

PURPOSE

The purpose of this evidenced based practice project is to evaluate the implementation of Crew Resource Management (CRM) training and culture, on staff satisfaction and retention over a two year period.

PICOT QUESTION

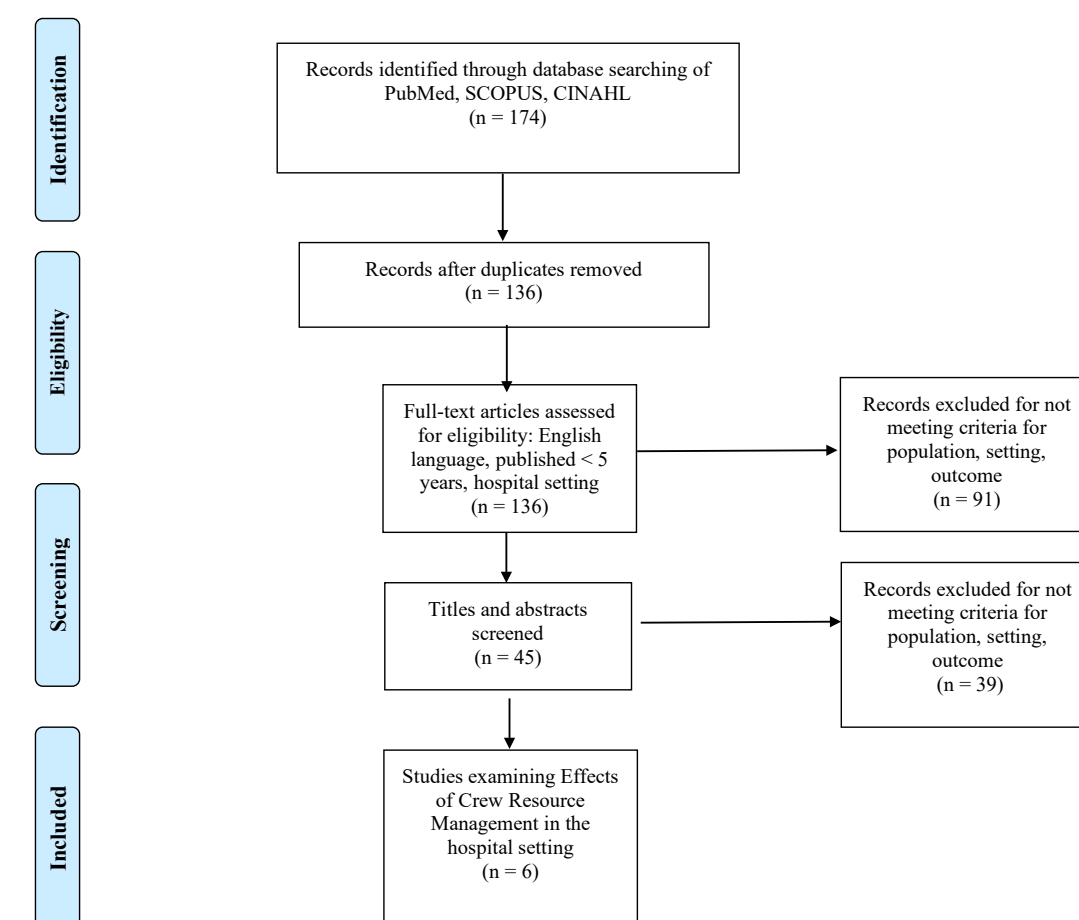
In staff working in emergency services (P), how does the adoption of Crew Resource Management training and culture (I), impact employee satisfaction and retention(O) over 2 years (T).

SIGNIFICANCE

- Currently Crew resource management is offered as an optional course offered to be taken once.
- In Missouri in 2022 this left vacancies for RN positions at 19.8% (2022 Workforce Report - MHA, 2023).
- Turn over of registered nurses has been increasing since 2019 (2022 Workforce Report - MHA, 2023).

SEARCH METHODS

Figure 1: The PRISMA Flow Diagram of the Literature Review: detailing the databases searched, abstracts screened, and full text articles included



