Targeted crisis resource management training improves performance among randomized nursing and medical students.

Jankouskas TS, Haidet KK, Hupcey JE, Kolanowski A, Murray WB.

Abstract
Introduction:
In this study designed with adequate statistical power to detect relevant training effects, investigators evaluated Crisis Resource Management (CRM) training during a simulated patient crisis. This study is guided by the Team Effectiveness Conceptual Model by Kozlowski and Ilgen.

Methods:
An experimental pretest/posttest design was used. Four-member, interdisciplinary teams, each composed of nursing and medical students, were randomly assigned to experimental or control conditions: Basic Life Support plus CRM training or Basic Life Support only, respectively. Team process (task management, teamworking, situation awareness, and interprofessional attitude) and team effectiveness (team error rate and response times) were the outcomes of interest.

Results:
Experimental teams demonstrated significant improvement in team process measures compared with control teams. CRM training predicted 13% of the variance in task management ($P = 0.05$), 15% of the variance in teamworking ($P = 0.04$), and 18% of the variance in situation awareness ($P = 0.03$). CRM training and task management predicted 22% of the variance ($P = 0.04$) in team error rate; CRM training and teamworking predicted 35% of the variance ($P = 0.01$), while CRM training and situation awareness predicted 20% of the variance ($P = 0.04$) in response time to chest compressions. Both experimental and control teams demonstrated significant improvement in team effectiveness measures.

Conclusions:
CRM team training and team practice in an environment of high-fidelity simulation and facilitated debriefing have significant effects on team process and team effectiveness. The conceptual framework is potentially adaptable to additional settings and populations for team-related research and education.

PMID: 21937959 [PubMed - indexed for MEDLINE]