

Would you choose an academic career? Views of current dental clinical academic trainees

N. Patel¹ and H. J. Petersen^{*2}

IN BRIEF

- Describes the dental integrated academic training pathway.
- Describes experiences of the first 'cohort' of dental academic trainees.
- The survival of academic dentistry relies on inspiring young dentists to enter this career pathway.

Objective To determine the views of current dental clinical academic trainees regarding their current posts. **Design** Online questionnaire emailed to 51 dental academic trainees. Survey results were collected over a six-week period. Eighteen closed statement questions were included using a five-point scale from 'strongly agree' to 'strongly disagree'. All questions had a section for open text comments. **Results** The response rate for the survey was 73%. A total of 38% were male and 62% female. Just under half of the sample (43%) had a higher teaching qualification. The majority of trainees were from oral surgery (22%), closely followed by restorative and dental public health (both 14%). The main reason trainees stated for choosing an academic post was to be involved in research (68%). The majority of dental clinical academic trainees would recommend a career in academia. **Conclusion** The majority of dentistry's academic trainees (73%) would recommend an academic career to their peers, a positive change in the culture of modern clinical academia.

INTRODUCTION

At the turn of the century, dental and medical academia were in decline and in a critical position. Smith and Sime identified that in the year 2000, UK dental schools were running at minimum viable level of academics to teach and run UK dental schools.¹ This trend was also mirrored in medicine, although dentistry was identified as being in a more desperate position. Traditionally a career pathway seen as somewhat difficult to negotiate, dentistry needed reform to encourage the brightest graduates to enter into academia and to retain staff.

A number of government commissioned reports were undertaken to investigate the reasons behind this decline in clinical academics in UK medical and dental schools. A task force set up in 1997 chaired by Sir Rex Richards sought the views of UK academic doctors and dentists. This included a questionnaire developed specifically to attain the views of academic dentists and

was published in 2000 by Goldacre and colleagues.^{2,3} This highlighted a general consensus of dissatisfaction among junior academic dentists on their working hours, clinical training and research time.² The results gleaned by the task force were used in the most well-known of the government commissioned reports, the 'Walport report'.⁴ This seminal report undertaken by the Academic Careers Sub-Committee of Modernising Medical Careers, UK Clinical Research Collaboration and chaired by Sir Mark Walport identified a number of barriers to young doctors and dentists entering into this career and also retention of academics further down the line. The three key barriers to choosing an academic clinical career were identified as: 1) lack of a clear and transparent career pathway, 2) lack of flexibility, and 3) lack of structured positions post completion of speciality training.⁴

Subsequently, as a direct result of the findings of these reports, both medical and dental academia has seen a number of changes. The most noticeable of these is the birth of the National Institute of Health Research (NIHR) and the implementation of the Integrated Academic Training Pathway (IAT) and the creation of so called 'Walport posts'. These posts were designed to fulfil the recommendations made by Walport and colleagues and provide a clear, structured career pathway to follow to succeed in a clinical academic career. This pathway included the creation of academic

foundation doctor posts, which included a block of research exposure, typically lasting four months as an introduction to research. It was then envisaged these trainees would progress to the Academic Clinical Fellow (ACF) level, a period of speciality training with protected research time to undertake research and acquire pilot data to make themselves competitive for externally funded fellowships to complete a PhD. On completion of a PhD, the trainee would then progress to the Clinical Lecturer phase, with an increased percentage of protected research time to develop and gain independence in their research while completing speciality training. This model does not need to be confined to only secondary care. Aggarwal and colleagues proposed this pathway to be translatable to train academic general dental practitioners also.⁵

But, these posts have been open to interpretation. It has become apparent that these posts are run in different ways from deanery to deanery and speciality to speciality. Have the recommendations made by Walport and colleagues and the creation of the IAT pathway made any difference to the views of academic dentists in the UK?

Thirteen years on from the Goldacre paper, as the researchers, clinicians and educators of the future, the aims of this paper were to ascertain the views of aspiring young dental academics from a variety of specialities across the UK. Would they recommend a career in academic dentistry?

