

AB205. SOH21AS060. Evaluation of the face, content and construct validity of a mobile hip arthroscopy module in a regional orthopaedic unit

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Background: Proficiency in hip arthroscopy is associated with a steep learning curve. Virtual reality simulation has been proffered as a solution to condense the learning process. The COVID-19 pandemic highlighted the potential benefits of mobile training tools available to surgical residents to continue development of surgical skills while away from theatre. The aim of this study was to assess the face, content and construct validity of a portable hip arthroscopy simulation.

Methods: Participants were recruited from a regional Orthopaedic centre, and categorised into novice (0 arthroscopies), experienced (1–49 arthroscopies) and expert group (>50 arthroscopies) based on self-reported experience in arthroscopy. Face and content validity was evaluated by feedback from users immediately following completion of modules. Construct validity was assessed, evaluating improvement through objective measurements including time taken and simulation derived measurements. Participant feedback on perceived educational use and user friendliness was collected following completion. Scores achieved by experts were set at the level at which proficiency was demonstrated.

Results: Novices performed no worse than experienced trainees ($P=0.39$), with no significant difference in time noted ($P=0.32$). Good face and content validity was expressed by participants, with novices indicating higher

levels of satisfaction.

Conclusions: Face and content validity were established on the module, with sufficient levels of realism reported by all participants. Construct validity was unable to be demonstrated in this simulator, with participants reporting difficulty easily maneuvering the reamer. Future focus on tactile feedback available to users may improve ease of use for surgical trainees, and help delineate levels of experience.
Keywords: Orthopaedics; postgraduate training; virtual reality; simulation; surgical curricula

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Footnote

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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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