

Poster Session I

#7

Crisis Resource Management Training: Impact On Team Process And Team Effectiveness

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Purpose: Cardiac arrest is a rare event creating an unfamiliar and intimidating challenge for the interdisciplinary team (Hayes, Rhee, Leblanc, Detsky, & Wax, 2007; O'Brien, Haughton, & Flanagan, 2001). A team training program, Crisis Resource Management (CRM), includes information and practice in team process during a patient crisis for improvement of team effectiveness (Howard et al., 1992). In this statistically-powered study, investigators evaluated Crisis Resource Management (CRM) training during a simulated patient crisis.

Theoretical Framework: Kozlowski and Ilgen's (2006) team effectiveness conceptual framework guided the study. Kozlowski and Ilgen (2006) synthesized the empirical and theoretical literature from the past 50 years on work groups and teams. Their conceptual framework, based on this synthesis, identifies key concepts of team process and illustrates potential relationships that can inform team effectiveness.

Methods: An experimental pretest/posttest design was used. Four-member 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 inter-professional 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 to 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 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.