



Performing Under Stress

Key Article

- *Lauria MJ, et al. Psychological skills to improve emergency care providers' performance under stress. Ann Emerg Med. 2017; epub ahead of print.*

Introduction – How Do You Prepare/Perform Under Stress?

- Peter
- Rob
- John
- Mike

Definitions

- *Psychological skills training*
 - “Systematic acquisition and practice of different psychological techniques to improve cognitive and technical performance”
 - Currently used in performing arts, military, athletics, etc.
 - Not used much in medicine
- *Stress*
 - “Perceived imbalance between the demands of the emergency situation and your ability to meet those demands where failure to do so has important consequences to you”
 - Detrimental to task performance cognitive faculties
 - Decrease in quality and effectiveness of decisions
 - Decrease in the number of pieces of information a person can process
 - Short-term memory deficits

Resuscitating the Critically Ill Patient – It is Stressful!

- Managing critically ill patients similar to crisis situations:
 - Uncertainty
 - Potential for life threats
 - Need to take immediate action
 - Often unable to control all aspects of the situation
- Two features of contemporary stress theories seen in EM:
 - Appraisal mechanism
 - How one approaches the situation determines thoughts, behaviors, and physical reactions that constitute emotional response
 - Compensation

- Individuals apply various conscious and unconscious modalities to compensate for perceived inability to meet situational demands
- Degree to which compensation occurs determines the nature and magnitude of the stress response

Psychological Skills – How to Improve Resuscitation Performance

- *Performance-enhancing Psychological Skills (PEPS)*
 - Distinct from “mindfulness” training
 - Specifically designed to empower people to actively address their emotional state and to take steps to mitigate the stress response in real time
 - Allows providers to:
 - Maintain situational awareness
 - Think clearly
 - Recall important information
 - Perform skills efficiently
 - Not designed to replace traditional clinical training – to be used as a supplement

Breathe, Talk, See, Focus (BTSEF)

- Lauria, et al. propose that the EM model for PEPS can be represented by 4 key elements: breathe, talk, see (mental rehearsal), and focus
- Breathe
 - Ability of providers to learn to control and focus attention on their breathing
 - Application of breathing techniques offers quick and effective means to decrease the immediate spike in physiologic arousal to stress.
 - Respiration is the only autonomic function that can be controlled and consciously modified
 - Can be used to control the effects of one’s emotional response – close relationship between respiration and emotional state
 - Can be used just before procedures and during transition points in resuscitation
 - Consider “tactical breathing”
 - 4-second method
 - Breathe in deeply for 4 seconds
 - Held for 4 seconds
 - Exhale slowly for 4 seconds
 - Held for 4 seconds
 - Intent is to slow down RR
- Talk
 - Positive, self-talk consists on an internal monologue with a structure of statements
 - Can improve the perception that one can successfully perform a task
 - Different kinds of positive self-talk:
 - Instructional self-talk
 - “focus on the needle angle going into the skin”

- Motivational self-talk
 - “I can do this; I have done it before”
 - “This person needs my help to survive”
 - How to perform self-talk
 - Keep phrases short and specific
 - Use first person and present tense
 - Use positive phrases
 - Say a phrase with intention
 - Speak kindly to yourself
 - Repeat phrases often
 - See
 - Ability of providers to visualize the steps of a procedure or clinical skill they are preparing to perform
 - Serves as a practice run in the provider’s mind before actually performing the procedure
 - Activates/uses the same neural network
 - Improves concentration, strengthens confidence, controls emotional response
 - Imagery most effective when specific, vivid details are incorporated – visualization should include simulating the actual movements and steps
 - PETTLEP
 - Physical nature of a task
 - Specifics of the environment the task will be performed in
 - Type of task
 - Timing of individual steps or movements
 - Learning the content of the movement
 - Emotion of task completion
 - Perspective of the person
 - Focus
 - Provider should use a trigger word before starting a procedure or resuscitation
 - Can be subvocalized, whispered, or simply spoken aloud
 - Word acts as a cognitive flare – prompts provider to shift his or her attention to a prioritized task
 - Trigger can also be used to refocus after a period of intense narrow focus in a high-stress scenario
 - Use of a trigger can be immensely helpful with attention
 - One’s attention is limited – humans can only pay attention to a limited number of stimuli
 - Humans don’t process things in parallel
 - Evidence exists to suggest that stress can initiate negative introspection and self-focus – can cause performance to deteriorate
 - Attention and concentration can be improved through use of a trigger word
 - Word can be motivational or instructional