EVIDENCE-BASED PRACTICE SUMMARY TABLE

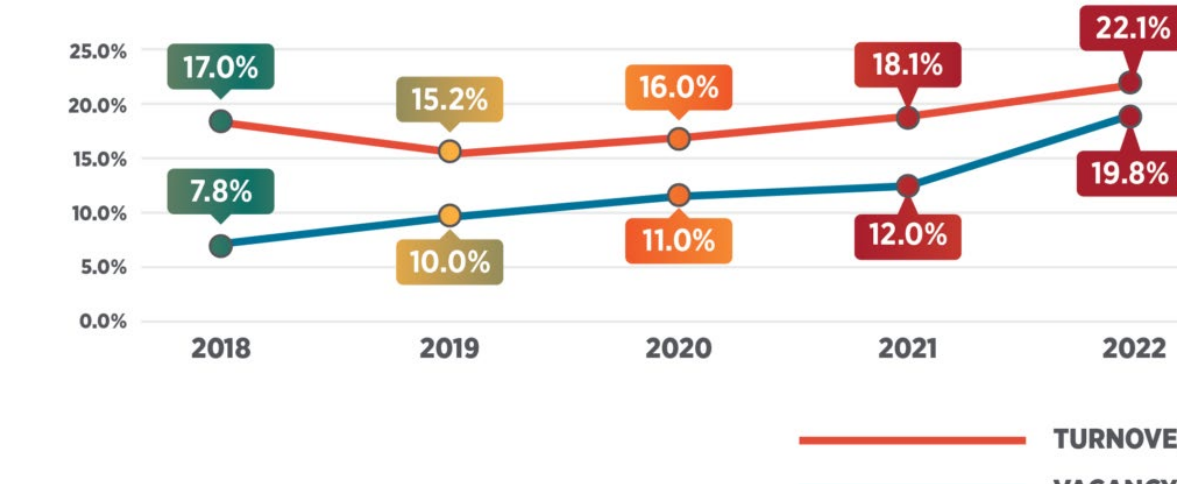
Citation	Study Design	Level of Evidence	Comments
Bacon, C. T., McCoy, T. P., Henshaw, D. S., & Stabel, C. L. (2021). Organizational Safety Climate and Job Enjoyment in Hospital Surgical Teams With and Without Crew Resource Management Training. <i>Journal of Nursing Administration</i> , 51(11), E20–E26. https://doi.org/10.1097/nna.0000000000001071	Meta Analysis	Level III	Improved job enjoyment with better organizational safety culture. It does say that a good organizational safety culture is important to job enjoyment, they can not directly correlate it to crew resource management.
De Schepper, S., Geuens, N., Roes, L., Hilderson, D., & Franck, E. (2021). Generic Crew Resource Management Training to Improve Non-technical Skills in Acute Care—Phase 1: An Interdisciplinary Needs Assessment Survey. <i>Clinical Simulation in Nursing</i> , 54, 1–9. https://doi.org/10.1016/j.ecns.2020.12.009	Descriptive Studies	Level III	Crew resource management training can be generalized, however in person and simulation is the preferred method of instruction and implementation.
Man, A. P. N., Lam, C. K. M., Cheng, B. C. P., Tang, K., & Tang, P. L. (2020). Impact of Locally Adopted Simulation-Based Crew Resource Management Training on Patient Safety Culture: Comparison Between Operating Room Personnel and General Health Care Populations Pre and Post Course. <i>American Journal of Medical Quality</i> , 35(1), 79–88. https://doi.org/10.1177/1062860618824863	Individual Studies	Level III	There is a need for repeated reinforcement education. It is not enough to give one class and expect a cultural change.
Moffatt-Bruce, S. D., Hefner, J. L., Mekhjian, H. S., McAlearney, J. S., Latimer, R. T., Ellison, C., & McAlearney, A. S. (2017a). What Is the Return on Investment for Implementation of a Crew Resource Management Program at an Academic Medical Center? <i>American Journal of Medical Quality</i> , 32(1), 5–11. https://doi.org/10.1177/1062860615608938	Individual Case Study	Level IV	At Ohio State University Wexner Medical Center spent 3.6 million in training of CRM in 6 hospitals across 2 campuses. They saw a return on investment in adverse events between a conservative \$9.1 million and \$24.4 million dollars. Evidence on improved safety culture.
Schwartz, M. E., Welsh, D. P., Paull, D. E., Knowles, R. S., DeLeeuw, L. D., Hemphill, R. R., Essen, K. E., & Scullin, G. L. (2018). The effects of crew resource management on teamwork and safety climate at Veterans Health Administration facilities. <i>Journal of Healthcare Risk Management</i> , 38(1), 17–37. https://doi.org/10.1002/jhrm.21292	Individual Studies	Level IV	One of the larger studies that focuses on improved teamwork, however also shows that around the 6 month and year mark there is a need for reinforcement training.
MSc, R. S. V., MSc, R. S. V., & Van Hecke MSc, R. A. (2018). The effectiveness of crisis resource management and team debriefing in resuscitation education of nursing students: A randomised controlled trial. <i>Journal of Clinical Nursing</i> , 27(1–2), 77–85. https://doi.org/10.1111/jocn.13846	Individual Studies	Level II	Showing that utilization of CRM with simulation training increased both self efficacy and team efficacy in nursing students.

IDENTIFIED THEMES & PRACTICE IMPLICATIONS

- Crew resource management has a positive impact on safety culture, and a quality safety culture is directly correlated with improved job enjoyment.
- Crew resource management training is best done through in person education and simulation.
- Crew resource management must be routinely reinforced through simulation and education.



Registered Nurse Turnover & Vacancy



RECOMMENDATIONS

- Evaluate the retention rates of staff in the emergency department over 2 years.
 - Retention will be compared to the rest of the hospital through trends to help mitigate confounding factors.
 - Staff satisfaction scores will be measured for 2 years and compared to the trends of staff satisfaction scores for one year previous.
 - Staff will be surveyed about safety culture at all trainings to gather baseline culture metrics and at all following recurrent training.
- Engage Key Stake Holders: Chief Nursing Officer, Director of Emergency Services, Leadership of the emergency department, Center for Education and Development, The Office of Clinical Effectiveness, and The Office of Professional Practice
- Dissemination:
 - SBAR outlining use of Crew Resource Management, our current training program.
 - Prepare presentation on how training, simulation, and recurrency could be handled in cost effective manner.

CONCLUSIONS

- Crew resource management was developed by NASA and has been implemented in numerous industries across the globe including healthcare to increase safety culture and has been proven to save organizations millions of dollars.
- Crew resource management can retain nurses through a developing a safer work environment and its own innate culture of communication and psychological safety.
- Potential Challenges: This will not just need the buy in of nurses, but the buy in and participation of multiple physician groups and other health care professionals. Also there is an upfront educational cost to each individual in the organization.
- Nevertheless, crew resource management will increase retention and over the next two years, not only save the organization from adverse events, but hiring, education and training.

REFERENCES

2022 Workforce Report - MHA. (2023, February 1). MHA. <https://web.mhanet.com/media-library/2022-workforce-report/>