¹Academic Clinical Fellow in Oral Surgery, University of Manchester, School of Dentistry, Coupland 3 Building, Coupland Street, Manchester, M13 9PL; ²Academic Clinical Lecturer in Oral Surgery, University College London Eastman Dental Institute, Department of Oral and Maxillofacial Surgery, 256 Gray's Inn Road, London, WC1X 8LD

*Correspondence to: Dr Helen Petersen
Email: h.petersen@ucl.ac.uk

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METHODS

A specifically designed survey consisting of 18 questions was emailed to 51 academic trainees via a web-based survey platform (SurveyMonkey). All the trainees had consented to be involved in the survey. The sample was selected from a NIHR and dental academic trainee mentoring group database of current dental clinical academic trainees. All members of the databases were sent the survey. The authors felt these were currently the largest and most reliable databases with details of dental academic trainees.

A reminder was sent after four weeks to those who had not completed the initial survey. Survey results were collected over a six-week period and results analysed using SPSS software.

The questionnaire was piloted on five trainees of a mix of pre and post-doctoral levels to ensure it was fit for purpose. No editing was required for the final questionnaire and these five trainees were excluded from the final results.

Eighteen closed statement questions were included using a five-point scale from 'strongly agree' to 'strongly disagree'. Furthermore, all questions had a section for open text comments. A final comments section was also included at the end of the survey. All data collection was anonymous as all trainees completed the survey via an online platform and the authors could only view the final results.

After six weeks from the initial email, the online questionnaire link was closed and data analysed. Participants were informed that responses were to be kept anonymous.

RESULTS

The response rate for the survey was 73% (37 trainees). Of that total, 14 (38%) were male and 23 (62%) female. The majority of participants (76%) held an academic national training number (NTNa).

Of the trainees, 12 described themselves as clinical lecturers, 15 as academic clinical fellows, three as clinical fellows, one doctoral research fellow and six speciality registrars with academic components to their training.

There was a diverse range of specialties represented by respondents (Fig. 1). The majority of trainees were from oral surgery (22%), closely followed by restorative and dental public health (both 14%). There were no dental and maxillofacial radiology or oral microbiology trainees. Academic oral and maxillofacial surgery trainees were not included in the survey.

Participants were commonly in their early years of training, although 21% were not in training at all. A total of 16% were in their

