Trainee Selection and the Correlation between Cognitive and Technical Skill Evaluation

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INTRODUCTION: The selection process for surgical trainees aims to identify those who will perform best during training and have the greatest potential as future surgeons. Better understanding the predictive relationship between interview performance, level of technical skill, and performance during training will allow optimization of the interview and evaluation process to identify the best candidates.[1-3]

MATERIALS AND METHODS: Three annual cohorts of Reconstructive Microsurgery fellows at the Department of Plastic Surgery at the University of Texas MD Anderson Cancer Center, comprising 20 trainees, were included in the study. At interview, subjects were rated using seven criteria, as well as given a score for overall impression. At the start and end of the fellowship, microsurgical technical skill was assessed both in the OR and laboratory using a validated tool. At the end of the fellowship there was a final evaluation of performance using criteria adapted from the six Accreditation Council for Graduate Medical Education (ACGME) core competencies. Scores at interview, technical skill assessment, and final evaluation scores were all compared in multiple ways to determine associations and predictive factors.

RESULTS: Microsurgical skill assessment in the OR at the start of training correlated with all domains evaluated at interview, most closely with Plastic Surgery Training Experience. Microsurgical skill assessment in the OR at the end of training also correlated with scores on the majority of final assessment criteria based on ACGME core competencies, with the highest correlations with Patient Care and Medical Knowledge. Assessment of microsurgical skill in the laboratory at the start of the fellowship did not improve the predictive relationship between interview scores and ACGME core competency evaluations.

CONCLUSION: Microsurgical technical skill in the OR tracked with all domains evaluated at interview, and also with the majority of ACGME core competency evaluations. These results validate the use of the current selection process in choosing candidates with the highest level of both cognitive and technical skill, and also support the effectiveness of the one-year microsurgical fellowship at improving microsurgical skill in all trainees.

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