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Is there a role for the use of aviation assessment instruments in preparation for ophthalmology and obstetrics & gynaecology residency?

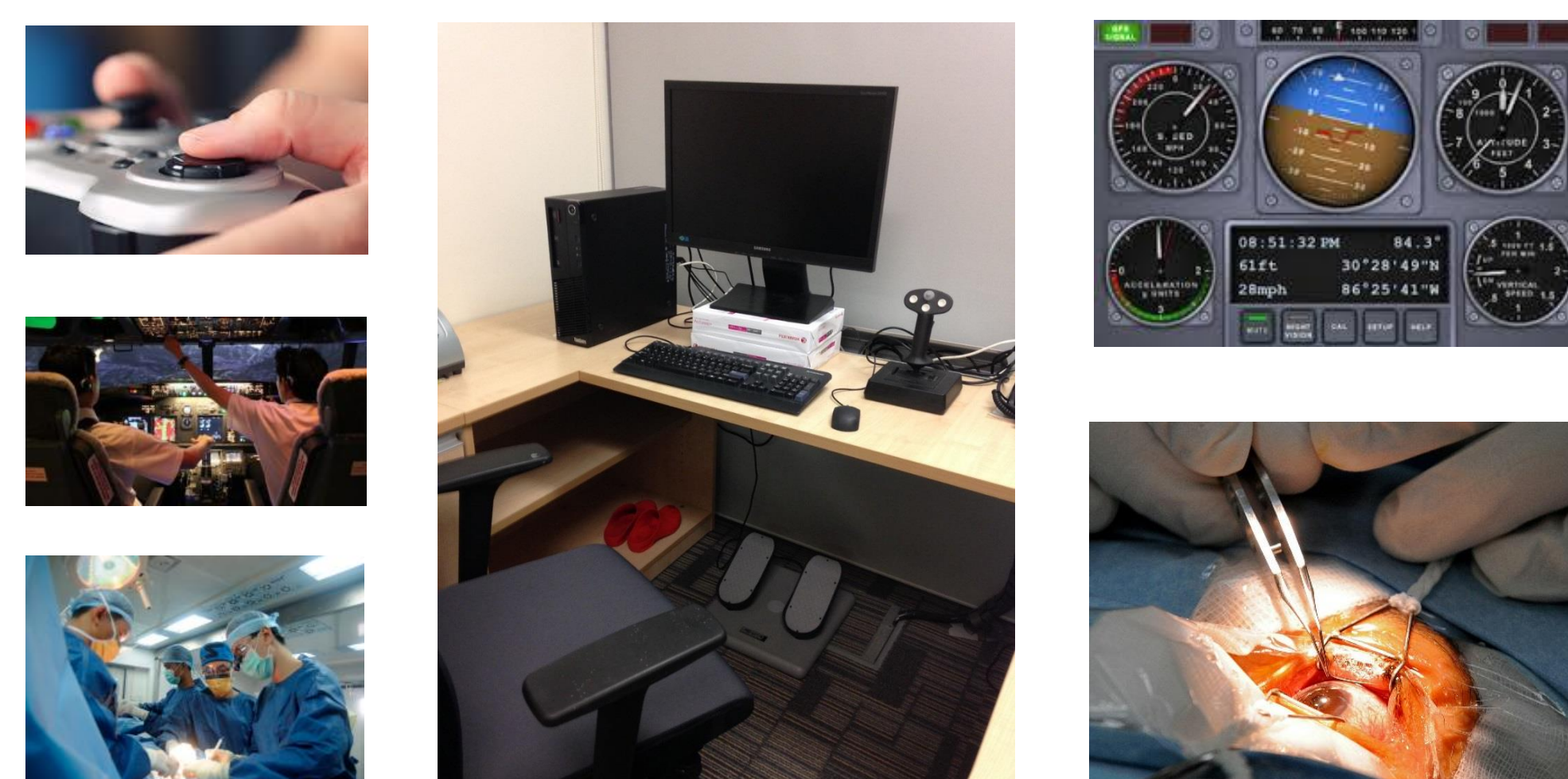
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Introduction

Selection for surgical residency programs could potentially be improved through assessment of surgical candidates' sensorimotor skills and personality traits. Self-administered and observer-independent aviation pilot selection instruments are available. This study aims to examine the feasibility of using two instruments, the Computerized Pilot Aptitude and Screening System (COMPASS) and Checklist Professional Profile (CPP) in medical trainees, and to compare its validity against performance on a surgical skills station.

