FAST-Tracking Proficiency: A Comparison of Minimal Versus Supplemental Ultrasound Training in Medical Students

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INTRODUCTION

Ultrasound is increasingly recognized as a vital diagnostic tool across medical specialties due to its portability, non-invasive nature, rapid results, and lack of radiation. In acute care, the Focused Assessment with Sonography in Trauma (FAST) exam is particularly important for detecting intra-abdominal and thoracic injuries. While ultrasound training is expanding in medical curricula, instruction remains inconsistent across different medical schools. This study evaluates whether supplemental ultrasound exposure beyond the standard curriculum improves medical students' FAST exam performance.

METHODS

An observational mixed-methods study was conducted at Rocky Vista University College of Osteopathic Medicine – Southern Utah with second-year students. Participants completed a survey on prior ultrasound experience, categorized as minimal (0–3 hours outside the required curriculum) or extensive (>6 hours). Students with 3–6 hours were excluded for clearer comparisons. Each student then performed a FAST exam within five minutes using a Chison or Mindray ultrasound machine. Performance on four views—Morrison's pouch, splenorenal recess, suprapubic region, and subxiphoid cardiac—was scored using a three-tier rubric of 1) Yes, correct view identified; 2) Yes, correct view identified but image not fully optimized; 3) No, unable to identify view. P-values were calculated using t-tests, and chi-square analysis.

Minimal Ultrasound Group
<3 Hours

Supplemental Ultrasound Group
>6 Hours

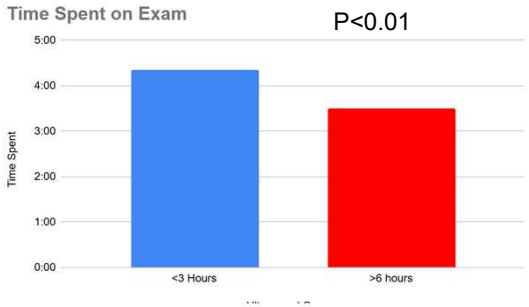
Exclusion Group
3-6 Hours

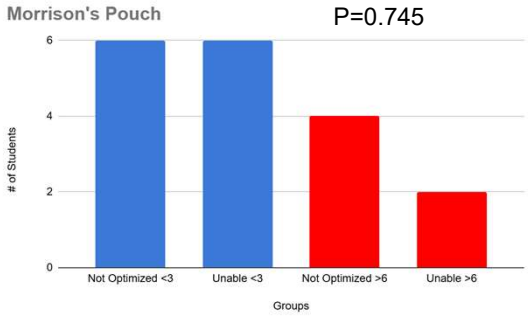
RESULTS

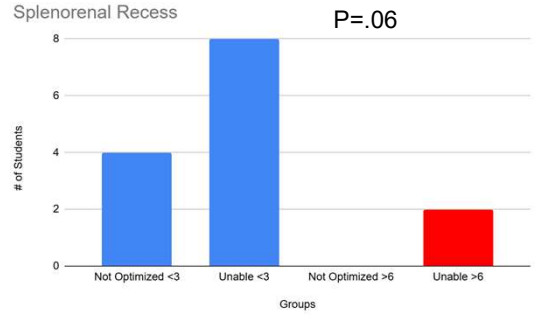
Qualitative:

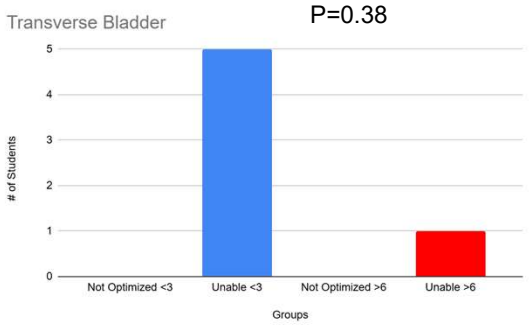
21 Students <3 Hours of Experience
5 Students 3-6 Hours (Excluded)
12 Students >6 Hours of Experience

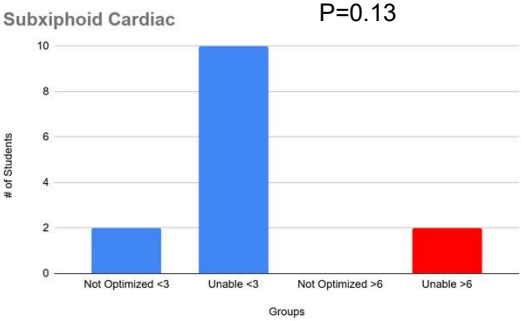
Quantitative:











CONCLUSION

There is statistical significance that students with supplemental ultrasound experience were able to perform the exam faster than students with minimal ultrasound experience. Limitations of this study is the small sample size of students. Future directions would be conducting this study again with a larger sample size to determine if there is statistical significance between these groups in the different portions of the exam.

REFERENCES

ROCKY VISTA UNIVERSITY