A Cross-Sectional Study Examining Associations Between Foundation School and MRCS Performance

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INTRODUCTION

The Foundation Training Programme is a two-year generic program for all medical school graduates that bridges the gap between medical school and specialty training. Although the foundation programme curriculum, assessments and outcomes are the same across the UK, surgical training and experiences vary considerably across foundation schools (of which there are 16 spread geographically across the UK), and little is known about whether foundation school is associated with performance later in surgical specialty training.

We investigated **whether foundation school had an impact on performance at MRCS Part A**, a high-stakes postgraduate assessment known to predict future success in surgical training and career progression.

We also assessed whether MRCS performance by foundation school correlated with doctors' subjective assessment of the provision and quality of training at these locations using data from the General Medical Council's (GMC) national training survey.

MATERIALS AND METHODS

Extracted data for analysis:
- MRCS Part A and B performance data (first attempts),
- Foundation school, age, self-declared ethnicity and gender

of all UK foundation programme trainees who had attempted either MRCS Part A or MRCS Part B between January 2017 to February 2020, excluding doctors in the Academic Foundation Programme and the Defence Medical Deanery

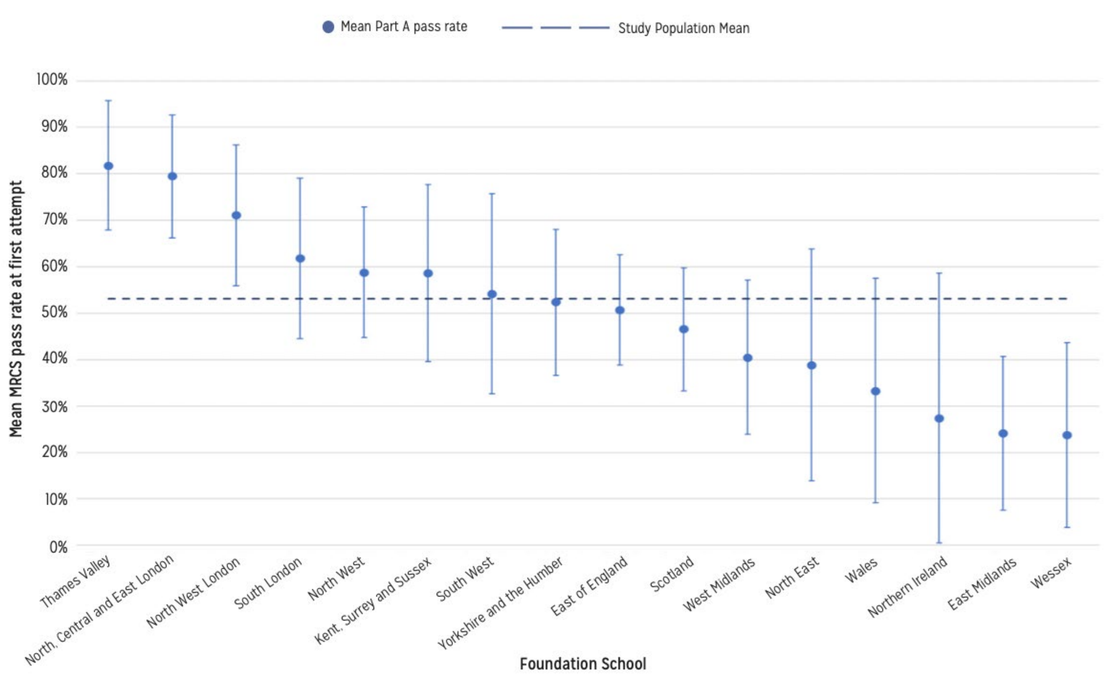
→ Matched performance data to each of the 16 foundation schools across the UK responsible for the postgraduate training of doctors and compared this with national training survey data from each school

STATISTICAL ANALYSIS

Chi- square tests were used to identify possible associations with MRCS Part A pass/fail outcomes. Multivariate regression models established the likelihood of MRCS success according to Foundation School after adjusting for age, gender and ethnicity.

RESULTS

Foundation programme data were matched for 553 UK graduates that attempted MRCS Part A between January 2017 and February 2020.



- Mean Part A pass rate at first attempt was 53.2% (294/553)
- Mean percentage score relative to the pass mark was −1.28% (standard deviation, SD, 14.2)
- Average number of attempts taken to pass the examination was 1.12 (SD 0.4)

A statistically significant association was found between MRCS Part A first attempt pass rates and foundation school ($p < 0.001$). No statistically significant correlations were identified between MRCS Part A performance and foundation programme national training survey training scores ($p = 0.256$).

After adjusting for known sociodemographic predictors of MRCS success, the only foundation schools found to be statistically significant independent predictors of MRCS Part A success at first attempt were Thames Valley (OR 5.75; 95% confidence interval, CI, 1.57–20.99) and North, Central and East London (OR 3.66; 95% CI 1.14–11.80).

No schools were found to be statistically significant independent predictors of Part A MRCS failure at first attempt.

DISCUSSION

A statistically significant association was found between MRCS Part A first attempt pass rates and foundation school. This could be possibly attributed to 2 main factors:

1. **Applicants rank their preferred foundation programme(s) at their preferred training locations across the UK and are subsequently allocated posts in order of their national ranking.**[1] Recent studies have confirmed significant differences in the prior attainment of doctors across foundation schools in respect of these and other metrics.[2]

2. **Some locations are more popular than others, attracting high-achieving applicants to certain foundation schools.** The schools identified in this paper as predictors of MRCS success are some with the greatest 'pull-factors'. Foundation schools that attract the highest achievers are therefore likely to train doctors who achieve highly in the future.

Finally, our analysis also found no significant correlation between foundation programme doctors' subjective assessment of training quality (national training survey scores) and MRCS performance.

Given these factors and the fact that learning for postgraduate examinations is largely self-taught, **it is more likely that individual differences such as innate academic ability have a larger impact on MRCS performance than foundation school.**

Thus, we suggest that the variation in MRCS Part A performance by FP is not due to the foundation school itself, but the fact that more competitive schools can attract the best applicants.

CONCLUSION

MRCS success is associated with foundation school but not with subjective indicators of training quality. Given that more competitive schools attract the highest-achieving applicants, this association is most likely due to individual differences rather than foundation school training experiences.

REFERENCES

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