How can simulation training be used to teach skills in human factors (HF)?

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01. Introduction

Simulation training is a valuable resource to teach clinical skills and mimic emergency settings. Human factors (HF) are non-technical skills that are affected by human attitudes and behaviours. Weaknesses in human factors can cause fatal medical errors.

02. Objective

We wanted to assess if simulation can be used as a tool to improve these. We conducted two simulation training days for medical higher specialty trainees (HST) focusing on HF.

03. Methodology

20 HSTs participated in 10 simulated scenarios. Scenarios involved using a high-fidelity manikin and actors. The scenarios were a mixture of long and short cases, including both clinical and non-clinical scenarios with a HF focus. Pre- and post-session questionnaires were used to rate confidence levels in a series of specific HF. A 10-point Likert scale was used.

04. Results/Findings

The majority of participants had a firm understanding of the importance of human factors in healthcare, especially the importance of teamwork, compassion, communication and situational awareness. 70% of participants felt that human factors training may not be adequately considered in current training pathways due to limited formal exposure, limited time, and its importance being underestimated. There was an increase in confidence in: managing disagreements (31%), negative emotions (38%), prioritisation (28%), delegation (23%), teamwork (34%) and leadership skills (30%), dealing with uncertainty (29%), challenging hierarchy (27%), anticipation (31%). 100% felt simulation training helped to develop their attainment of HF skills.

05. Analysis

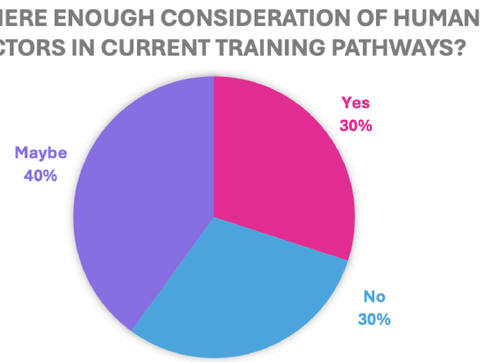

Figure 1: The percentage of participants that believe there to be enough human factors teaching in current training pathways.

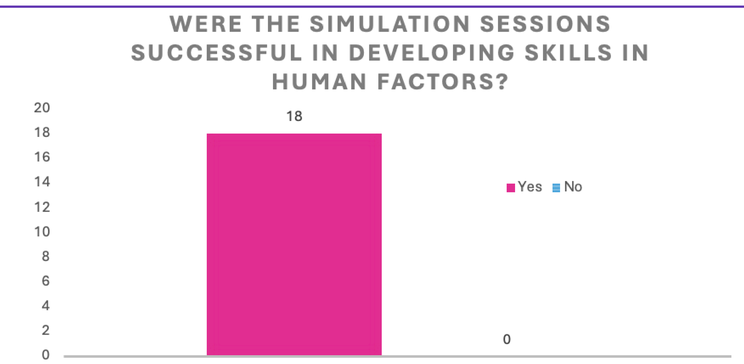

Figure 2: The number of participants who believed that the simulation sessions were successful in developing skills in human factors.

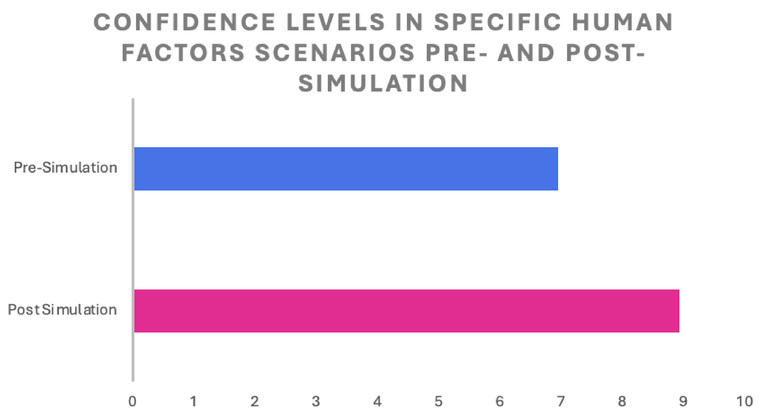

Figure 3: The average level of confidence participants felt they had in specific human factors scenarios pre- and post-simulation ranked using a Likert scale out of 10.

Figure 4: The opinions of participants about whether they would like human factors simulation introduced into training.

06. Conclusion

This form of simulation training was successful in improving confidence and understanding of human factors in healthcare and showcased the value of using high-fidelity training to realistically recreate the clinical environment. Going forward, this type of teaching could be integrated within the specialty training curriculum to formally improve skills in HF and therefore improve patient outcomes and relationships between team members, thus contributing to a more positive working environment.

07. References

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