

# Journey towards a dental career: the career decision-making journey and perceived obstacles to studying dentistry identified by London's secondary school pupils and teachers

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## Key points

This paper explores the dental career decision-making journey, with the 'student voice' providing clear evidence of the support young people may require at every stage of the process to accessing dental education.

Raising the profile of dentistry by dental professionals, within schools and wider society, may help initiate aspiration.

Dental professionals can support pupils in their exploration of the career and the demanding application process, particularly for pupils who may face greater challenges, to help widen access.

## Abstract

**Objective** To explore the career decision-making journey towards dentistry and identify possible challenges and supports in this process as perceived by academically able, science-minded, London school pupils and their careers teachers.

**Methods** A mixed-methods study was conducted using a purposive sample of London schools. Focus groups ( $n = 13$ ) with 91 pupils aged 14–18 years and a survey of career teachers ( $n = 12$ ) were conducted at a range of school-types. A topic guide, informed by the literature and previous research, guided discussions. Ethical approval was obtained from King's College London Research Ethics Committee (BDM/10/11–17 and 14/15–40). School, teacher, parental and pupil written informed consent were obtained. Data were transcribed and analysed thematically using framework methodology.

**Results** Four distinct phases of the career decision-making journey were identified: 1) initiation of aspiration, with wider influences promoting medicine as a primary aspirational career option; 2) exposure to dentistry as a career, leading to recognition of dentistry as an alternative; 3) exploration of the career; and 4) the application process. Dentistry received little early consideration in this process. Greater representation of dental professionals within the school, access to work experience, and support in the student application process were identified as possible supports.

**Conclusions** The findings suggest a four-phase journey towards a dental career, which may be enhanced by engagement of dental professionals at each stage. This may be particularly helpful in widening participation from under-represented groups.

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## Introduction

### Why dentistry in the UK?

Dental education is delivered across 16 dental schools (and two postgraduate dental schools) in the UK, all of which are in the public sector.<sup>1</sup> Entry to dental schools is competitive, with applicants required to achieve high grades in science subjects.<sup>2,3</sup> National research suggests that early career dentists in the UK embark on a career in dentistry 'because they perceived that it provides a financially lucrative, contained career in healthcare, with professional status, job security and the opportunity to work flexibly'.<sup>4</sup> Furthermore, 'long-term professional expectations were closely linked with their personal lives and support a vision

of a favourable work-life balance'.<sup>5</sup> Similar perspectives have also been identified among undergraduate students.<sup>5,6,7</sup>

### Who enters dentistry in the UK?

Universities are required, under the Office for Students, to attract students from diverse backgrounds and 'improve equality of opportunity for underrepresented groups to access higher education'.<sup>8</sup> UK dental schools have responded by employing a variety of initiatives to widen participation to dentistry, both individually and collectively.<sup>9,10,11</sup> Dentistry has been shown to attract more UK applications from women, those of Asian ethnicity, direct entrants to university, pupils from selective schools, and Londoners. Male applicants, students

of white and Black ethnicity, those from England (excluding London) and those from lower social groups continue to be under-represented among those accepted to dental school.<sup>3,12,13,14</sup> As a result of alterations to A-levels and admissions during the COVID-19 pandemic, there was greater intake of dental students in 2020/21,<sup>15</sup> and new initiatives (such as summer schools) focused on addressing the under-representation of rural students.<sup>16</sup> Given the diversity of the applicant population and the challenge of addressing multiple under-representations,<sup>17</sup> at dental schools, it is crucial we listen to student voices to explore challenges faced and recommendations for improving the aspirations of capable students.

