

Assessing Exposure to Radiology in Preclinical Curriculum: A Single Institution Review

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Objective

X-ray, MRI, CT, ultrasound, and PET are essential in teaching medical students about disease anatomy and pathology. Basic radiology knowledge should be integrated into the preclinical medical school curriculum due to its key role in medical decision-making. However, integration of imaging practices and clinically oriented radiology material varies among schools, often taught by non-radiologists. Our goal was to evaluate pre-clinical medical students' proficiency with these imaging modalities.

Methods

We created a 20-question survey that was administered to first and second-year medical students at the AU/UGA Medical Partnership. The survey utilized a 5-point Likert scale to measure students' confidence in identifying normal and pathological structures for each imaging modality. We also inquired about their interest in radiology and attendance at extracurricular radiology events. Standard statistical analysis was conducted.

Results

A total of 16 students were surveyed, comprising of 4 M1s and 12 M2s. 3 of the 16 students attended an extracurricular radiology event. Overall, the students showed an interest in receiving more exposure to radiology through both the preclinical curriculum (average: 3.63) and through interest group events (average: 3.69) with M1s showing statistically more interest in learning more about radiology through the curriculum when compared to M2s. Furthermore, students had above average confidence in identifying which modality was utilized when given an image (average: 3.75) and determining the best imaging modality to use in a diagnostic approach (average: 3.31). The average of the students' confidence with identifying normal anatomy and pathological structures with the different radiologic modalities can be seen in Figure 1. Further comparison of the results in groups of M1s vs M2s, and attendance in radiology events vs no attendance in radiology events did not reveal any statistically significant differences among any of the imaging modalities.

Conclusion

Students exhibited confidence in using X-ray and ultrasound for both normal and pathological states. Students felt comfortable using CT scans and MRIs for identifying normal structures but not pathological structures. Notably, students expressed low confidence in utilizing PET scans in any setting. Justification for increased integration of PET scans into the curriculum arises from their common use in clinical settings and poor confidence in utilization. Larger trials across multiple medical schools are warranted to further explore their incorporation into curriculums.

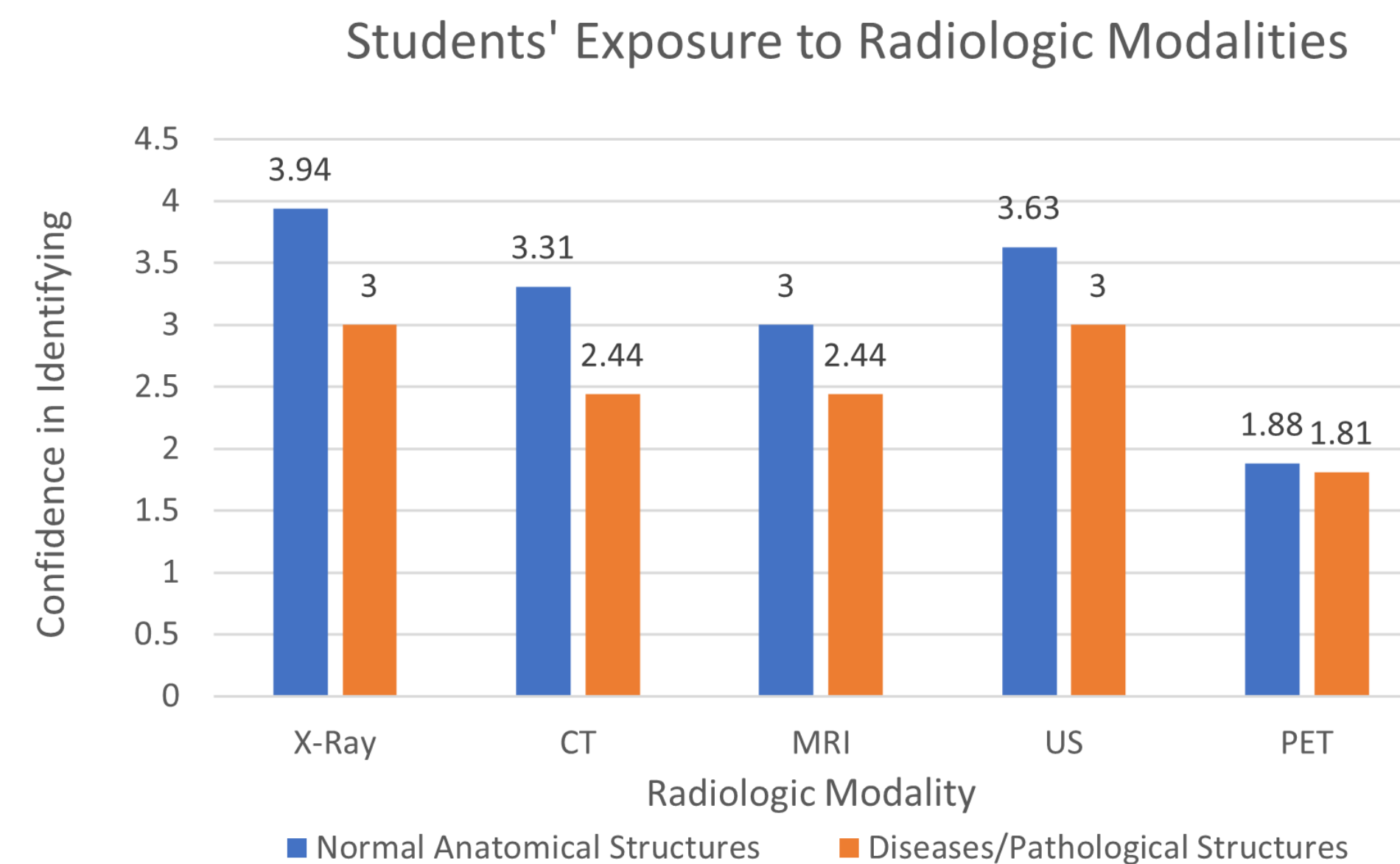


Figure 1: Students' Confidence in Identifying Normal and Pathological Structures through Different Imaging Modalities