

AB204. SOH21AS064. The role of mentoring in stimulating medical student interest in orthopaedic surgery: a randomised control trial

Aoife Feeley, Matthew Lee, Khalid Merghani, Eoin Sheehan

Department of Orthopaedics, Midlands Regional Hospital Tullamore, Tullamore, Ireland

Background: Components of undergraduate surgical rotations yield positive learning experiences, which influence future surgical careers. These can be delineated into practical and interpersonal themed factors. It remains unclear the relative impact each factor has on the student experience and subsequent specialisation. We evaluated the influence of senior trainee mentoring during practical simulation of an orthopaedic procedure has on medical student interest in surgery compared to independent student practice.

Methods: Fifteen medical students undergoing clinical rotations in a regional university-affiliated hospital were randomised to undertake a virtual reality simulated operation independently or perform the simulated procedure under the guidance of an experienced surgical trainee. Baseline levels of interest in surgery, and comfort in theatre were established, and compared to responses following completion of the tutorial. Statistical analysis using student t-tests and independent t-tests was used for intra-and intergroup outcomes. Qualitative feedback was collected regarding the benefits and limitations to the experience.

Results: Participants in the trainee guided group reported an increased interest in Orthopaedic surgery from baseline ($P=0.04$) compared to the control. The trainee guided group achieved significantly higher simulated performance scores

compared to the control ($P<0.001$). One hundred percent participants strongly agreed it was a beneficial learning experience which would be useful in surgical education curricula.

Conclusions: Surgical trainee guided simulation leads to improved performance and interest in Orthopaedic surgery, while virtual practical experience was felt to be a useful learning tool regardless of presence of supervision. Further research is needed to further develop the role of trainees in undergraduate surgical education curricula.

Keywords: Mentoring; simulation; surgical trainees; undergraduate medical education; virtual reality

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Footnote

Conflicts of Interest: The authors have no conflicts of interest to declare.

Ethical Statement: The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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