### Career choices

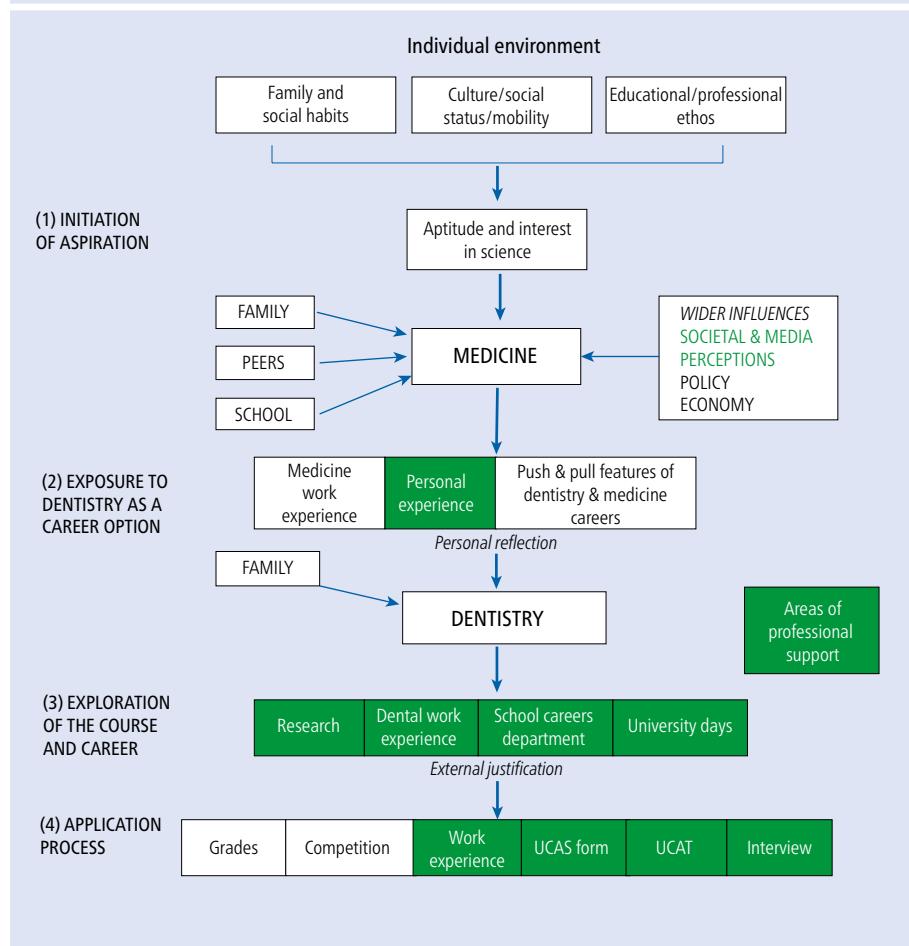
This is the second of two papers based on qualitative research conducted among science-minded able young people at London secondary schools.<sup>7</sup> Our previous paper identified a range of 'pull factors' young people perceived from studying/a career in dentistry, which included: 1) science-based; 2) status and security – extrinsic rewards; 3) structure of service provision; 4) career opportunities; 5) social interactions; 6) personal skills and care – intrinsic rewards; and 7) being a vocational degree. This supported previous findings and contextualised these perceptions with individual and wider influences, including personal experience with dentistry, social and community networks, and the school environment, as well as system- and societal-level influencers.<sup>4,5,6</sup>

In light of the above, this paper explores pupils' career decision-making journeys towards dentistry and identifies challenges and supports in this process, as perceived by academically able, science-minded, London school pupils and their careers teachers.

### Methods

Qualitative research to explore the views of academically able, science-minded young people's (aged 14–18 years) journeys towards dentistry (or not) as a potential career involved a series of focus groups conducted in school settings 2011–2018. Questionnaires were provided for the career teachers at each institution to identify sources of dental professional support within the school and perceived facilitators and barriers to their students considering a career in dentistry.

**Fig. 1 Dentistry career decision-making pathway as perceived by London secondary school pupils**



Ethics committee approval was gained from King's College London Research Ethics Committee (No. 10/11–17 and 14/15–40).

