

What's the Stress? Exploring the Worries of Medical Students prior to Hi-Fidelity Simulation Training

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Introduction

Simulation-based education is a key part of medical training, offering learners a safe space to develop clinical and decision-making skills. Despite its benefits, it can also induce significant stress, potentially hindering learning and performance (1,2). While physiological and self-reported measures indicate heightened stress prior to and during simulation in previous studies (3-6), pre-simulation stress remains overlooked. As a result, current psychological safety strategies in simulation focus on the session itself, but there is a need to address the anticipatory stress that learners experience in the days leading up to simulation. The pre-brief, typically lasting 10-15 minutes, may be insufficient to alleviate the stress.

Objective

This study explores the factors that medical students perceive as contributing to their stress prior to simulation training.

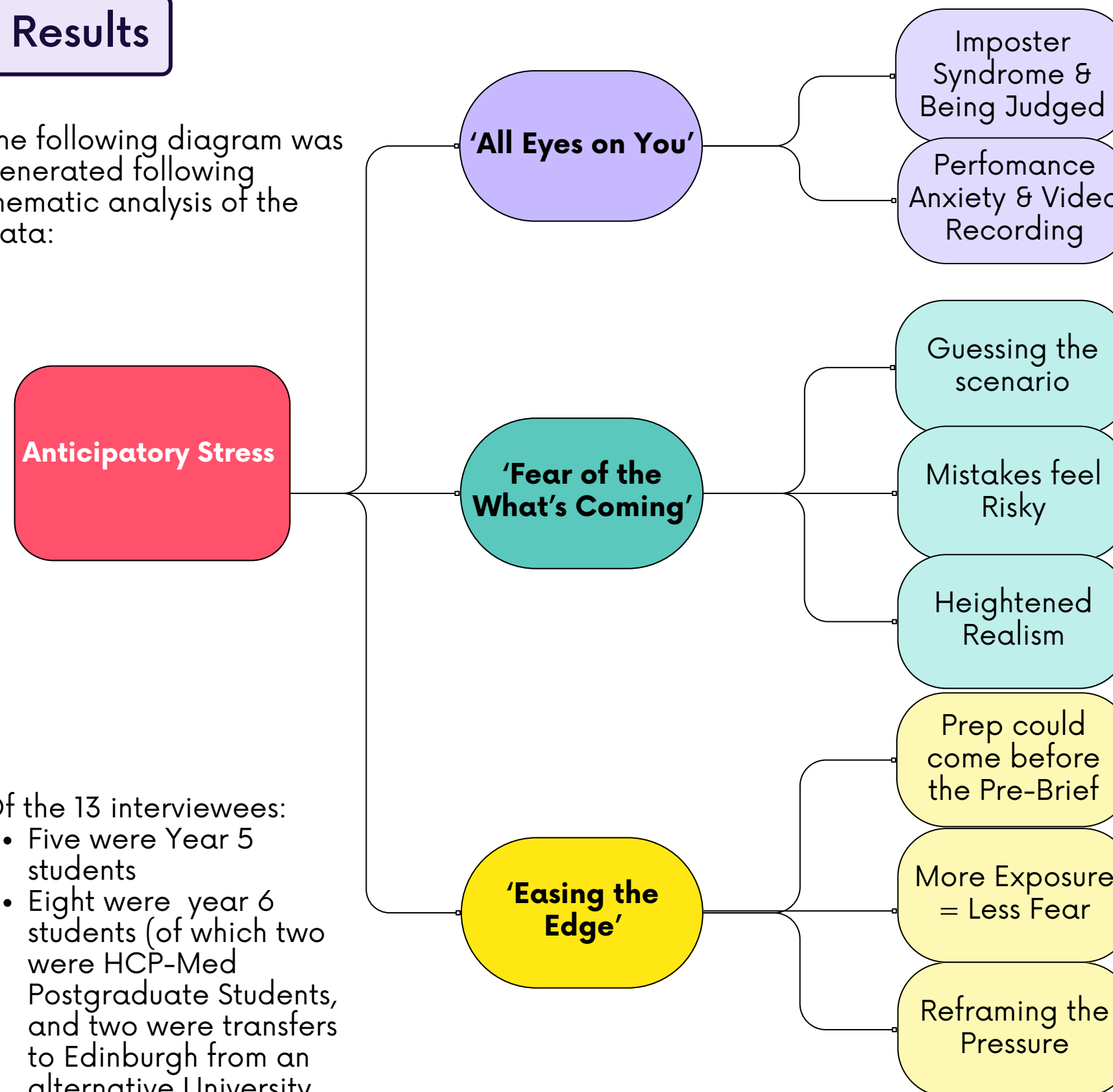
Methodology

Year 5 and 6 medical students with prior simulation experience were purposively sampled. Data were collected via semi-structured interviews (in-person or online), informed by an optional pre-interview questionnaire. Interviews explored students' subjective experiences of stress before simulation.

Data were anonymised and transcribed. Thematic analysis was conducted in NVivo14 using Braun and Clarke's reflexive approach to identify recurring themes and patterns.

Results

The following diagram was generated following thematic analysis of the data:



Of the 13 interviewees:

- Five were Year 5 students
- Eight were year 6 students (of which two were HCP-Med Postgraduate Students, and two were transfers to Edinburgh from an alternative University)

'All Eyes on You' Students described heightened self-awareness and a fear of being judged by peers and faculty. Video recording amplified performance anxiety and imposter syndrome.

'Fear of What's Coming' Uncertainty around the scenario content, fear of making mistakes, and the realism of the environment contributed to a sense of unpredictability and stress.

'Easing the Edge' Participants highlighted small, practical interventions that could reduce stress, such as more frequent, but less acute simulation exposure, and positively reframing pressure and mistakes. 'Prep could come before the pre-brief' emerged as a strong subtheme, with students expressing difficulty absorbing information when already feeling anxious.

Conclusion

This research addresses a critical gap in the literature by amplifying the learner's voice and identifying actionable strategies to optimise both the simulation environment and preparatory resources. By exploring the root causes of simulation-related stress, this study highlights the importance of psychological safety, early access to preparatory material, and increasing familiarity with simulation practices. Future directions include rethinking pre-briefing timing, normalising mistakes as learning, and integrating more low-stakes simulation to build confidence and clinical readiness.

References

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