

Stanford Cognitive Aid In Simulation Training

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Problem

The implementation and use of a cognitive aid during a crisis is not the standard of care even though they have been shown to provide a significant decrease in medical errors and improve the patient outcomes.

Though there is evidence from studies that have shown cognitive aids improve treatment of emergencies, there is little research that explores the use of cognitive aids in simulation training, and how it affects student registered nurse anesthetists' ability to appropriately identify and effectively treat emergency situations.

Methods

- Quantitative design
- Samples: SRNA cohort 2022 at AHU
- Two groups, both participated in a simulation with the same scenario (Total Spinal Anesthesia).
- The control group had the Stanford Cognitive Aid available during the simulation and the comparison group did not.
- Data collection was focused on the dependent variables: time to diagnosis and the number of correct interventions implemented.
- A data collection sheet was used to record information.
- Results were obtained and analyzed.

Results

- In the group with the Stanford cognitive aid available, only one out of the four student correctly identified the problem in 9 minutes
- In the group without the cognitive aid, only one out of three student correctly identified the problem in 6 minutes
- In both groups, all students initiated CPR
- In the group with cognitive aid, one student did not intubate
- No student in the cognitive aid group properly addressed hypotension
- No student in the group without a cognitive aid gave fluids

Discussion & Implications

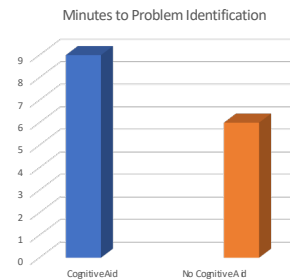
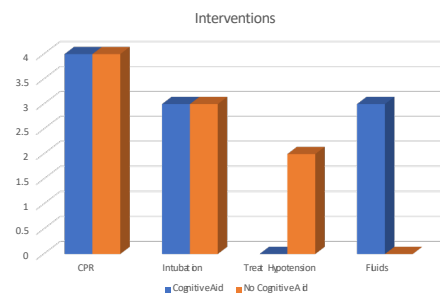
Due to several limitations (small sample size, technical difficulties) we were unable to draw a conclusion or answer our PICOT question.

During the simulation, only one person from each group correctly identified the problem. The student without the cognitive aid diagnosed the problem quicker. Students who had the cognitive aid seemed fixated on the aid versus the patient. However, neither group identify the problem early on in the scenario. Neither group completed all of the necessary interventions.

Literature Review

The use of cognitive aids and how it correlates to improving patients' outcomes was a major theme which emerged repeatedly throughout the literature, and a specific comparison was made between the use cognitive aids in simulation and outcome of scenarios.

In patient care settings the use of cognitive aids has been associated with improved technical skills in providers. The use of cognitive aids also fostered a culture of safety in patient management.



Conclusions

Due to a small sample size of 7 participants, we were unable to conduct a statistical analysis. Therefore, with this and other limitation we were unable to draw any conclusions. However, we would recommend this project to be done with a larger sample size to determine a correlation between a cognitive aid and simulation performance.

Acknowledgements

AHU Simulation Department