The full methods have been detailed in our earlier paper.<sup>7</sup> In brief, purposive sampling included of a representative range of London schools comprising state, academies, grammar and independent schools.<sup>7</sup> Schools were approached via head teachers in the first instance to assist with approaching career teachers and pupils. Career teachers were invited to assist with recruitment and to complete a brief questionnaire, and pupils were provided with an information sheet. All students (and parents of those below 16 years) and careers teachers were provided with an information sheet and consent form which they were asked to complete directly if they were aged 16 years and over. For those aged under 16 years, written parental consent was obtained to participate in the study. All participants, or their parents, provided consent for anonymous data to be published.

The interview topic guide was informed by the literature and previous research. It

explored pupils' perceptions of the career decision-making process towards dentistry (or preferred alternatives) and identified areas of professional support, as voiced by the pupils, which could help them overcome challenges throughout the process. Data were thematically analysed using framework methodology,<sup>18</sup> which identified themes in the process of the career decision-making, and potential areas of perceived influence, support and challenge. This methodology provided a matrix-based system which allowed for systematic and visible stages to the data analysis process: familiarisation; identification of a provisional thematic framework; indexing; charting; and mapping and interpretation. Careers teachers' perspectives, gained from the questionnaire, were then integrated to the themes from the pupils' discussions to corroborate and expand on pupil reflections, and any divergences noted, to build a theoretical model of the decision-making journey. Please see our earlier publication for coding of participant pupils and school careers teachers.<sup>7</sup>

## Results

Focus groups (n = 13), involving 91 pupils, were conducted across 11 schools in the London area. All focus groups comprised prospective medical and dental students, allowing for exploration of the interplay of career decision-making influences between the two groups. There was significant over-representation of pupils from higher socioeconomic groups and broad representation across ethnicities and genders.<sup>7</sup> Careers teacher questionnaires were completed at all schools, except for one grammar school.

The themes are illustrated using quotations, identified by participant and focus group number, career choice (d = dentistry, m = medicine, o = other, or u = undecided), gender, school type and school stage (A = A-level or G = GCSE). The quotes from the careers teachers have been coded by school number, for example, sch3.

### Model of career decision-making journey in dentistry

The results suggest a 'four phase journey to dental school': initiation of aspiration; exposure; exploration; and application process (see Figure 1). Each phase of the career decision-making journey will be presented, drawing on both pupil and teacher perspectives.

In the early stages of the career journey, individuals' environment, particularly their family, was an important influence in the career decision-making process. Many pupils perceived a 'pro-professional parental ethos':

- *'My background is that everyone's quite educated. My dad was a pilot, my mum was a nurse. My mum's brothers and sisters are all doctors and lawyers and all of that. So, it's something I was brought up in'* (P7,2,m,♀,↑s,A).

This familial/cultural influence reflected social class and status aspirations:

- *'It has to be high as well, I can't just do something like, lower. Top end stuff. Professional and high earning'* (P1,2,m,♂,↑s,A).

The requirement for a professional career was as much to do with status as the career itself.

#### Phase 1: initiation of aspiration – medicine first

Focus group participants were selected for being 'science-minded' and aptitude for science at GCSE-level was a prominent initiator of the consideration of a science-based professional career – not necessarily dentistry:

- *'I enjoy the sciences as well, they're probably my best subject, so it made sense to go in that direction'* (P1,5,d,♀,↑i,A).

While some pupils expressed a generalised interest in science, many of those interested in a career in medicine identified a much earlier aspiration initiation:

- *'For a long, long time, I always said "I want to be a doctor, I want to be doctor!"'* (P1,3,m,♀,↓s,A).

Interestingly, none of those interested in dentistry had the same focused aspiration. Negative societal perceptions of dentistry are one possible reason for limited early aspiration in this area:

- *'Because dentists are seen as scary, sometimes evil [interjection from other participant: "sadistic"], because they tell you not to have sweets. So not many people say, "when I want to grow up, I want to be a dentist"* (P8,9,m,♀,f,A).

This illustrates the importance of the public presentation of the profession of dentistry.

Once this scientific aptitude has been recognised, pupils identified that, from multiple sources (family members, peers and the school), the assumption would be that they should study medicine:

- *'They was like "oh well you're smart enough to be a doctor". Doctor, doctor, doctor'* (P1,3,d,♀,↓s,A).

