

## 9<sup>th</sup> Annual Medical Education Day

**Title:** Near-Peer Created Full-Length Practice Laboratory Practicals in Gross Anatomy and Embryology: Medical Student Support and Perceived Impact on Emotional Well-Being

**Authors:** K. Ryan Dickerson<sup>1</sup>, Alexandra Doherty<sup>1</sup>, Emily Askew<sup>1,2</sup>

**Affiliations:** <sup>1</sup>Brody School of Medicine, East Carolina University, Greenville, NC. <sup>2</sup>Department of Anatomy and Cell Biology, Brody School of Medicine, East Carolina University, Greenville, NC

**Background:** Human gross anatomy and embryology (GAE) is an essential component of the first-year undergraduate medical curriculum at Brody School of Medicine (BSOM). A unique component of the course is the inclusion of cadaveric-based laboratory examinations in a timed, station-based format. Many learners have no prior experience with this form of assessment, which can make the transition to this style of testing challenging, potentially increasing learner stress and anxiety. In this study, we evaluated the utility of practice practicals for improving student exam preparation and perceived emotional well-being and confidence.

**Methods:** First-year medical students in the Fall 2022 GAE course at BSOM voluntarily participated in practice practicals prior to each exam. Near-peer educators (2<sup>nd</sup>- 3<sup>rd</sup> year BSOM students) designed the practice practicals to mimic course exams. Learners rotated through 45-second cadaveric stations each containing one A-E multiple choice question ranging from structure identification to higher order “derivative” questions; learners cannot revisit stations. Radiology, osteology, and anatomical models were included. Upon the completion of the course, students (n=91) were asked to complete an optional 15-question survey using a 10-point Likert scale to evaluate self-perception of preparedness and emotional well-being.

**Results:** Survey questions were scored on a Likert scale with 0 indicating strong disagreement and 10 indicating strong agreement. Sixty-eight completed surveys were returned (74.7% response rate). Results indicated strong agreement that practice practical participation supported comprehension of anatomical structures (M=9.46, SD=1.10) and training for the mental fatigue of a 50-question practical exam (M=9.59, SD=1.06). Additionally, survey outcomes indicated the practice practicals assisted in self-perceived identification of personal weaknesses (M=9.62, SD=0.92) and decreased stress on exam day (M=9.06, SD=1.54). Remarkably, ninety-nine percent of respondents strongly agreed that future cohorts would benefit from this initiative (M=9.99, SD=0.12).

**Conclusion:** GAE laboratory examinations are a challenging, but vital component of undergraduate medical education. Collectively, this study provides insight into the positive effects of participation in full-length near-peer created practice practicals prior to course exams. Impact on student performance in GAE assessments should be evaluated in future studies.