IN PRACTICE

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BRAIN BREAKS - USING EDUCATIONAL NEUROSCIENCE TO COMBAT PSYCHOLOGICAL DISTRESS IN HEALTHCARE SIMULATION

James Carlson[1]; [1]*University south wales, Glyntaff, United Kingdom*

Correspondence: Jamesedwardcarlson89@gmail.com

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Introduction: Healthcare simulation has the potential for learners to suffer psychological distress and anxiety causing "amygdala highjack" thus the potential for learning drastically dissipates as learners enter fight, flight or freeze, where cognition can be impaired [1]. An obvious solution is to remove stress from the simulation, however a variety of factors can contribute to the emergence of anxiety including external stressors, social discomfort [1] simulation design and extraneous cognitive load [2]. The complete removal of anxiety or stress is improbable yet promoting psychological safety and providing a learner centred environment in which anxiety can be alleviated is essential.

Methods: Utilising the neuroscience of education concept, brain breaks [1], a space set away from the simulation, was used. Learners removed themselves from the simulation, stepped into the space and were coached through cyclical sighing which has been shown to reduce stress and anxiety [3]. Following this, physical and cognitive activities designed to activate neural pathways and release neurotransmitters such as dopamine, oxytocin and acetylcholine were carried out to promote the learning process and higher order thinking [1]. The combination of these elements aimed to reduce anxiety and have the learner return to the simulation should they feel able to do so.

Results: The brain break spaces were implemented in two high fidelity major incident simulations in April 2023 in which 120 healthcare students participated. Of the 120 students, 46 provided anonymous feedback. 83% of students who used the space indicated a reduction in anxiety and stress, 72% of the respondents reported that knowing it was available for them reduced their baseline stress and anxiety prior to the simulation. Whilst some did not return to the simulation a small number of students were able to complete the simulation after using the space.

Discussion: Initial positive results indicated from student feedback showed that the presence of a brain break space had positive outcomes on students undertaking simulation. For those who suffer 'amygdala highjack' and anxiety the space offers refuge for cognitive re-focus and relief from anxiety. The presence of the safe space also appears to reduce the likelihood of learners suffering psychological distress by reducing their baseline levels of anxiety and stress. Further development of these spaces is ongoing and continual student feedback will guide any future implementation of the initiative with the aim of improving psychological safety during simulation.

Ethics statement: Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

REFERENCES

1. O'Mahony K. The brain-based classroom: accessing every child's potential through educational neuroscience. New York, NY: Routledge, Taylor & Francis Group. 2021.
2. Fredericks S, ElSayed M, Hammad M, Abumiddain O, Istwani L, Rabeea A, et al. Anxiety is associated with extraneous cognitive load during teaching using high-fidelity clinical simulation. Medical Education. 2021;26(1).
3. Balban MY, Neri E, Kogon MM, Weed L, Nouriani B, Jo B, et al. Brief structured respiration practices enhance mood and reduce physiological arousal. Cell Reports Medicine [Internet]. 2023;4(1). Available from: https://www.cell.com/cell-reports-medicine/fulltext/S2666-3791(22)00474-8?_returnURL=https%3A%2F%2Flinkinghub.elsevier.com%2Fretrieve%2Fpii%2FS2666379122004748%3Fshowall%3Dtrue.