In this context, dentistry was seen as less desirable:

- *'I mean yeah, they have the same thing, why not a doctor, why don't you [...] why don't [...] it's like you're settling for something less, like "oh why don't you become a doctor rather than a dentist", that's how it's seen like'* (P6,3,d,♀,↓s,A).

Again, this reflects the perceived social status of career choice. This was both social class-based and linked to culture and ethnicity. Pupils from a variety of different schools made the link between ethnicity and career choice:

- *'Well, I'm Asian [laughter], so it's kind of implied! I'm joking. [Interviewer: what do you mean?]. Because it's just the way we are, we have to [...] I don't know why, but if you're Asian you naturally want to do that. I don't know, it's just the way it is. Yes, it's stereotypical but it's true at the same time'* (P1,2,m,♂,↑s,A).

In the examples given above, parents and pupils shared an ambition for social mobility and social status with a focus on a career in medicine.

This proposition of medicine as a primary career choice for pupils with an aptitude for science was echoed by schools:

- *'And then teachers at school, the ones that become really full of you (because you are good at science), and then expect you to become a doctor. And when you're like, "no", it's like you just took their life and threw it out of the window: "what do you mean, you're not going to be a doctor?!"'* (P8,9,o,♀,f,A).

The positive portrayal of doctors in the media was identified as auxiliary reinforcement of the perceived high social status of doctors, in contrast to the portrayal of dentistry. The pupils proposed that improving the public perception and media representation of dentists would raise the profile of dentistry as a career option:

- *'A healthier portrayal in the media and the press'* (P1,8,d,♀,↓g,A).

These results reveal the familial, educational, cultural and wider societal environment, which presents medicine as a primary aspirational career for pupils with an aptitude for science. This echoes Robb *et al.*'s identification of five influences on pupils' development of academic identity and medical ambition: family; school; peers; past experiences; and psychological resources.<sup>19</sup> For some pupils, medicine will be their chosen career. However, students who are still unsure of medicine as a potential career and are open to alternative career options may consider dentistry as a career option.

#### Phase 2: exposure to dentistry as a career option

Although medicine may be presented as the initial option, for those who do not select, or actively resist, medicine, other careers are considered:

- *'The more my dad says "do medicine" the more it puts me off'* (P6,5,d,♀,↑i,A).

The exposure to dentistry as an alternative may come from several sources. Some pupils reported that their family proposed dentistry:

- *'My dad introduced me to dentistry. Because he is a doctor and I was, you know, previously I was into medicine, so he was like "maybe you should go for something else". My family would probably support me in whatever*

*I did. Although I would say that they did influence me a lot in choosing dentistry' (P6,8,d,♀,↓g,A).*

Others were influenced by their own experience of dentistry, as a patient and/or from their relationship with their dentist:

- *'I'd say it [tooth extraction] was quite a positive experience actually because I wasn't that scared at all, and I thought, that's also where my inspiration came from to be a dentist' (P3,1,d,♀,↑i,A).*

Medical work experience was also a source of exposure to dentistry as an alternate career:

- *'And when I did work experience at the hospital, at the beginning, a lot of doctors there were telling me to try for dentistry instead. I think, 'cos they [junior doctors] were doing really hard and long hours and advised dentistry as preferable' (P6,8,d,♀,↓g,A).*

Interestingly, however, no pupils mentioned their school proposing dentistry as an option:

- *'They [the school] kind of forget that dentistry even exists. It is easy to forget about it because it is so badly advertised' (P5,2,m,♀,↑i,A).*

This highlights a gap in current provision. When asked, pupils suggested that schools could increase exposure to dentistry as a career in several ways. At the most basic level, more information is needed:

- *'I haven't had enough knowledge on dentistry. And perhaps if I did, I would have actually wanted to go into that field more' (P5,8,m,♀,↓g,A).*

Particularly through, talks from dentists themselves:

- *'It would be useful [to have a dentist talk] because we don't hear anything about it really. It's a very unspoken about career' (P1,11,o,♀,↓i,A).*