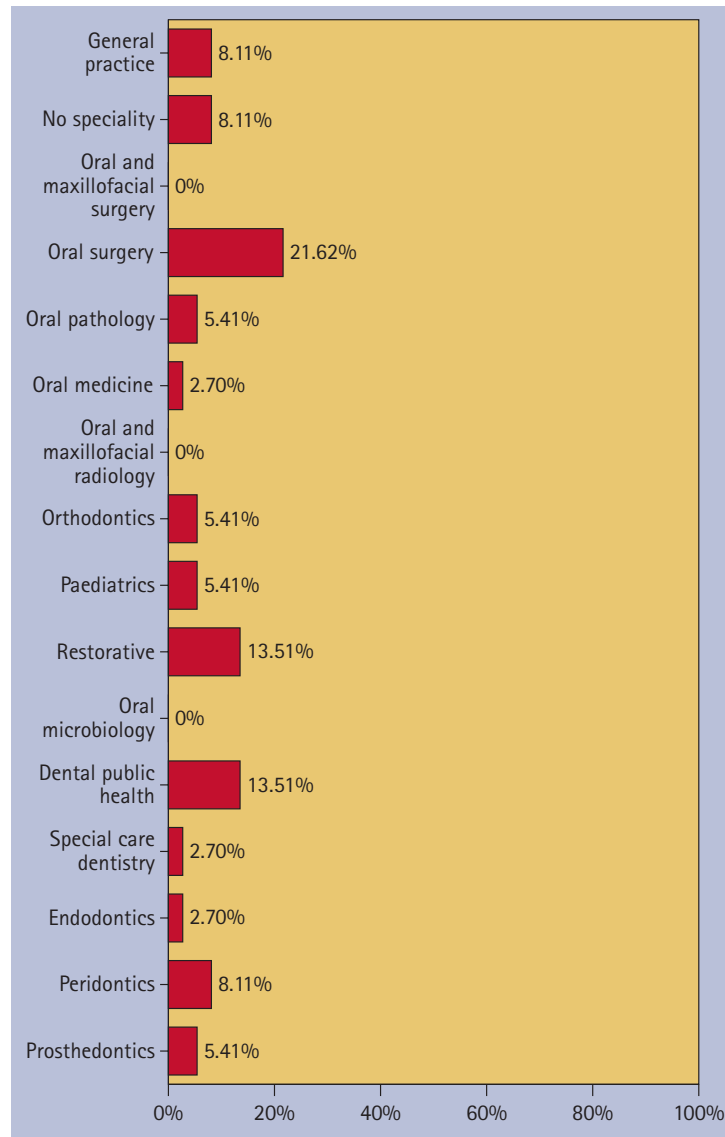


Fig. 1 Speciality of respondents

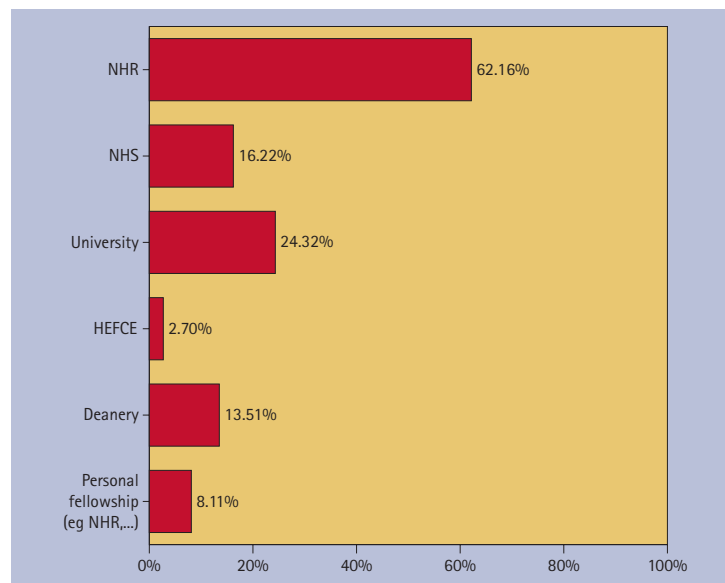


Fig. 2 Source of funding

first year, 26% in their second, 16% in their third, 11% in their fourth, 7% in their fifth and 3% in their sixth year or above.

Trainees were supported by a number of different organisations (Fig. 2). The majority

were funded by NIHR (62%). A total of three trainees were currently funded by a research/doctoral training fellowship from NIHR, MRC or a research charity such as the Wellcome Trust. Trainees were also funded

