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The Effect of Stress Inoculation Training on Endotracheal Intubation

Alexandra P. Lambert
Virginia Commonwealth University

VIRGINIA COMMONWEALTH UNIVERSITY

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Alexandra Lambert, DO; David Evans, MD FACEP; Nathan Lewis, MD FACEP; Stephen Miller, DO FACEP; Michael Vitto, DO FACEP; Grace Hickam, MD

Department of Emergency Medicine, Virginia Commonwealth University Health System, Richmond, VA

Background

- **Stressful situations pervade emergency medicine. Many studies demonstrate the deleterious impacts of stress on a physician's immediate actions and lasting mental health, yet it is well-documented in the literature that preparedness can help mediate stress (1,2).**
- **Stress inoculation training (SIT) is utilized to prevent adverse stress response (3).**
- **SIT theory teaches coping skills and defensive thinking to actively mitigate the negative physiological effects that occur during stressful events. This training involves a conceptualization phase, skills training phase and application phase (4,5).**

Objective

- **Evaluate the effect of stress inoculation training (SIT) on endotracheal intubation performance of novice intubators.**

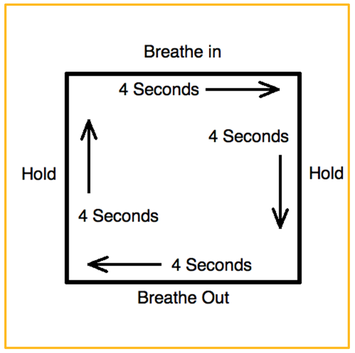

Figure 1: Techniques taught for the focused intervention include box breathing, positive self-talk and imagery.

Methods

- **The study consists of a population of medical students without prior airway training randomly assigned to control and intervention groups.**
- **Both groups will receive a didactic lecture on airway management followed by a brief intubation attempt on a standard dummy.**
- **The experimental group will subsequently receive a lecture on the principles of SIT where they learn to use focused intervention shown to reduce the physiological effects of stress** (Figure 1).
- **All participants will then intubate the standard dummy in three different scenarios of varying environmental stressors.**
- **To evaluate the lasting effects of SIT, both groups will return in a month and repeat the intubation scenarios.**

References

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2. Paton, D. (1994). Disaster relief work: An assessment of training effectiveness. *Journal of Traumatic stress*, *7*(2), 275-288.
3. Meichenbaum, D., & Cameron, R. (1989). Stress inoculation training. In *Stress reduction and prevention* (pp. 115-154). Springer, Boston, MA.
4. Druckman, D., & Swets, J. A. (Eds.). (1988). *Enhancing human performance: Issues, theories, and techniques*. National Academies Press.
5. Keinan, G., & Friedland, N. (1996). Training effective performance under stress: Queries, dilemmas, and possible solutions. *Stress and human performance*, 257-277.

Results

- **Due to COVID-19 restrictions pilot testing has been postponed until Fall 2020.**
- **The main outcome will be the participant's ability to successfully perform the procedure under stressful conditions.**
- **Secondary outcomes will be the number of attempts and time required to successfully intubate.**
- **Participant's post event response to the Perceived Stress Questionnaire will also be analyzed.**

Conclusions

- **The study evaluates the teaching of SIT on emergency airway management.**
- **This application of SIT will not only contribute to the literature on stress management, but also enhance patient safety and better prepare medical students for career resiliency.**

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