It was proposed that these talks would be appropriate in the first year of GCSE studies to enable pupils to select their A-levels (or equivalent) in line with admissions requirements. The potential impact of talks within schools was echoed by several careers advisors:

- *'Student involvement in groups such as these [ie the focus groups] helps to "raise student awareness" (Career Department, sch2).*

Dental schools were not deemed to be 'advertising' the career of dentistry sufficiently to schools, especially in comparison with medicine. This resulted in individual pupils needing to carry out independent research about the course and career:

- *'It's just seen as something that people choose themselves to do. It's not advertised at all. So, I think universities themselves could advertise it more' (P3,2,m,♂,↑s,A).*

Even though dentistry may not be initially identified as a career option, sources of exposure – family, work experience, personal experience etc – can raise the profile of it. Once dentistry has been recognised as a potential career option as an alternative to medicine, then pupils actively explore dentistry.

### *Phase 3: active exploration of a dental career and course*

Pupils in this study gathered information about a dental career from private research and the school. Dental work experience was also useful to counter negative stereotypes of the profession:

- *'I learnt how there is so much more to the [...] to it [...] than actually just sticking your hand in someone's mouth, and sort of cleaning their teeth, you know, it is a lot of [...] it is fun and it's really good' (P7,4,d,♀,↑i,A).*

Talking with dental professionals was perceived as important. Pupils encountered these professionals during work experience and from their social networks. It was acknowledged (by students and careers staff) that pupils with dental professionals within their social networks had an advantage, not only in the exploration phase of the career decision-making process, but also accessing work experience:

- *'Knowing people. Not just work experience but knowing people [...] someone who has ten dentists in their family will obviously have an advantage because they can talk to someone, the person is accessible for them to talk to always, so it's not just in terms of work experience but also getting a better idea of the career' (P7,3,d,♀,↓s,A).*

This illustrates the importance of social networks but is also suggestive of shared social class backgrounds.

The supportive role played by schools was seen as having a limited impact on the decision-making process. Schools provided

careers advice through discussions, careers fairs and talks with professionals. Guidance was provided dependent on perceived aptitude and interests of the pupil:

- *'I think that what happens is, we choose, and then our teachers, the head teachers, choose whether they think we are fit enough, or [if] they think we can, like, do it' (P3,7,m,♂,↑g,A).*

Whatever the level of guidance provided by the careers department, independent research was also needed although relevant online resources were lacking:

- *'Obviously everybody knows about medicine, but I just think dentistry is sort of, er, it's not [...] it's not, you know, you are not made as aware of it as other careers, so you have to kind of find it yourself, which I think wasn't good' (P7,4,d,♀,↑i,A).*

All the A-level pupils at the remaining schools stated that they had a careers fair at school but that dentistry was not represented, and most of the pupils' recollections about these days/evenings were vague:

- *'I THINK we did have a [careers] day' (P4,1,m,♀,↑g,A).*

The careers teacher advised after the focus group that the pupils had all attended a careers fair less than one year previously. This research suggests that careers fairs may be of limited value and while representation of dentistry may be important for the small number of pupils already considering dentistry as a career, it does not broaden exposure to dentistry as a career choice.

Careers teachers identified several ways the dental profession could improve the exposure and exploration of the career for their pupils:

- *'Some professional bodies are very skilled in the production of factual/promotional materials to encourage potential student awareness. I feel dentistry might do more in this respect' (Careers teacher, sch3).*

• *It was suggested that dental schools could get more involved in providing information about studying dentistry. Many of the schools in this study invited professionals to talk with the pupils about potential future careers. None of the schools provided talks with a dentist, however:*

- *'You know normally we have outside speakers who come in and talk to us? We never had a dentist' (P3,5,d,♀,↑i,A).*

Pupils were more likely to remember talks than general fairs, which suggests that this is a good way to promote the profession to those who had not previously considered it as an option.