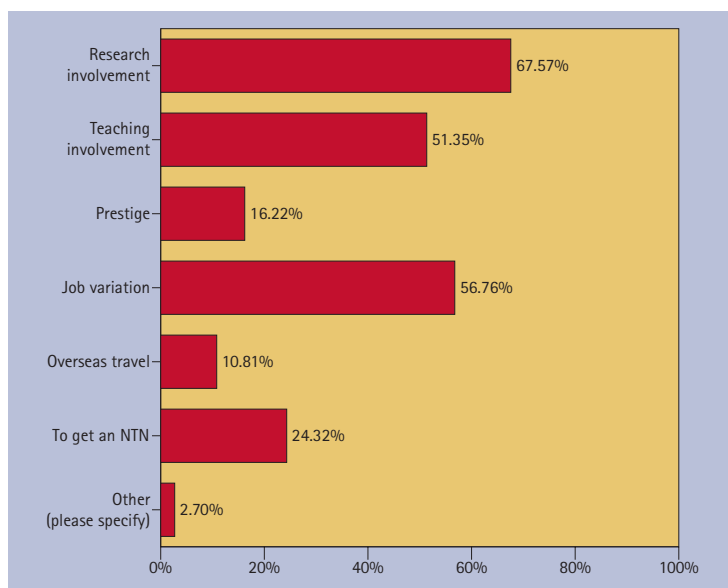


Fig. 3 Reasons for entering academic career

mixes of time spent undertaking clinical work, teaching, administration duties and research activities throughout the week (Table 1). The median number of sessions (one session is a morning or afternoon, therefore a maximum of ten sessions per five day week) for time spent undertaking research was two sessions (30%). The range for the number of sessions undertaking research was between 0-9 sessions. The median time spent participating in clinical activities was five sessions (19%) with a range of 0-9 sessions. For teaching the range was 0-4 sessions with the majority of trainees undertaking 0 teaching sessions (32%). Finally the range for administration sessions was 0-5 sessions with a median number of sessions undertaken as one (49%).

The majority of trainees agreed that their research time was protected (Table 2.) A total of seven trainees disagreed or strongly disagreed that their research time was protected from other duties.

When questioned about mentoring, 19 trainees (51%) had a mentor, 16 trainees (43%) did not and two trainees were not sure.

The final question on the questionnaire asked if the trainee would recommend a dental academic training post, to which 27 trainees replied 'Yes' (73%). Only two trainees stated that they would not recommend a clinical academic training post (5%) and eight trainees were still undecided.

A section for open text comments was available for all questions and a final section at the end of the survey. Unfortunately, few trainees took the opportunity to complete this section.

DISCUSSION

Over the past few years, clinical academia has seen huge reform and the Integrated Academic Training Pathway (IAT) has been instated. The first cohort of these posts in dentistry was taken up in 2006. The number of dental academic trainees has continued to grow year on year. Now there is a recognised and arguably structured career path for young dentists to follow into academia. The first step on this career pathway is the NIHR academic clinical fellows (Fig. 4). These posts combine clinical speciality training with 25% protected research time (nine months) over three years of the post for the trainee to gather pilot data and apply for an externally funded research training fellowship (RTF). This allows the trainee to be paid a clinician's salary to undertake a PhD. Following undertaking a PhD, the trainee can move into an NIHR Clinical Lectureship. This four-year post provides the trainee an opportunity to finish registrar clinical training but also 50% of the time is for protected research time to

	0	1	2	3	4	5	6	7	8	9	10
Research	3%	8%	30%	16%	16%	11%	0%	3%	5%	8%	0%
Clinical	8%	16%	5%	8%	14%	19%	16%	8%	3%	3%	0%
Teaching	32%	27%	19%	14%	8%	0%	0%	0%	0%	0%	0%
Admin	41%	49%	3%	3%	3%	3%	0%	0%	0%	0%	0%

Working week divided into ten sessions over five days. Trainees asked to split their week into sessions spent undertaking clinical, teaching, research and admin duties. Sessions undertaken

Question	Strongly agree	Agree	Neither agree/disagree	Disagree	Strongly disagree
In general, my research sessions are protected from other duties	30%	32%	19%	14%	5%
I am satisfied with my academic training	27%	46%	16%	11%	0%
I am satisfied with my clinical training	30%	43%	8%	3%	0% (N/A 16%)
In my future career I will be involved in academia	30%	57%	8%	5%	0%

by the NHS (16%), local deanery (14%), universities (24%) and HEFCE (3%).

When questioned regarding acquisition of a higher degree, 24 trainees (65%) had no higher degree, nine trainees (24%) had a PhD, five (14%) had an MSc, one had an MPhil and one an MRes.

Encouragingly of those trainees who did not have a higher degree, nearly half of the trainees were working towards one in the form of a PhD (8%), MRes, (3%) or MPhil (3%). Only seven trainees were not working towards any higher degree and had not already obtained one.

Just under half of the respondents had a teaching qualification relevant to the

higher education sector for example, certificate in higher education/academic excellence or fellowship with the Higher Education Academy (43%). Of those without a teaching qualification 67% were working towards one.

The main reason trainees stated for choosing an academic post was to be involved in research (68%); this was closely followed by job variation (57%) and teaching involvement (51%) (Fig. 3). Other reasons trainees took up an academic training post were to acquire an NTN (24%), for the overseas travel (11%) and for prestige (16%).