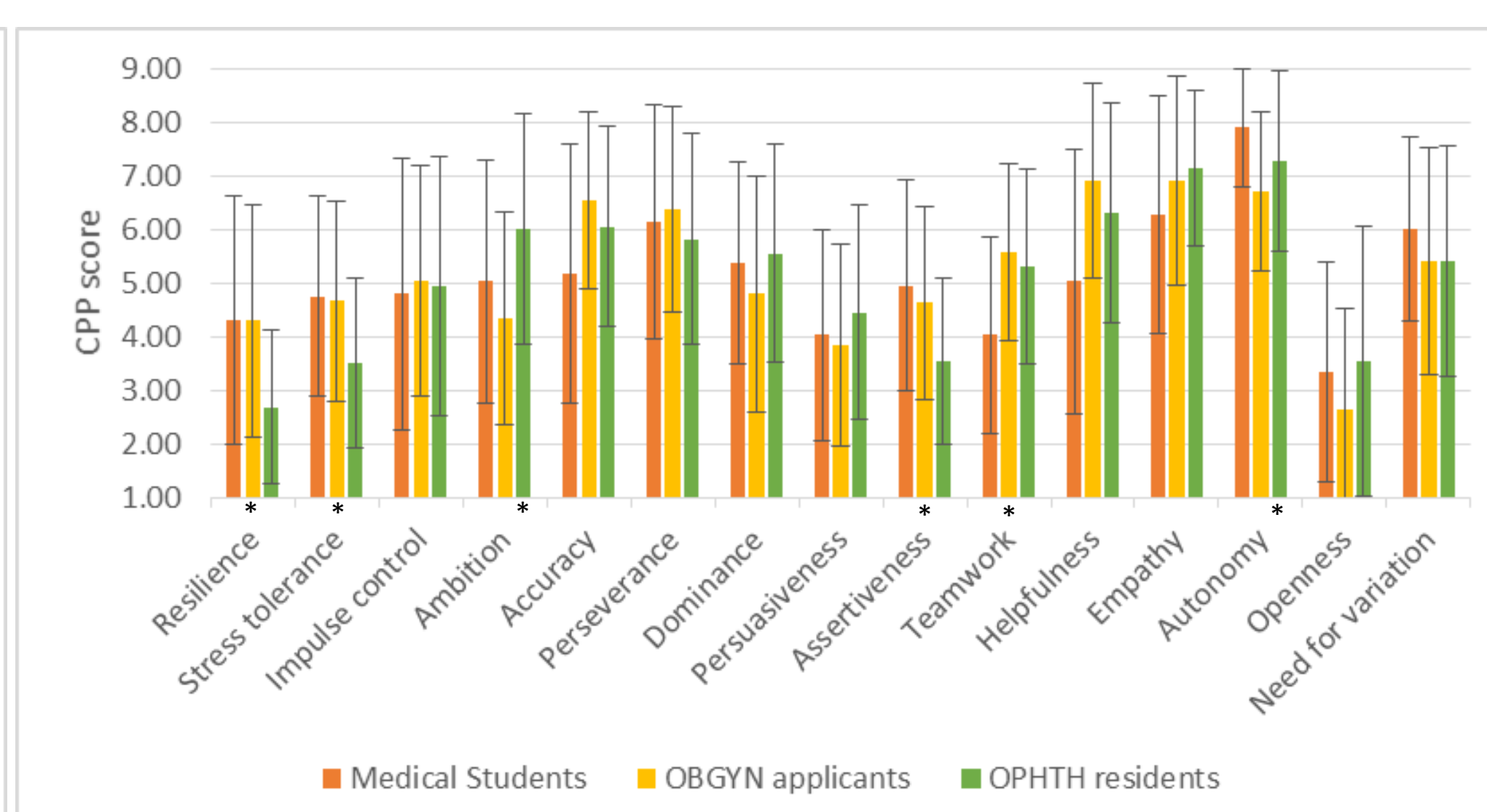
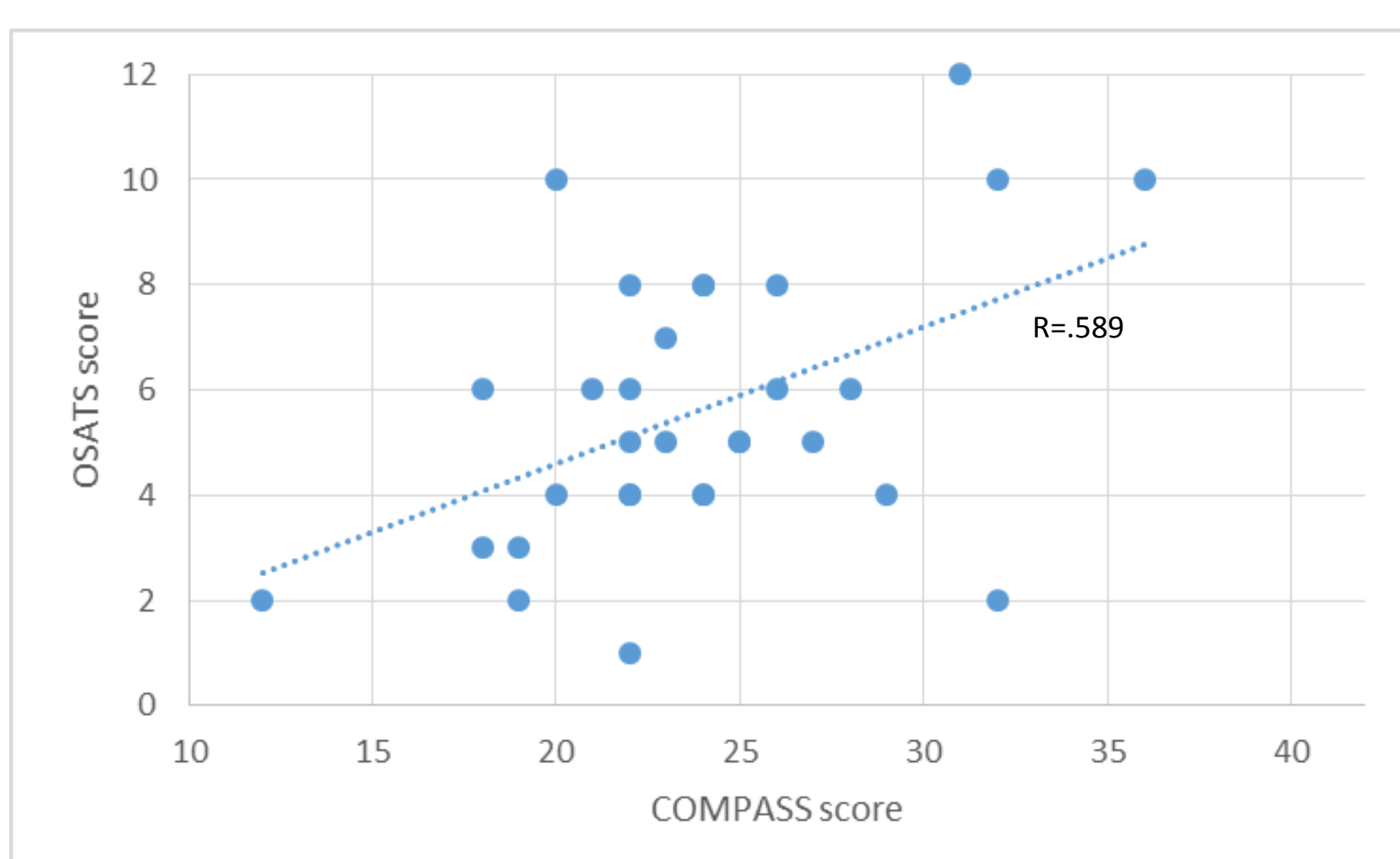
