Predictive validity of Dental School Selection Criteria in Europe

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Introduction

Once admitted to dental school approximately 98% of students graduate and work as dentists. Thus, it is critical to select those with appropriate attributes for training and entry into employment at the admission stage in the education and training pipeline. Concerns have been raised that traditional measures of selection are open to bias, affected by socioeconomic status and have little or no predictive validity. To date, there has been no overview of the predictive validity of dental school selection tools. This study synthesizes the dental admissions literature reporting on the relationship between performance at selection with performance throughout dental school in Europe.

Methods

We performed a systematic search of SCOPUS, Pubmed and Ovid using the MeSH terms ‘Education’, ‘Dental’, ‘Criteria’ and ‘school admission’. Exclusion criteria included Non-English Language, Post-graduate, Non-European and studies that did not present empirical data (e.g., opinion pieces). The date range investigated was 1987-2017.

Results

21 papers were identified for analysis. The nature of the study designs indicated a narrative synthesis. Only 14 of the current 228 dental schools in Europe have published any research over the last 30 years. The majority (n=17) were single site studies; 5 studies were single-cohort studies. Study populations ranged from 62 to 769. No sample size calculations were stated. Duplication of study populations was found across several of the papers by the same authors.

A variety of selection tools featured which fell into three distinct categories; Cognitive (n=9), ‘Soft-skills’ (n=14) and, Manual dexterity (n=5). Most studies were published within the last 10 years (n=14). The majority were from the UK (n=9). Most studies used a cross sectional design (n=11) and retrospective analysis (n=11) of an admission tool already in use. Only two authors reported on full cohorts through to completion of studies, with the majority only investigating performance in year 1.

Conclusions

This research highlighted a lack of good quality published work, particularly when compared with other subjects such as medicine. No conclusion can currently be drawn as to the “best” tools for dental school selection. Given that most of the research identified has been conducted over the past 10 years, dental school selection is clearly a topic of current research interest. However, without further research, admissions may fail to select those candidates most likely to become competent clinicians.

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References