The respondents' posts were organised in a very diverse way with a variety different

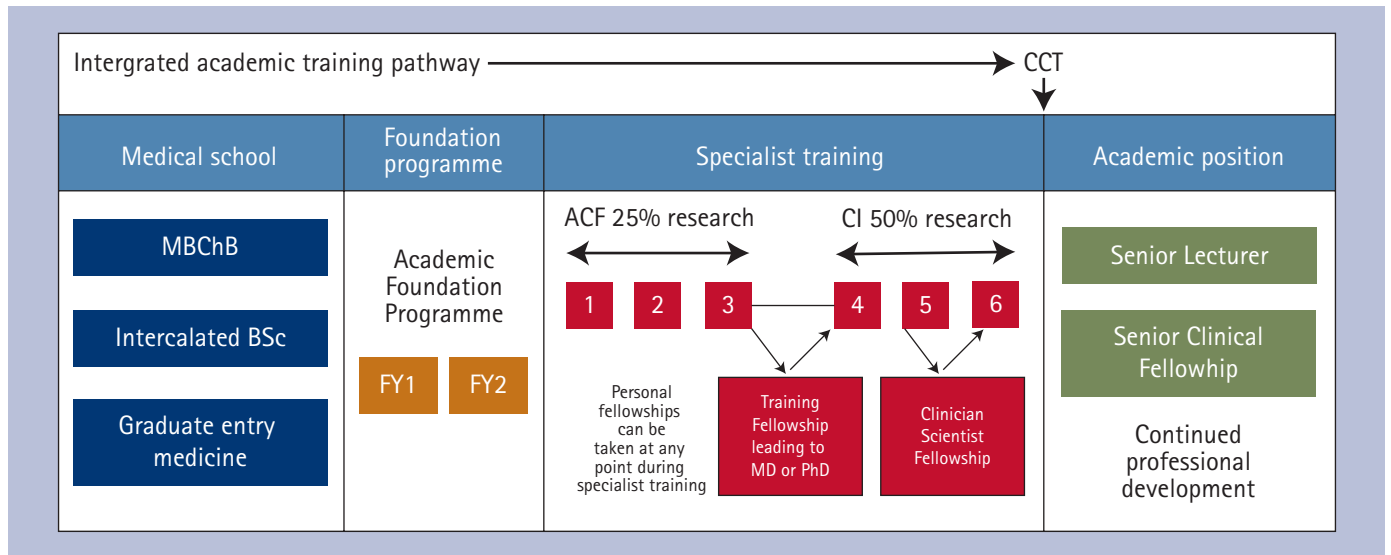


Fig. 4 Integrated academic training pathway⁶

undertake postdoctoral research. The trainee is encouraged to apply for a postdoctoral fellowship to allow them to develop an independent research career. If this is achieved, they reduce their clinical commitments and increase their research time (dependent on how close they are to CCST). At any point the trainee can convert to an NHS training post if they are unsuccessful in acquiring external research funding. Once CCST is reached they are then eligible to apply for senior lecturer positions and further senior fellowship funding.

As NIHR oversees these posts, we approached NIHR faculty to ask for a list of email addresses for all their academic trainees. For data protection purposes NIHR faculty could not provide a list of trainees, but did contact them on our behalf both for the purposes of this survey and to join the national young dental academic peer mentoring group. Other non-NIHR trainees who had joined the peer mentoring group who already had contact details for were also included in the survey. This could create some bias as some non-NIHR academic trainees would not have been included. The Walport report also recommended there should be the availability of PhDs during the BDS programme akin to the MBPhD programmes seen at select medical schools. Also recommended was the instigation of academic dental foundation year 2 (DF2) posts, where the trainee spends a block of four months in a research environment to get a taste for research.⁴ Both these recommendations are yet to come into fruition, although both have been implemented in medicine.

