

# Summary of: The admissions process in a graduate-entry dental school: can we predict academic performance?

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## FULL PAPER DETAILS

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### Refereed Paper

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**Aim** To assess the association between the admissions performance and subsequent academic achievement within a graduate-entry dental school. **Methods** The study was conducted at the University of Aberdeen Dental School. UCAS forms for course applicants were reviewed and assigned a pre-admission score (PAS) and a tariff given for the UCAS personal statement (UCAS). Individuals ranked highest were invited to attend multiple mini-interviews (MMI), which were scored. Data was correlated with academic performance reported as the University Common Assessment Scale (0–20). Comparisons were also made between the first degree and subsequent educational achievement. **Statistics** Data were analysed by multiple linear regression, Pearson correlation and unstacked ANOVA (IBM® SPSS® Statistics 19). **Results** Data were obtained for 75 students (F: 50; M: 25). A correlation between performance at MMI and CAS scores was identified ( $r = 0.180$ ,  $p = 0.001$ ,  $df = 538$ ). A correlation was also noted between each student's first degree and the CAS scores ( $F = 4.08$ ,  $p = 0.001$ ,  $df = 9$ ). **Conclusions** This study suggests that candidate performance at MMI might be a stronger predictor of academic and clinical performance of graduate-entry dental students compared to other pre-interview selection criteria. The first degree for such a programme also appears to be significant.

## EDITOR'S SUMMARY

Competition for places at UK dental schools is fierce. Only about 40% of applicants make it onto an undergraduate course each year. As a consequence there is a lot of pressure on university selection systems to identify the candidates who will definitely make the best dentists and to decide this fairly.

Picking the right people is important for both dentists and patients. It is imperative that 'soft' skills, such as communication, empathy and insight, are considered alongside academic ability. These can be tricky to measure but it is essential. For example, a staggering 70% of litigation cases in dentistry are related to poor communication with patients.

Structured interviews are the typical tool used to determine aptitude and soft skills at UK dental schools. However, there is criticism surrounding the predictability and reliability of this method of choosing the best dentists. Also, structured interviews can favour eloquent candidates from more privileged backgrounds. This contravenes the desire to widen access to dental schools

for those from more deprived and minority backgrounds.

The multiple mini-interview (MMI) has been introduced in many UK medical schools as a way of solving this problem. This is a new selection proposition for dental schools and is being trialled at the University of Cardiff and at the University of Aberdeen. In their recent *BDJ* Education Article, McAndrew and Ellis reported on how the applicants and examiners felt about the MMI experience at Cardiff.<sup>1</sup> This particular *BDJ* research article actually compares the performance of Aberdeen students at the MMI with their performance in their degree course and indicates that there is an association between MMI selection performance and subsequent achievement on the course.

It looks like MMIs could become the selection method of choice for UK dental schools, so what exactly is involved? The MMI uses many short, independent assessments, typically in a timed circuit, to obtain a score of each candidate's soft skills. You can read more about what the MMI entails in both the Foley and McAndrew/Ellis articles but here is a

taster of questions which may be asked at stages of the interview circuit – how well would you do?

- Without using your hands, explain how to tie shoe laces.
- An actor plays the role of your elderly neighbour. You have just accidentally run over your neighbour's cat while reversing your car. You have 5 minutes to break the bad news to her.
- You are presented with a list of 15 individuals, including details of their age, sex and occupation. You are being told that a nuclear attack is imminent and you are only allowed to save 5 of them from destruction. Which ones and why?

The full paper can be accessed from the *BDJ* website ([www.bdj.co.uk](http://www.bdj.co.uk)), under 'Research' in the table of contents for Volume 214 issue 2.

Ruth Doherty  
Managing Editor

1. McAndrew R, Ellis J. An evaluation of the multiple mini-interview as a selection tool for dental students. *Br Dent J* 2012; 212: 331–335.

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**IN BRIEF**

- Suggests performance in multiple mini-interview during the admissions process may predict academic performance in a graduate-entry dental school.
- Stresses multiple mini-interviews reviewing previous relevant work experience, evidence of team-working, positive communication skills and demonstrable manual dexterity appear to have a greater predictive value of subsequent academic achievement.

**COMMENTARY**

Selection for dental school is an important yet complex and contentious subject, based on suboptimal evidence. So efforts to improve this situation should be applauded. I write from a medical education perspective but there is much in common, such as UCAS forms, UKCAT, widening access issues and now the advent of the Multiple Mini Interview (MMI or admissions OSCE) process.

This paper seeks to evaluate the predictive validity of admissions tools used by one postgraduate UK dental school. It follows 75 students from 4 cohorts and compares scores of academic and non-academic achievement based on UCAS forms plus interview scores with performance on the course. Interestingly their approach to interviewing covers seven domains using seven minute stations with one selector in what sounds like an MMI format. Unfortunately it is not described in enough detail to really understand how it functions or how closely it mirrors McMaster medical school's original process. For instance manual dexterity is identified as a domain but it is not clear how this was tested.

Around the UK, dental schools are taking up the MMI format rapidly so such studies are important and one novel aspect of this study was the inclusion of first-degree university rank. However, additional detail regarding the methodology could enable more to be taken from this paper. For instance, overall reliabilities are not reported for any of the selection or

outcome assessments, it is not clear how the variation in years of performance scores for each cohort are handled and knowledge/clinical assessments are combined, so it cannot be seen if either is more sensitive to particular selection scores.

Even so the findings are consistent in the sense that females outperform males and it is very believable that the previous universities 'rank' appears relevant. Other studies should now assess this. The MMI literature is growing and they appear consistently reliable and predictive of performance, especially clinical performance, at all levels and many sites. However, it remains unclear exactly what they measure or to what extent specific domains should be considered and dentistry may wish to take a lead here given the unique key importance of manual dexterity. Now that a worthwhile and feasible approach to interviewing has emerged, rigorous studies exploring the nuances of the process are a logical next step.

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**AUTHOR QUESTIONS AND ANSWERS****1. Why did you undertake this research?**

Competition for admission to dental schools throughout the United Kingdom is intense. Recruitment of the most appropriate candidates is imperative and a range of 'screening tools' is required for the selection of prospective dental students. Debate continues, however, as to the best way in which to choose dental students and throughout the UK substantial variations remain between dental schools. Graduate-entry dentistry is a recent innovation in UK dental training and evidence is sparse in relation to student progress and attainment on these programmes. The current study was designed to determine the relationship between performance at the selection process and subsequent academic performance within a graduate-entry dental school and in addition, to determine the effect of the first degree on achievement within the programme.

**2. What would you like to do next in this area to follow on from this work?**

The current study suggests that there is an association between admission performance at MMI and subsequent achievement on a graduate-entry dental course. Further data collection within the study institution and in collaboration with other graduate- and non-graduate entry programmes is required. In addition, the authors are currently investigating the predictive value of the UK Clinical Aptitude Test (UKCAT), an online test designed to assess cognitive ability and used as part of the admissions process within the study institution and amongst other centres.