Reflecting on the features of the career, particularly in comparison to medicine,<sup>7</sup> and their own aptitudes and abilities, there was recognition by the pupils that once the decision is made, it is a firm choice:

- *'It's not really a cliché job to choose, but if he said doctor, loads of people want to be a doctor. But if he said dentistry, because not everyone says that, you know, it's ACTUALLY what people want to do, because it's not as popular a choice'* (P4,2,m,♀,↑s,A).

But that this choice may require external justification:

- *'I first said medicine [to my family] and they seemed excited about it, but when I said dentistry, they thought it's not as higher status as medicine, so it's sort of downgraded a little bit. But after I explained to them that it's as hard as med school then they understood'* (P2,9,d,♂,↓f,A).

As pupils have to actively explore dentistry as a career during Phase 3 and rationalise it as an acceptable alternative to medicine, this process appeared to build determination to study dentistry, leading to the application process.

#### Phase 4: application phase

Having decided upon dentistry as a career choice, high grades, the level of competition, the UCAT (University Clinical Aptitude Test), the UCAS (Universities and Colleges Admissions Service) process, the level of work experience, and the interview process were highlighted as challenges to the application process. All pupils from all schools were concerned about achieving the A-level grades, and entry to dentistry was seen as highly competitive, especially when compared with other courses. Interestingly, those that were hoping to study dentistry perceived entry to dental school as more competitive than medical school, but among all the other pupils, medicine was perceived as more competitive. There was general acknowledgement that dentistry would be more competitive than other courses because of limited spaces, but less competitive than medicine due to the perceived high volume of pupils who wish to study at medical school:

- *'From my point of view, there's less competition to be a dentist. Whenever I ask someone, they don't really say they want to be a dentist. They want to do medicine, so from what I think, there's more competition to study medicine at university than dentistry'* (P4,9,d,♂,f,A).

The UCAS form itself was not identified as a particular concern for the pupils, but the personal statement and the subjectivity of its interpretation were cited:

- *'But it depends on a lot of things [...] things like [...] how much the admission tutors like my personal statement really'* (P1,8,m,♀,↓g,A).

Many of the pupils across all school types were particularly concerned about the interview; a necessary stage in the application process to dental school:

- *'I think the most daunting thing about medicine or dentistry [is] not the competition but the interviews'* (P2,8,d,♀,↓g,A).

There was no evidence among the pupils of perceived prejudice in the admission process by sex or ethnicity. However, state school pupils and the further education college (42% of participants were from these school types) suggested that those from more privileged educational backgrounds were advantaged in the application process, not directly because of their education, but because of the level of school support, together with their articulation and confidence. Further education college pupils also suggested that this advantage to those from higher social classes (57% of participating pupils were from high socioeconomic groups) reflected a potential bias towards more articulate and confident pupils in the admissions process:

- *'Someone of a higher class, they usually have better vocabulary [and] way of speaking let's say than working class. I know maybe they say they don't do that, but there is a bit of bias towards higher class'* (P2,9,d,♀,f,A).

This reflects the perceived social advantages that pupils from higher social classes have over and above educational attainment.

Although some pupils identified support from doctors in the application process to medical school, the equivalent support from dentists was not cited in relation to dental school applications:

- *'They came and they talked to us, they helped us on personal statement, interview skills.'*

*'But I'm not aware that you guys have had it for dentistry?'* (P5,8,m,♀,↓s,A).

The option for pupils to participate in a 'dentistry only day' was proposed with the potential to provide community social support, or a Medlink alternative (reiterated by a careers teacher from a different school). One of the grammar school pupils had access through their school to a 'medicine preparation day' provided by another organisation. This was marketed as catering for medicine and dentistry degrees, but the pupils were disappointed that the focus was primarily on medicine and didn't consider wider careers in health care.

