

Evaluation

First year nurse anesthesia students at a university in the Midwest United States were asked to complete a ten-question pre-test on neuraxial anesthesia to assess their knowledge prior to utilizing the educational tools. Students were then given access to the educational videos created for this project. After allowing adequate viewing time, students attended a guided hands-on lab. At the conclusion of lab, students were given an identical ten-question post-test to assess their knowledge after the implementation of this multimodal educational experience. In addition to the ten knowledge-based multiple-choice questions, students answered eight Likert-style questions and two open-ended questions aimed at understanding their perceptions of the educational tools provided. Data was then collected and analyzed to compare pre-test and post-test averages. Additionally, qualitative data from the Likert-style questions and open-ended questions was reviewed.

Outcomes

Educational Assessment

Participants in this quality improvement project included 32 students. Upon analysis of the pre-test, it was determined that the low score was 4 out of 10, the high score was 10 out of 10, and the overall mean score was 7.97 out of 10. Upon analysis of the post-test, it was determined that the low score was 7 out of 10, the high score was 10 out of 10, and the overall mean score was 9.28 out of 10. There was a 16.44 percent increase in the mean score from the pre-test to the post-test. The questions showing the greatest increase in scores were questions 6, 9, and 10. The topic assessed in these questions was epidural technique. This increase in scores

suggests a gain of knowledge after utilization of the educational videos and is further described in Figure 1.

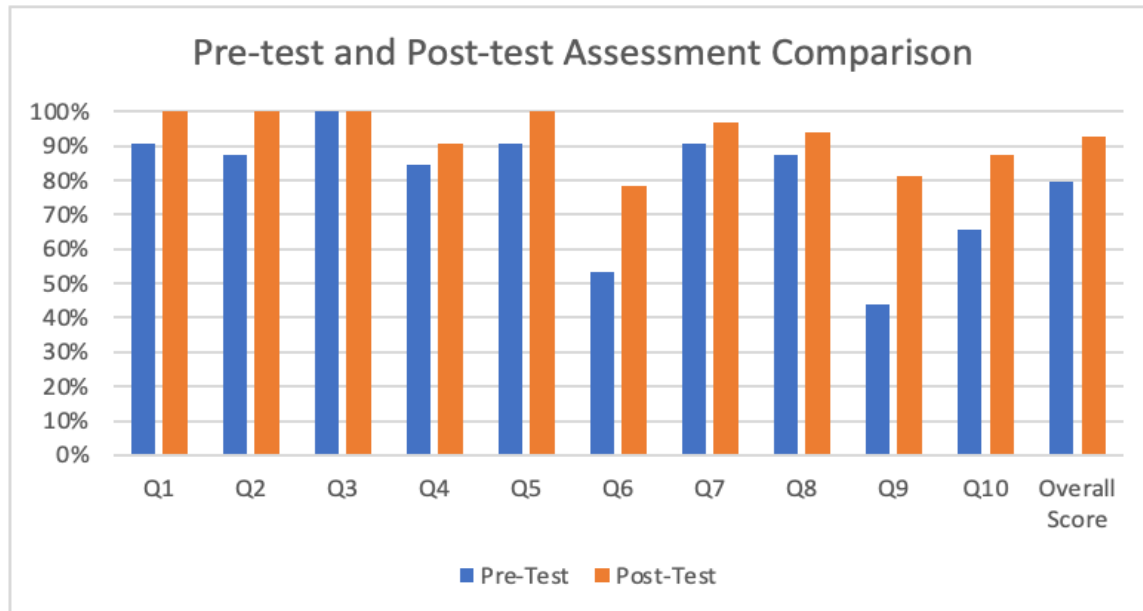


Figure 1. Depiction of results of knowledge-based questions.

Survey Responses

Likert-style Items

Qualitative data from the 5-point Likert-style questions showed the following: Most students (93.8%) agreed or strongly agreed (mean= 4.8) that the supplemental videos were easy to access and 96.9% agreed or strongly agreed (mean=4.9) that the videos were easy to understand. When asked if the videos aided in their understanding of neuraxial anesthesia and their performance of neuraxial anesthesia, 96.9% of students agreed or strongly agreed (mean= 4.9). All students surveyed (100%) declared that they would prefer the incorporation of video learning for future topics covered in class (mean= 4.9). The skills rubrics were reported to be easy to understand by 96.9% of students (mean= 4.8). It was communicated by 96.9% of

students (mean= 4.9) that the information taught in the videos aligned with the information listed on the skills rubrics. Additionally, having peers teach in class was reported by 96.9% of students (mean= 4.9) to have aided in their educational experience.

Open-ended Items

Students were asked to identify what educational tool or learning activity was most impactful on their understanding of neuraxial anesthesia. Themes gathered included small group hands-on learning, supplemental videos, and real time guidance from peers. Additionally, students were asked what suggestions they have for improvement of this educational module. Themes gathered include providing videos for all skill checkoffs and having more peers/instructors available during lab sessions.