balance and retirement plans). Relevant staff from all 16 UK dental schools were contacted by email and invited to forward the link to the online questionnaire, along with a Participant Information Sheet, to all their dental undergraduates. Participants were surveyed self-reportedly. Upon completion of the survey, they were presented with a confirmation receipt that their responses had been submitted. Reminder emails were sent to the contacts at each school at further two, four and eight week intervals. Data was collected between April and September 2017.

Data was coded and analysed using SPSS 23 software and the results were expressed as numbers and percentages for each question.

Chi-squared tests were performed to determine statistical significance, with a P value of less than 0.05 ( $P < 0.05$ ). Confidence intervals were set at 95%.

Full ethical approval for this study was obtained from the University of Bristol Faculty of Health Sciences Research Ethics Committee (HSFREC), application number 48402.

## Results

There were 422 responses to the questionnaire which represent a response rate of 8.9% based on a total undergraduate population of approximately 4700 students.<sup>21</sup> All except four optional questions had a 100% completion rate. The optional questions, of which three were follow-up questions, had a 99% completion rate.

### Demographics

The majority (71.3%) of participants were female. Over half (51.7%) of all respondents were aged 18–21, with 37.7% and 10.6% of respondents being aged 22–24 and over 25 respectively. The ethnicity of participants reported as ‘white’ was 56.4%.

### Background

Responses were received from 13 out of 16 dental schools, and responses from final year students comprised 16.8%, 10.7% from first year students, and 72.5% from students in years 2, 3 and 4.

### Career choice

Table 1 shows the responses to how satisfied participants were with their choice of dentistry as a career. Amongst ‘white’ participants, 93.9% were ‘extremely satisfied’ or ‘satisfied’. This was in contrast with ‘non-white’ participants where 84% of participants were ‘extremely satisfied’ or ‘satisfied’, showing statistical significance ( $P < 0.041$ ). When asked about their concerns with the amounts of personal debt, 66.78% of females responded that they were concerned

**Table 1 Respondents satisfied with dentistry as a career choice**

Level of satisfaction	Number (N = 422)	%
Extremely satisfied	197	46.7
Satisfied	179	42.4
Neutral	31	7.3
Unsatisfied	14	3.3
Extremely unsatisfied	1	0.2

compared to 57.02% of males. However, this showed no statistical significance ( $P < 0.052$ ). Three-quarters (75.83%) of participants thought that men and women were equally likely to succeed in dentistry. Of the 24.17% that answered 'no', 19.67% of women thought that men were more likely to succeed in dentistry. Only 0.95% of males felt that men were more likely to succeed, whereas 3.6% felt that women were more likely to succeed. The perception that men would be viewed as more likely to succeed amongst genders is statistically significant ( $P < 0.001$ ).

### Career plans

Almost all participants (97.4%) responded that they would apply for dental foundation training (DFT). Participants were also asked about where they intended on working, with 57.6% choosing general dental practice. Of the participants, 28.5% indicated that they would like to work in a hospital dental service, 7.1% indicated that they would work in a community dental service and 2.8% of participants wish to work in the armed forces. Four percent of participants selected 'other'. Following DFT, participants were asked whether they intended on remaining as an associate (30.9%), start as an associate and later buy into a partnership (67%) or look for partnership immediately (2.1%). More females than males wished to stay as an associate.

Participants were asked whether they were aware of career paths available to them, with 64.2% of participants answering 'no'. The majority (70%) of participants intended to specialise, including 68.8% of females and 69.4% of males. Of those intending to specialise, 54.6% of participants were 'white' compared to 'non-white' participants (44%). This was not found to be statistically significant ( $P < 0.594$ ). Orthodontics was the most popular speciality (26.4%), followed by oral surgery with 15.3% of responses. The least popular option was prosthodontics (1.7%) (Table 2). The majority (82.7%) indicated they would like to work in a mixed NHS and private practice, whilst a minority (6.2%) would like to work solely in the NHS and 11% in private practice only.

**Table 2** The choices of specialties of those who indicated they would like to specialise

Dental speciality	Gender				Overall	
	Female (N)	Female%	Male (N)	Male%	N	%
Orthodontics	61	30	16	18.8	77	26.7
Paediatric dentistry	26	12.8	1	1.2	27	9.3
Restorative dentistry	22	10.8	9	10.5	31	10.7
Prosthodontics	3	1.5	2	2.4	5	1.7
Oral surgery	29	14.3	15	17.6	44	15.2
Oral and maxillofacial surgery	8	3.9	13	15.3	21	7.2
Periodontics	9	4.4	1	1.2	10	3.4
Implantology	21	10.3	15	17.6	36	12.5
Endodontics	3	1.5	6	7	9	3.1
Special care dentistry	12	6	2	2.4	14	4.9
Dental public health	5	2.4	2	2.4	7	2.4
Oral medicine	4	1.9	3	3.5	7	2.4
<b>Total</b>	<b>203</b>		<b>85</b>		<b>288</b>	

### Anticipated work pattern

Five years after qualifying, the majority (83.2%) of participants plan to work full time with 16.8% planning to work part time (Table 3). This contrasts with 15 years after qualifying, where just over one-half (54.3%) indicated that they would like to work full time with 45.7% intending on working part time. There is statistical evidence between gender and work pattern for both five years and 15 years after qualifying, with more females (19.6%) indicating that would like to work part time compared to males (9.9%) after five years ( $P < 0.015$ ). After 15 years there was an increase in the number of females (51.8%) indicating that they would work part time ( $P < 0.001$ ).