The 2000 survey by Goldacre had a male predominance of 76% in the whole survey, which included senior academics.² Traditionally this career path has been

dominated by men, Walport and colleagues identified that academia did not adequately support women, especially those with a family, and that the profession needed to do more to retain and encourage female academics.⁴ In contrast to the Goldacre paper, this survey included responses from a majority of women (62%). This shift in the demographics of dental academia in the younger generation suggests that potentially the changes to academic training have encouraged more women to consider academia as a career pathway. However, what also should be taken into account is the fact that more women in general are entering into medicine and dentistry compared to men.

Respondents were from a range of specialities, but predominantly from oral surgery (22%). The authors recognise the sample would be highly heterogeneous due to the method used to gain trainee data. Currently there is no reliable database of all dental academic clinical trainees in the UK hence the NIHR and dental academic clinical trainee mentoring group databases were used in order to generate the largest and most representative sample available.

There was a large variation in combinations of how academic dental trainees' timetables are organised. Some trainees did have a large percentage of their week taken up by teaching commitments. From the survey results, these trainees were NIHR trainees and also disagreed that their research time was protected. This is a worrying result. NIHR IAT posts are designed with protected research time. This appears to be being abused in some institutions, with some trainees seeming to be loaded with teaching responsibilities, which is not what these posts are designed for. This protected research time is crucial to allow each trainee to undertake research to accrue pilot data to

make them competitive for external funding such as an RTF.

Encouragingly, a number of academic trainees already held PhDs or were working towards one. Currently, three trainees held RTFs acquired through open competition with the medical specialities. This shows a positive move towards young dental academics applying for and also being successful in obtaining grant funding.

Mentoring has been shown to play an increasing role in the development and success of clinical academics' careers.⁶ The Academy of Medical Sciences is an organisation which among other things heavily promotes mentoring in clinical academia. It has a list of over 1,000 fellows who are senior, leading lights in academia which can be paired up with junior academics needing a sounding board. Just over half of the dental academic trainees had mentors (51%), but half didn't. As mentoring has proven to be helpful in develop and retain staff in academia, dentistry as a profession should encourage this practice as much as possible. The emphasis should be placed on encouraging trainees to seek mentors outside of their immediate units/institutions so there is no bias and they get truly impartial help. Mentoring by peers (peer mentorship) has also gained popularity, particularly in the United States.⁷ It has been recognised that mentorship between colleagues of similar career level is beneficial as they would have been through similar events and are more in a position to offer help than someone very senior.

Past opinions by young clinical academics showed dissatisfaction with their academic and clinical training as a whole.^{2,8} These findings along with those from surveys in medicine helped form the basis of the Walport report, which stated lack of

career pathway structure and availability of post CCST support as being major reasons not to enter into academia. The Goldacre paper reported only 56% of junior academics would recommend a career in clinical academia.² Today, the majority of dentistry's academic trainees (73%) would recommend an academic career to their peers, a positive change in the culture of modern clinical academia. Hopefully this change in opinion will continue into the future and the profession will continue to grow and encourage the brightest graduates. This is very encouraging, but there are still trainees who are not getting full benefit of their NIHR IAT posts. It is crucial that their protected research time is indeed protected to give the trainee the best possible chance of getting external research funding and a good research training to set them up for the rest of their careers.

The final aspect of ensuring the survival of academic dentistry is the inspiration of the next generation of young dentists to enter this career pathway. Personal experience from both authors has identified that there is a lack of awareness and understanding by dental students of this career pathway. It

is essential students are engaged with academia at an early stage in their careers so that the brightest and most capable minds are attracted to the speciality. Recently, the Academy of Medical Sciences in collaboration with the Wellcome Trust launched the INSPIRE scheme. This scheme promotes academia and research among medical and dental students. As part of this scheme, dentistry has been awarded a grant to host a conference for dental students to encourage research and to increase awareness of an academic career. This conference is to be held in 2015 and will see each dental school sending five 'Research Champions' to the event to present their research and learn about an academic career. They will then go back to their respective institutions to organise their own event at a local level to engage the whole of the student body with academics in their institutions. It is hoped this event will help jumpstart the influx of new blood in dental academia and ensure the future of the speciality.

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