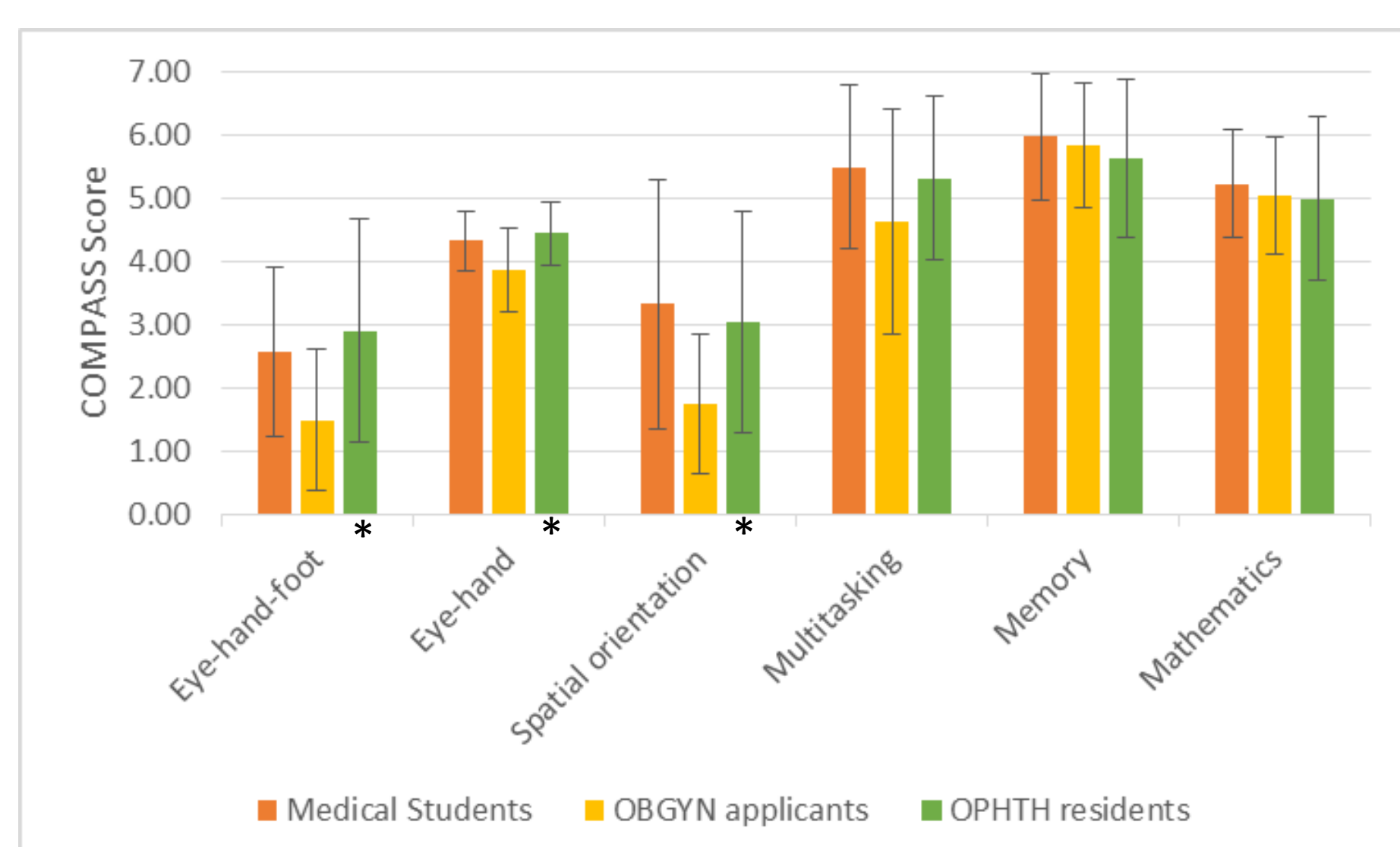
Methodology

