

Streszczenie w języku angielskim

Background:

In recent years, high-fidelity medical simulation, has become an effective, widely accepted and popular method of medical education. During such classes at Medical Simulation Centres, not only technical procedural skills are taught, but also teamwork (non-technical skills, team training). By providing high fidelity, students can be taught the proper management of a patient in a life-threatening condition under safe, controlled conditions, but they are also exposed to severe stress, similar to real-life emergency department situations. The negative impact of stress in both: simulation and real patient care, affects the executive functions of medical teams participants: attention and memory.

Mindfulness practice is one of the effective methods of coping with stress. Mindfulness is the process of intentionally paying attention to the present moment without judgment, including openness, curiosity and acceptance. It is possible that stress, mindfulness, executive functions and their interrelationships affect the quality of medical teams' performance.

The aim of this study was to examine whether mindfulness, stress and executive functions are related to the technical and non-technical skills of medical students participating in medical simulations in pediatrics.

Participants and methods:

The study included 153 final-year medical faculty students. A total of 306 high-fidelity simulations of life-threatening situations involving children were conducted. The stress, executive functions, mindfulness, and technical and non-technical skills of the participants acting as team leaders were assessed.

Results:

1. Stress and the coping mechanism of the participants affected their skills during pediatric simulations.
2. Repeating various scenarios in the same team significantly improved the students' non-technical skills but not procedural ones.
3. Some components of mindfulness, such as non-judgment and conscious action, were positively related to the skills of medical team leaders.
4. Executive functions correlated with the non-technical skills and mindfulness of the medical students.

Conclusions:

Stress, mindfulness, and executive functions model the behavior and skills of medical students during pediatric simulations of life-threatening events. Further research in this area may prove whether mindfulness training will improve learning outcomes in pediatric emergency medicine.