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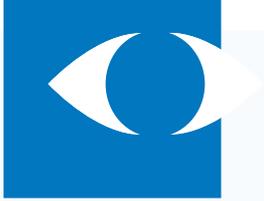
A game-based education program to train situation awareness among scrub nurses

Summary

Background: Situation awareness is crucial for patient safety but factors preventing attainment and sustenance of situation awareness are not widely explored in an ambulatory surgical setting where globally the majority of surgeries are performed.

Aim: This study aimed to develop and evaluate the effectiveness of a game-base SA training program for scrub nurses working in a fast-paced ophthalmic ambulatory surgical setting.

Methodology: This was a nurse-led, two phase concurrent mixed-methodology study. In phase 1 quantitative and qualitative observation data were integrated to understand factors affecting SA within a fast-paced OT for development of a game-based SA training program. In phase 2 quantitative, pre and post SA and sub element scores were compared using one group pre and post-test design, and supported by qualitative interview using semi-structured questionnaires to understand the effectiveness, feasibility and acceptability of the game-based training program.



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Results:

Phase 1: Triangulated complimentary findings concluded that

- 1) Individual factors from task overload suppressed female, senior staff with higher level of education on leadership, managing task & ability to process and respond.
- 2) System factor from poor communication is a result from workload and environmental design.

Phase 2: Integrative findings concluded that effectiveness of game-based SA training was directly influenced by the participants ability to have relate, reflect and apply the content aspects which closely resembled their actual practice. Two themes on lack of factors to motivate play and lack of interactivity explained if the game-based SA training was feasible within the context of practice. Three themes emphasized on acceptability of the game-based training program, convenience and reliable connectivity, a good platform for younger and lack of formal guidelines towards this method of training and future enhancement. Effectiveness of game-based SA training was directly influenced by the participants ability to have relate, reflect and apply the content aspects which closely resembled their actual practice.

Conclusion: The game-based training developed based on evidence according to situated cultural and context of practice was found to be effective to improve SA and element scores among scrub nurses working in fast-paced operating theatre. Elements to enhance motivation to play, improve interactivity, convenience platform and connectivity, policy to guide game-based training for novice would ensure feasibility acceptability and sustainability on its applicability in healthcare.