Work experience was a wide concern for pupils, both in relation to being able to find dental surgeries that would accept pupils on placements, and the perceived importance of work experience in the application process. Three careers departments also highlighted this as a potential barrier. Age requirements for placements and UCAS application deadlines were also highlighted as problematic:

- *'Yes, everybody can get the grades if they actually work hard, but it's the work experience'* (P5,6,o,♀,↓i,A)
- *'Lots of people who are wanting to do dentistry are like, "I'll just get my dad to tell me what to say in the interview," and it's, like, "yeah, but I don't have that, so I have to get it all from work experience and on my own and stuff." Like, speaking for the majority here, we're not exposed to being a dentist or doctor so we wouldn't be able to get hold of them in order to arrange work experience or something in the desired place and so they have more of a chance to get into it than us'* (P2,8,d,♀,↓g,A).

The final concern among pupils was the UCAT, which is a test most dental and medical schools require applicants to undertake as part of the application process. The relatively late introduction of this test in the pupils' academic lives and their lack of experience and practice concerned older pupils:

- *'I think for the rest of us, the UCAT is quite a daunting prospect 'cos it hasn't been introduced to us very early on like most other qualifications are, and it is a big role in you actually getting into the course. We're all very [...] traumatised about it!'* (P7,8,d,♀,↓g,A).

There are a number of clear themes emerging from this journey. Medicine was seen as the primary option with elite status in the eyes of parents, schools and many pupils. Exposure

to dentistry as an alternative career option in health care was limited and for the interested and determined few, almost always contrary to school views and sometimes in opposition to parents. However, there was a strong perception that more assistance in exploring a career in dentistry was required.

## Discussion

This study, the first of its kind, provides the 'student voice' within the dental career decision-making process, identifying not only areas perceived as challenging, but also proposals on how they may be addressed. The 'pathway' developed incorporates and lends congruence to published findings on medical identity, ambition<sup>19,20,21</sup> and career decision-making,<sup>4,6,7,22</sup> while identifying key stages in the journey. Understanding this career pathway, and potential sources of support and challenge, deepens our knowledge of how, as professionals and policy advocates, we can diversify access to dentistry and the future workforce.

This study purposively sampled science-minded GCSE and A-level pupils, with the aim of including only students who may have the propensity to meet the stringent entry criteria for dental school. Future research, however, could explore pupils' career decision-making earlier in the journey, before the recognition of science aptitude, to explore other initiators of aspiration. Given the recent data showing that young people from rural areas of England, especially those from under-represented and disadvantaged groups, have lower rates of entry to elite university than their urban counterparts, future comparative research could be conducted in other regions of the UK (and other countries) to further inform our understanding of the career journey and its challenges.<sup>23,24</sup> This may be especially beneficial in regions where there are fewer dental applicants and a lower dentist-to-population ratio.<sup>3,12</sup> There is the potential for this research to be replicated with current dental students from under-represented backgrounds to explore and contrast their perceptions of the journey towards dentistry. The data were collected pre-COVID-19 (2011–2017) and it is acknowledged that the pandemic had a major impact on the admissions processes and clinical care.<sup>14,25</sup> Nonetheless, many of the issues highlighted in this research remain, with new challenges

emerging during and post-lockdown, and evidence of greater national social and educational inequalities emerging.<sup>26,27</sup>

An interesting aspect of the decision pathway is the importance of status – not only as a pull factor towards a career in dentistry,<sup>7</sup> but in the emphasis on medicine. This historical perception of the high status of medicine (initiated as one of the oldest professions)<sup>28</sup> has been maintained due to its exclusivity (the competitive admissions process).<sup>29</sup> This is compounded by the medical student cohort, which is more likely to have students from higher socioeconomic groups and from selective schools.<sup>3</sup> These societal perceptions of the professional elitism of medicine, shown in this research to be reinforced by family, all school types and the media, promote 'medicine first' as a career choice to pupils. For pupils who rationalise their decision away from medicine and decide upon a career in dentistry, determination for this career may be cemented as they need to justify their career choice.

