

Can Ultrasound Simulation Practice Enhance Practical Skills and Academic Knowledge?

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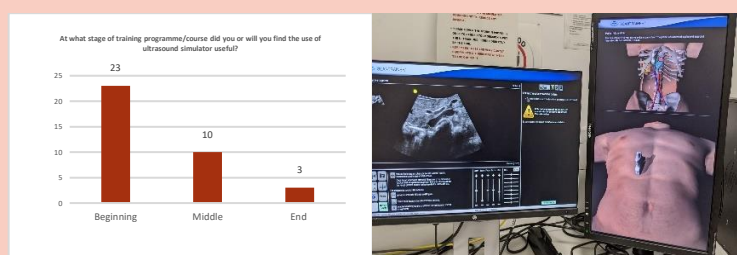
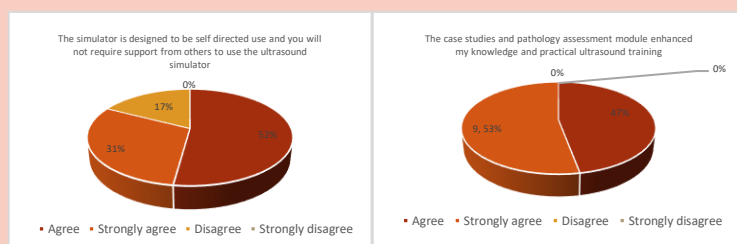
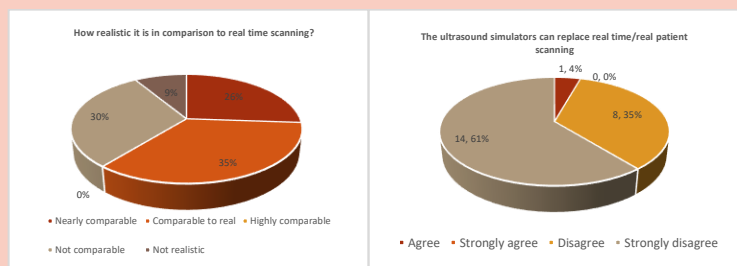
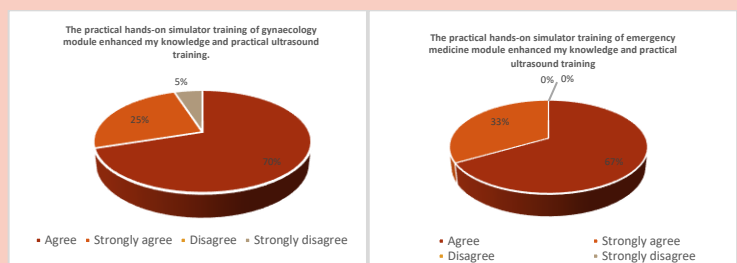
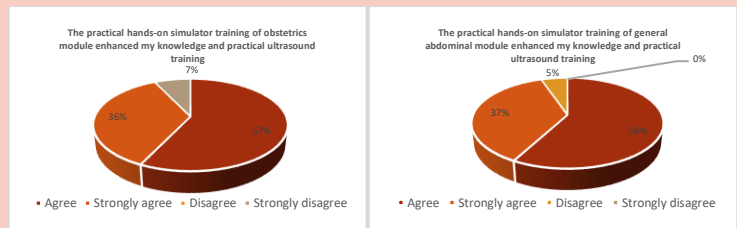
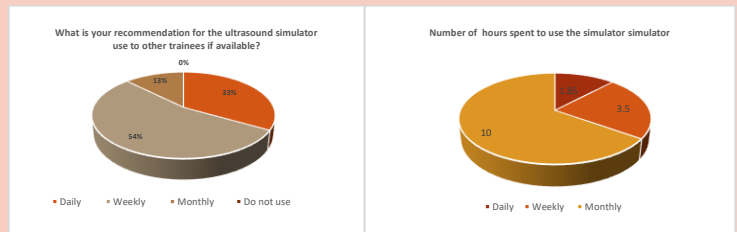
Introduction:

The use of ultrasound simulator is becoming more popular in ultrasound training centers (1,2,3). Therefore it is important to evaluate if ultrasound simulator practice can enhance practical skills and academic knowledge of ultrasound trainees.

Objectives: The aim of this study was to evaluate the views of ultrasound trainees (student sonographers and specialist trainee radiology registrars) who were using the ultrasound simulator at the London Northwest University Healthcare NHS Trust Ultrasound Training Academy during their training programme and to determine if using an ultrasound simulator enhanced their practical skills and academic knowledge.

Method: A questionnaire was designed to explore the views of 32 trainees who were using the Scantrainer ultrasound simulator during their training. Twenty three out of 32 questionnaires were completed and returned and the data analysis was based on 23 completed questionnaires to evaluate if using the ultrasound simulator enhanced their practical and academic knowledge.

Results: The results showed that 100% of respondents agreed that the ultrasound simulator enhanced their practical skills and academic knowledge at the beginning of their training, 43% agreed that ultrasound simulator practice enhanced their practical skills and academic knowledge at the middle of their training while only 13% agreed that it enhanced their practical skills and academic knowledge at the end of their training. This study also found that 20% agreed that trainees should use the ultrasound simulator daily for an average of 1.8 hours/day, 40% agreed an average usage of 3.5 hours/week and 40% agreed an average usage of 10 hours/month. The majority (96%) agreed that ultrasound simulator practice cannot replace patient-based ultrasound practice.



References:

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2. Pessin YJ, Tang-Simmons J. Sonography Simulators: Use and Opportunities in CAAHEP-Accredited Programs. *Journal of Diagnostic Medical Sonography*. 2018;34(6):435-444. doi:10.1177/8756479318799347
3. Hani, S., Chalouhi, G., Lakissian, Z., & Sharara-Chami, R. (2019). Introduction of Ultrasound Simulation in Medical Education: Exploratory Study. *JMIR medical education*, 5(2), e68. <https://doi.org/102196/1356>