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Authors

Shah, S H
Heitmann, D
Mangolds, V
et al.

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Shah SH, Heitmann D, Mangolds V, Zgurzynski P, Bird SB/University of Massachusetts, Worcester, MA

Background: Team Strategies and Tools to Enhance Performance and Patient Safety (TeamSTEPPS) is a validated framework to improve patient safety, however its impact in undergraduate medical education is understudied.

Objectives: We hypothesized that teaching TeamSTEPPS augmented with simulation will improve medical student views on teamwork and their measured performance in scenarios.

Methods: We performed a prospective evaluation of TeamSTEPPS using a pre- and post-intervention design. Participants were a convenience sample of 4th year medical students participating in a required course. Knowledge of teamwork and communication were assessed by TeamSTEPPS Learning Benchmarks (LB). Teamwork perception was assessed by TeamSTEPPS Teamwork Attitudes Questionnaire (T-TAQ). Students were divided into 6 teams to participate in a scripted pre-intervention simulated scenario involving physicians, nurses, pharmacists and respiratory therapy. Data on teamwork performance was obtained by using TeamSTEPPS Team Performance Observation Tool (T-TPOT). Then the standard TeamSTEPPS curriculum was delivered. The same teams engaged in a second, different post-intervention scenario. Post-intervention data were obtained by repeat completion of LB, T-TAQ and T-TPOT. Mean scores for the LB, T-TAQ, and T-POT from the two scenarios were compared using t-test.

Results: There were 23 participants. Mean scores for LB pre- and post- were 77% and 78%, respectively ($p=ns$). Mean pre- and post- scores on the T-TAQ were not statistically different ($p=ns$). For the T-POT, the mean score was 3.3 before and 3.6 after education ($p=ns$).

Conclusions: Implementation of the TeamSTEPPS curriculum failed to show an impact on medical student knowledge, attitudes or performance regarding teamwork. It is unclear if this is related to pre-existing familiarity with TeamSTEPPS concepts, the educational design of the curriculum may not meet the learner needs/expectations, or limitations of the survey instruments.