Barriers to improving access among pupils to dentistry that were identified by the participant pupils and careers departments include barriers to exposure to dentistry as a career and lack of support in applying to dental school. Although exposure to dentistry by family, social networks and personal experience was variable, encounters with dentistry as a career option through the school (especially through small group talks with local dentists or university representatives) was perceived as an area for action (Figure 1), which could reduce the disadvantage of pupils who do not have 'social-professional' networks. Both staff and students perceived that this could be supplemented by involving professionals in programmes such as STEMNET and the provision of promotional literature at school may help raise the profile of dentistry not only to pupils. Dental professional representation at careers events, and as recommended by staff and pupils alike, earlier in the educational pathway of pupils, may help increase the exposure of the profession as a career option. This paper proposes a pathway which suggests areas for secondary investigation. Given the temporality and timing of the study (pre-COVID-19), these findings are tentative and should be tested in further primary research, as they address a significant gap in the literature.

## Conclusions and recommendations

To support pupils through the application process, barriers perceived by the pupils in applying to dental school could be reduced by various means. Suggestions included contact with current dental pupils, offering support with UCAS forms and advice about studying at dental school, and local professionals providing work experience for interested pupils and practice interviews for applicants. Recent initiatives have addressed some of the pupil proposals as part of the widening participation agenda (for example, summer schools, evening lectures and provision of work experience through dental schools), which has been accelerated by the COVID-19 pandemic when no students could access in-person dental work experience.<sup>16,30</sup> Medlink now provides a dentistry section<sup>31</sup> and dental schools offer different programmes with varying entry-level requirements to support students from disadvantaged backgrounds.<sup>14</sup> As a potentially limited number of pupils from different school may be considering a career in dentistry, peer support could be greatly increased through the introduction of a regulated online forum. This research provides evidence for the importance of collaborations between schools, dental professionals and universities, and across the widening participation agenda, to help overcome the challenges pupils face in applying to dental school. These recommendations proposed by pupils (and staff) provide a platform from which we can finally hear the 'student voice'.

The profession can support pupils at different stages of this journey towards a dental career. At the individual level, general dental practitioners (GDPs) have an awareness of under-represented groups accessing dental careers,<sup>3,7,11,12</sup> and could be aware of patients who may express an interest in dentistry at an early age (support initiation stage); could support the exploration stage (helping provide work experience); and could potentially provide support in the application process. It must be recognised that GDPs may be challenged to provide work experience due to professional indemnity and general data protection regulation constraints, even with available guidance, thus innovative new ways to achieve this may be needed.<sup>32,33</sup> At a systems level, GDPs could forge links with local schools to improve dental representation. All of this is particularly important in areas with fewer dentists, where disadvantaged pupils may face greater challenges in accessing support.

Collectively, as a profession, we need to challenge outdated societal stereotypes in relation to the value of dentistry as a profession and raise the positive profile of dentists, for example, championing the impact of their highly skilled work, not just in improving the physical health but the mental wellbeing and self-esteem of their patients also. We have a responsibility to stop underselling our profession and become advocates, and if societal perceptions change, maybe more children will start to say, as they do with medicine, and inspired by the serving the needs of the population, 'when I grow up, I'm going to be a dentist'.

#### Ethics declaration

*In relation to conflict of interest, all of the authors have been involved in dental education and contributed to admissions processes to dental school.*

*Dr Lyndon Cabot is a UCAT board member and chairs the Research and Development Group.*

*Ethics committee approval was gained from King's College London Research Ethics Committee (No. 10/11-17 and 14/15-40).*

*All participants or their parents provided consent to participate in the study.*

*Consent to publish was obtained from the participants and their parents regarding the information included in the paper.*

*The participants of this study, and their parents, did not provide written consent for their full data to be shared publicly, due to the sensitive nature of the research amongst young people, hence the raw data are not available on request from the author.*

#### Author contributions

*Victoria Niven and Jennifer E. Gallagher conceived the presented idea and designed the study. Victoria Niven conducted the fieldwork. Victoria Niven, Sasha Scambler and Jennifer E. Gallagher conducted the analysis with Victoria Niven developing the model. Victoria Niven, Sasha Scambler, Lyndon B. Cabot and Jennifer E. Gallagher contributed to the writing of the manuscript, contributed to reviews and approved the finalised version of this paper.*

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