Implications for practice

1. 'Do no harm' remains paramount in medical education. The benefit to society must be weighed against the risks to the child and their best interests must be kept central in educational processes.
2. When planning teaching I will:
3. Run monthly simulation sessions consolidating weekly didactic teaching
4. Limit sessions to 1 hour
5. Recruit young people within the hospital to minimize school absence
6. Invite collaboration between SPs and students to create scenarios around self-identified learning needs while maintaining psychological safety, allowing for complexity and fidelity that would be impossible if written by faculty
7. Train SPs to feedback using 'I' statements
8. Collaborate with the Child and Adolescent Mental Health Team prior to mental health scenarios to consider training and debriefing
9. Keep the SPs voice central to the debrief and feedback

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## 152 A NARRATIVE REVIEW: PRIMARY RESEARCH IN SIMULATION-BASED EDUCATION USING EYE-TRACKING TECHNOLOGY


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**Background:** There has been a gradual increase in research using technology such as eye-tracking in medical education in simulation. Subsequently, the aim of this review is to examine primary research for simulation-based education using eye-tracking technology.
**Method:** The Strengthening of observational studies in epidemiology (STROBE) method was used to evaluate the reliability of the simulation and eye-tracking articles [1]. The search strategy included articles published between 2010 and 2021. Articles were searched using terms derived from McCormack et al. (2014). An electronic database search was performed in January 2021: CINAHL, Medline, SCOPUS, Web of Science, Science Direct and APA Psych INFO with 2,621 hits. The search strategy included the following Boolean terms; 'expert' AND 'visual' OR eye track* (eye tracking) AND simulat* (simulation or simulated) AND diagnos* (diagnose or diagnosis).
**Findings:** The key finding from this narrative review highlighted the use of eye-tracking technology as an objective assessment tool in simulation-based education [2]. The literature reinforced the use of algorithms (e.g. ABCDE approach) when assessing a patient. Furthermore, the different gaze patterns between novices and experts were identified. There are limited studies available in simulation-based education using eye-tracking technology. Furthermore, none of the studies has measured the development of gaze patterns in simulation using a longitudinal study with a repeated simulated scenario.
**Implication for practice:** Eye-tracking technology can pinpoint the exact areas the healthcare provider is gazing upon during a simulated scenario to help focus the debrief and highlight the gaze patterns. Encourage the use of algorithms when delivering simulation-based education.

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## 150 'A SAFE LEARNING ENVIRONMENT': SIMULATION-INDUCED STRESS LITERATURE REVIEW


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**Background:** Simulation-based education (SBE) is often celebrated as a safe learning environment, but this usually refers to the risk posed to patients, in this literature review the psychological safety for participants and the elements of SBE that generate or reduce stress are sought. Stress and learning have a complex relationship in adult learning; however, negative stress may inhibit memory formation and so the sustainable effect of SBE learning may be jeopardized by participants experiencing unnecessary stress during SBE. It is therefore important to identify the nature and trigger for stress in SBE to optimize this resource.
**Method:** Using the online database PubMed and the search terms (stress and anxiety) AND (Simulation) AND ((clinical education, medical education)) without limits on publication type or date, 20 articles were returned. A non-systematic review was undertaken. Articles that were designed to deliberately introduce stress into SMEs to gauge the effect on performance were excluded. Included studies analysed the type, characteristics and potential triggers of stress evoked through participation in SBE. 17 studies were retained.
**Findings:** No studies in the UK were returned, SBE participants were from undergraduate and post-graduate settings and there was a mixture of professional groups included with three studies looking at team-based SMEs. Study design and method varied with an observational study being the most common method. Only one looked at qualitative data from focus groups of SME participants. Nearly all studies recorded a physical marker of stress – heart rate, cortisol level or visible signs of stress such as shaking hands. Two studies looked at techniques to actively reduce stress within