Eighty-six medical trainees (40 final year medical students, 24 applicants for an Obstetrics & Gynaecology residency and 22 Ophthalmology residents) completed aviation's validated COMPASS and CPP. From thirty-one of the 86 (25 Obstetrics & Gynaecology and 6 Ophthalmology residents), the Objective Structured Assessment of Technical Skills for Surgeons (OSATS) scores were taken during a surgical skills station. Between-group comparisons were performed using ANOVA.



Results

All 86 trainees completed COMPASS and CPP within the prescribed two hours. Pearson's Correlation's between COMPASS and OSATS scores among the 31 trainees was .589 (p=.001). Performance scores were different among the groups. Ophthalmology residents scored higher on eye-hand-foot coordination (p=.003), eye-hand coordination (p=.001), spatial orientation (p=.003), ambition (p=.041) and autonomy (p=.005). OBGYN candidates scored higher on resilience (p=.011), stress tolerance (p=.030), assertiveness (p=.019) and teamwork (p=.002). Both residents and candidate residents scored higher on accuracy (p=.040) compared to medical students.



Conclusion

Medical trainees are able to complete COMPASS and CPP within the set time frame. We found a correlation between residents' COMPASS and OSATS performance. The instruments have potential to be used as time and cost-effective assessment among medical trainees in two specialties.