THE USER EXPERIENCE: PRELIMINARY FEEDBACK ON SMARTGLASSES FOR REMOTE PROCTORING IN LAPAROSCOPIC SURGERY

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Introduction



Patient access to laparoscopy outside of developed centres in North America is inconsistent, and surgeon access to laparoscopic training is limited by barriers such as geographical distance.

Smartglasses Technology

Smartglasses are augmented reality glasses that send a double-end encrypted audiovisual feed to another device via WiFi.





An operating surgeon can wear the glasses while a remote proctor expert in minimally invasive surgery provides real-time feedback and visual annotation from anywhere in the world.



Images from rods-cones.com

Objective

To gather feedback on the user experience of the Rods and Cones Smartglasses system to assess feasibility for remote proctoring in surgery.

Methods

Twenty-two medical students, residents, and staff participated in a demonstration as a Smartglasses user or remote proctor and completed surveys about their experience.

Results

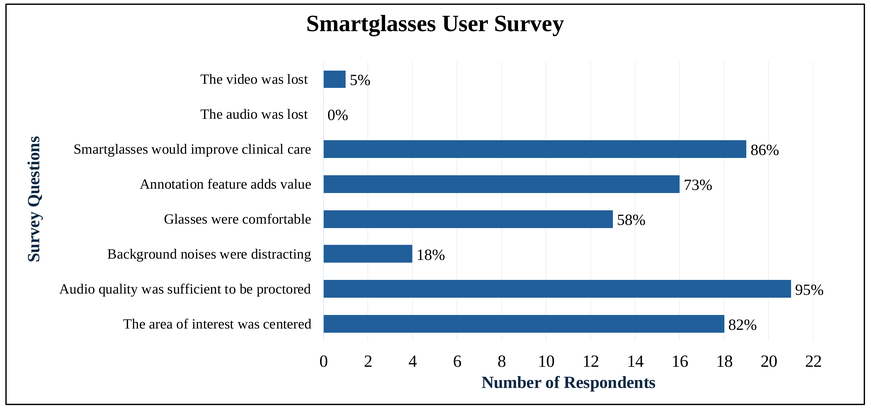


Figure 1. Proportion of Smartglasses Users agreeing with survey statements.

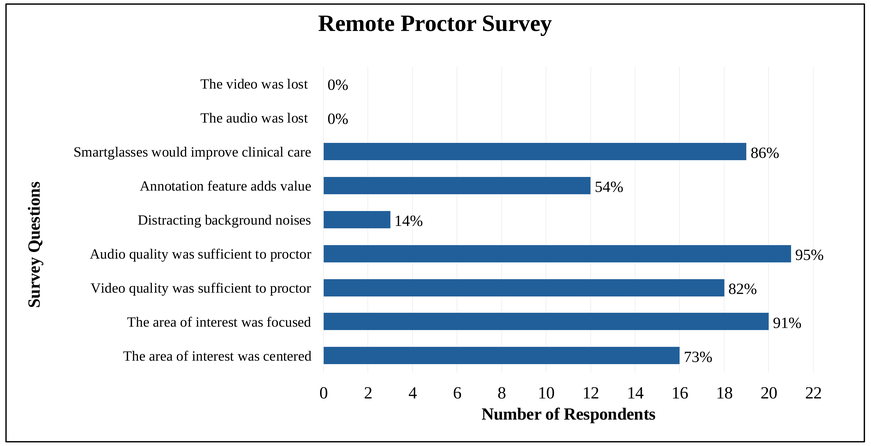
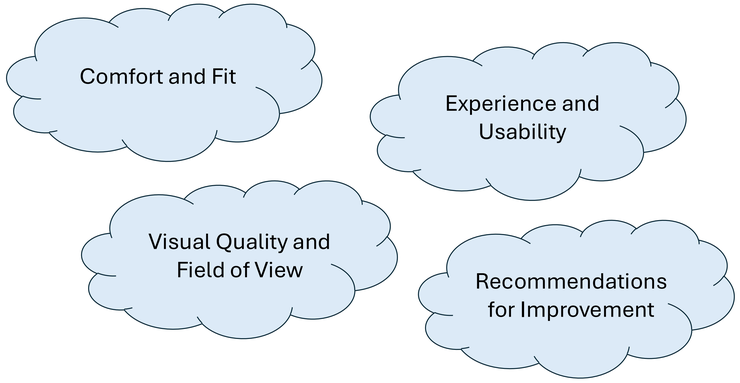


Figure 2. Proportion of Remote Proctors agreeing with survey statements.

Thematic Analysis



Conclusions

- These results demonstrate a degree of satisfaction and feasibility of Smartglasses as a valuable tool for remote training.
- Positive and negative qualitative feedback can be applied to future study design.

Future Directions

- A multi-center pilot feasibility study of Smartglasses technology in laparoscopic surgery training is underway.
- If effective, there is potential to integrate this technology in laparoscopic training programs.