### Retirement

Very few (1.7%) participants intend to retire below the age of 40 years (Table 4). Between the ages of 41–66, more females than males indicated they would retire earlier and this was found to be statistically significant ( $P < 0.032$ ). However, there was no statistical significance associating gender with leaving full-time dentistry ( $P < 0.780$ ).

### Domestic life

Participants were asked if they intended to start a family or had already started a family with 96.9% responding 'yes'. Over half (54.9%) of respondents indicated that they would like to start a family aged 27–30, 6.4% chose 23–26, 34.6% chose 31–34, 2.9% chose 35–38, 0.2% chose over 38 and 1% already had a family. The majority (93.6%) felt that childcare should be shared equally between both parents. Only 6% felt that it should be the mother's responsibility, and of this 6%, one-third were female and two-thirds were male. Only 0.2% felt that it was solely the father's responsibilities.

Regarding the amount of time participants would take out for child care, 5.1% responded 'none', 29% 'until the child reaches the age of 4', 6.3% 'until the child reaches the age of 7', 4.1% 'until the child reaches the age of 11', 2.4% 'until the child reaches the age of 18', 0.2% 'would give up their career' and 4.4% would 'take an indefinite amount of time out'. Just under half (48.4%) indicated that they would take the time allowed for maternity/paternity leave. There is a statistical link between females taking out greater time

**Table 3** Male and female response to working full time or part time after five years and after 15 years

Gender	In five years' time do you plan to work full time or part time?				In fifteen years' time do you plan to work full time or part time?			
	Full-time		Part-time		Full-time		Part-time	
Female	80.40%	N = 242	19.60%	N = 59	48.20%	N = 145	51.80%	N = 156
Male	90.10%	N = 109	9.90%	N = 12	69.40%	N = 84	30.60%	N = 37

to raise a child compared to males ( $P < 0.04$ ). Participants were asked whether having a child would affect their career. Only 4.8% felt that it would not, 56.7% felt that it would 'slightly' and 38.6% felt that it would 'considerably'. There is strong statistical evidence associating females and perception of how having a child would affect their career ( $P < 0.001$ ).

### Discussion

Reassuringly, 89.1% of respondents were either 'satisfied' or 'extremely satisfied' with their career choice, which is an increase on the 2016 study<sup>18</sup> which reported an 82% satisfaction rate. However, it is still unknown why some students were unsatisfied (3.5%) at this early stage of their career and this warrants further research.

The debt associated with the five-year course was a concern for 66.8% of females and 57% of males. A possible reason for this may be the 300% tuition fee increase<sup>22</sup> along with a further increase in 2016/17 to £9,250, and a potential to increase over £10,000 in line with inflation.<sup>23</sup> More students were concerned currently than the previous study; an increase from 43% to 64%. However, it is unknown if concern about debt is also associated with an individual's perception of earnings, as earnings on average have decreased in the last five years.<sup>24</sup> It is worrying that 19.67% of women perceived that men were more likely to have career success and efforts must be made to provide equality within the profession.

Most (97.4%) dental students indicated that they would undertake DFT training and the majority then intended to work in general dental practice which confirms previous findings in previous studies.<sup>18,25</sup> Fewer students chose careers in armed forces and community services compared to more popular choices of general dental practice and hospital dental service. Public sector pay has not kept up with inflation and so there may not be a

financial incentive to pursue a career in the armed forces.<sup>26</sup> For those who selected general dental practice, 30.9% would like to remain an associate with 67% looking to later buy into a partnership. Only a minority look for partnership immediately possibly due to existing levels of personal debt, lack of business acumen and inexperience managing a practice.<sup>27</sup>

Only a small percentage (6.2%) of students intended to work solely within the NHS which supports previous findings.<sup>18,25</sup> This may be explained by the lack of financial incentive and the workload that comes with a UDA style contract and perceived injustices of the NHS contract.<sup>28</sup> There has been a slight increase from the 2% previously reported<sup>18</sup> and this may be in part due to optimism surrounding the new dental contract reportedly being rolled out in 2018.<sup>29</sup> However, there is no hard evidence to suggest that a move away from a UDA style contract will result in a greater number of dentists providing NHS only work.

