

CONCLUSION: Our structured model for perioperative educational discussions significantly improved faculty and trainee satisfaction and resulted in measurable improvement in resident technical skills.

The Effect of Stress and Conscientiousness on Simulated Surgical Performance in Unbalanced Groups: A Bayesian Hierarchical Model

Grey Leonard, MD, Jing Cao, PhD, Shannon Scielzo, PhD, Yi Zheng, BS, Juan Tellez, BS, Herbert J Zeh, MD, FACS, Ann Majewicz Fey, PhD

Southern Methodist University, Dallas, TX
University of Texas at Dallas, Dallas, TX
UT Southwestern Medical Center, Dallas, TX



INTRODUCTION: Acute stress is common for surgeons during operations and may affect performance. The relationship between stress, personality, and performance may vary by experience level. This study investigated the relationship of stress and conscientiousness across unbalanced groups of medical students.

METHODS: After informed consent, 30 medical students were randomized into control (n=15) and stressed (n=15) groups. Each group completed the Big Five Inventory for personality. Participants were asked to complete a 6-minute peg-transfer drill in a simulated operating room under stable patient conditions (control) or deteriorating patient conditions (stressed). Participants were scored under a modified Objective Structured Assessment of Technical Skills (mOSATS) by a blinded, independent reviewer. A Bayesian hierarchical model was built to incorporate random effects and to promote borrowing information across subjects.

RESULTS: Overall, mOSATS score differed between the control and stressed group (7.5 vs 5.5, $p < 0.01$). By class, the mean effect of being in the stressed group on mOSATS score was -1.89 (95% credible interval [-3.57, -0.23]) for first year, -1.93 (95% credible interval [-3.42, -0.43]) for second year, -1.83 (95% credible interval [-5.70, 2.24]) for third year, and -1.66 (95% credible interval [-3.99, 1.08]) for fourth year students. The effect of conscientiousness on mOSATS score remained approximately 0.21 across the 4 classes.

CONCLUSION: In this simulated environment, stress was associated with decreased surgical skills (mOSATS) performance compared to the control group. The negative effect of stress on performance decreased as experience increased. Conscientiousness was associated with increased performance, but did not vary by class.

The Flipped Operating Room: Establishing Best Practices in Surgical Education Using Resident-Initiated, Inquiry-Based Preoperative Briefing

Jennifer H Fieber, MD, Phillip Dowzicky, MD, MSHP, Cary B Aarons, MD, FACS, Hilary A Sanfey, MB, BCh, FACS, Rachel R Kelz, MD, MSCE, MBA, FACS
Southern Illinois University, Springfield, IL
University of Pennsylvania, Philadelphia, PA



INTRODUCTION: Effective and efficient education requires communication and preparation by both learner and educator. Current practice seldom includes clinical management discussions or educational planning before the operation. We performed a pilot study of a resident-initiated, inquiry-based preoperative briefing (R-PROB) to determine the feasibility and potential impact on the educational experience.

METHODS: A prospective, qualitative pilot study was performed within an urban, university-based general surgery residency. The R-PROB included preoperative emails to faculty with summaries, learning goals, and questions. Faculty responded by email, phone, or in-person. Semi-structured interviews were completed before and after R-PROB implementation. Interviews were transcribed, coded, and analyzed through collaboration with a mixed-methods laboratory.

RESULTS: Ten attendings and 13 residents from clinical years (CY) 1-5 participated. The R-PROB was viewed overall positively and felt to be easily incorporated into the standard curriculum. The R-PROB significantly improved attending perception of resident preparedness. Junior residents (CY1-3) affirmed that R-PROB very strongly improved case preparation. The preoperative exchange was valued by both participants as improving communication frequency, transparency, and quality. Most attendings stated that the R-PROB enabled tailored teaching to each resident's level, both preoperatively and in the operating room. Residents affirmed attending teaching to be more targeted toward their goals and objectives after the R-PROB. Challenges included late case assignments and minor time limitations.

CONCLUSION: A resident-initiated, inquiry-based preoperative briefing intervention is feasible and is positively perceived overall by both attendings and residents. The briefings had a positive impact on resident preparedness, bi-directional communication, and permitted focused attending teaching.

The Impact of a Novel Surgical Subspecialty Roundtable on Career Perception for Medical Students

Insiyah Campwala, BS, Edgar Aranda-Michel, BS, Gregory A Watson, MD, FACS, Giselle G Hamad, MD, FACS, FASMBS, Joseph E Losee, MD, FACS, FAAP, Ibrahim Sultan, MD, FACS, FACC

Department of Cardiothoracic Surgery
Department of General Surgery
Department of Plastic Surgery
Division of Trauma and General Surgery, Department of Surgery, University of Pittsburgh, Pittsburgh, PA



INTRODUCTION: Limited exposure to surgical subspecialties during medical school may be responsible for decreasing medical student interest in surgery. While most medical schools have surgery interest groups to increase exposure, our aim was to evaluate the impact of a surgical subspecialty roundtable on students' perceptions of surgical careers.