Currently, there are only 4,011 registered specialists in the UK which accounts for 9.7% of all registered dentists.<sup>30</sup> The majority (70%) of students in the current study indicating that they would specialise supports previous findings.<sup>18</sup> However, it is unlikely that these numbers will indeed go on to specialise, and this may be due to financial constraints, lack of training places and family commitments.<sup>18</sup> With the limited number of training places available, students intending to specialise may decide to self-fund their training, at significant personal cost. The results of this current study find a large proportion of students already concerned about financial debt, and so the self-funding route may not be an option for some. Studying via a modular programme or considering pursuing extended skills training may be possibilities for some. It is also important to remember that the responses show only an intention to specialise.

When asked about their intended work-life pattern, most respondents (83.2%) indicated

that they would still work full time five years after qualification. However, this decreases significantly after 15 years where only 54.3% of participants indicated that they would work full time. This difference after 15 years is exaggerated in females where 51.4% intend to work part time compared to males at 30.6% ( $P < 0.001$ ) and is similar to previous findings.<sup>18</sup> This decrease in females wanting to work full time might be due to childcare commitments and would support an earlier study<sup>31</sup> finding that there was no significant difference in working patterns until females have children. This is relevant, as in this current study, almost all (96.9%) of participants indicated that they would like to start a family. Females also indicated that they would take more time out to raise a child compared to males ( $P < 0.004$ ). Females felt having a child would have a 'considerable' effect on their careers supporting similar findings.<sup>32</sup>

Most participants indicated they would retire between the ages of 61–66 (40%), and 33.6% intend to retire between the ages of 51–60. Over one-third (39.4%) of all participants indicated that they would retire below the age of 60, supporting previous findings.<sup>18</sup> Over 19% of participants indicated that they would retire after the age of retirement, possibly due to financial motives or lack of desire to give up the career linked to continual professional development. However, this figure is lower than the previously reported 59%<sup>25</sup> although the reason for this is unknown. This has both merits in that the number of experienced dentists may remain high, but also disadvantages as a lack of positions available and an oversaturation of dentists could potentially impact younger dentists taking up new positions.

This study was an expansion of a recent study of Bristol undergraduates.<sup>18</sup> A major limitation of this current study is the very low response rate. This will have a major impact on the reliability of results, and whether the results are representative of the whole UK

**Table 4** The age at which participants would like to retire overall by gender

At what age would you like to retire?	Gender				Overall N = 422	
	Female (N)	Female%	Male (N)	Male%	n	%
Under the age of 40	2	0.66%	5	4.13%	7	1.7
41–50	15	4.98%	5	4.13%	20	4.7
51–60	102	33.89%	40	33.06%	142	33.6
61–66	128	42.52%	41	33.88%	169	40
Over the age of 66	54	17.94%	30	24.79%	84	19.9



dental undergraduate population. Responses were received from 13 schools across England, Scotland and Wales, and in terms of demographics of respondents, responses were received from a higher than expected proportion of female undergraduates but representative numbers of ethnicities. It is disappointing that more dental undergraduates did not respond to this important study, the reasons for which are unknown. Was it due to apathy, time constraints<sup>33</sup> or other reasons?<sup>34</sup> Are those that responded the 'more committed' undergraduates and has this resulted in selection bias? The results add to the current knowledge base and provide a further benchmark from which future studies could be conducted, although drawing strong conclusions must be done with caution. It has been found that online questionnaires generally have lower response rates compared to paper-based questionnaires.<sup>35</sup> Ideally, the study would be repeated using a paper-based questionnaire. This would hopefully increase the response rate and therefore the reliability of results, but significant funding would be required to achieve this. Additional further research could explore the views of qualified dentists including dental foundation trainees and dental core trainees giving further insight into the career plans of dentists after they have been exposed to working life. This future research could also explore the views of dental care professionals, especially dental therapists. The vast majority are UK trained, with very few numbers registered under EU primary qualifications.<sup>4</sup> Their career intentions, work like balance and retirement plans will also play a role in the future UK dental workforce.

The full impact of Brexit is unknown at the current time, and possible implications to the dental workforce, education and training following a 'hard Brexit' have been discussed at length elsewhere.<sup>10</sup> As the majority of UK graduates remain working within the UK, Brexit may not affect their career plans directly, although they may be indirectly affected, for example, if a reduced number of overseas trained dentists enter the UK, home graduates may have better opportunities for securing appropriate positions.<sup>10</sup> Whatever form of Brexit emerges, it is unlikely that we will see uncontrolled numbers of dentists eligible to join the UK workforce.<sup>10</sup> Dental workforce

planning will still need careful monitoring by relevant stakeholders to ensure that the changing dental needs of the UK population continue to be met, and the views of UK undergraduates should continue to be researched and considered.

## Conclusion

This study set out to explore the views of UK dental undergraduates with respect to their intended careers, work-life balance and retirement plans. These results reinforce the conclusions of a previous local study<sup>18</sup> and highlight differing views between genders that may have an impact on access to dentistry. Future generations of dentists may have a pattern of professional life that could have the effect of reducing their clinical commitment. However, the low response rate means that the results should be viewed with caution and may not be representative of all UK dental undergraduates. Further research is needed as the views of dental undergraduates are still important to consider when planning the future UK dental workforce.

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