Does Simulation Impact Nurses' Performance in Neonatal Resuscitation?

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BACKGROUND

Patient safety in the neonatal intensive care environment is understudied. However, teamwork and communication are reportedly integral components, or prerequisites, for supporting a culture of patient safety. Teamwork and communication in clinical practice are reported to improve with simulation and structured learning strategies. There is limited research about simulation efficacy for improving neonatal resuscitation through enhanced communication.

The Joint Commission reported that between 1995 and 2004 there were approximately 3000 sentinel events that were attributed to poor communication (Aggarwal et al., 2010). The Institute of Medicine (IOM) recommends that health care professionals utilize interprofessional training as patient safety strategy to address poor communication (IOM, 2003). TeamSTEPPS core competencies for team leadership skills include directing and coordinating activities of team members, assigning team performance, assigning tasks, developing team knowledge and skills, motivating team members, planning and organizing, and establishing positive team atmosphere (Aggarwal et.al., 2010).

Based on an institutional needs assessment and literature review specific to quality improvement strategies for neonatal resuscitation, an improved neonatal resuscitation program (NRP) course was developed and implemented. The revised course included NRP simulation cases, communication education with TeamSTEPPS strategies, and documentation training of the clinician guided revision of the resuscitation form. The education, training, and simulation exercise was guided by the National League for Nursing/Jeffries Simulation Framework and the TeamSTEPPS program.

REFERENCES
Aggarwal, R., Mutton, O.T., Derbrew, M., Hananef, D., Heydenburg, M., Issenberg, B.,…Reznick, R. (2010). Training and simulation for patient safety. *Quality and Safety in Health Care*, 19(Suppl 2), 134-143. http://dx.doi.org/10.1136/qshc.209.038562
Institute of Medicine. (2003). *Health professions education: A bridge to quality.* Washington, DC: National Academies Press.
Institute of Medicine. (2010). *The future of nursing: Leading change, advancing health.* Report Brief.
http://www.iom.edu/~/media/Files/ReportFiles/2010/The-Future-of-Nursing/Future of Nursing2010ReportBrief.pdf
Jeffries, P. R., & Rogers, K. J. (2009). Theoretical framework for simulation design. In P, R, Jefferies (Ed.), Simulation in Nursing Education (pp. 21-34). New York, NY: National League for Nursing.,
National League for Nursing. (2005). Student satisfaction and self-confidence in learning. Retrieved from http://www.nln.org/docs/default-source/default-document-library/instrument-2_satisfaction-and-self-confidence-in-learning.pdf?sfvrsn=0

PURPOSE

This project was designed to evaluate the perceived level of confidence, satisfaction and communication skills in nurses performing neonatal resuscitation following the revised NRP Provider course.
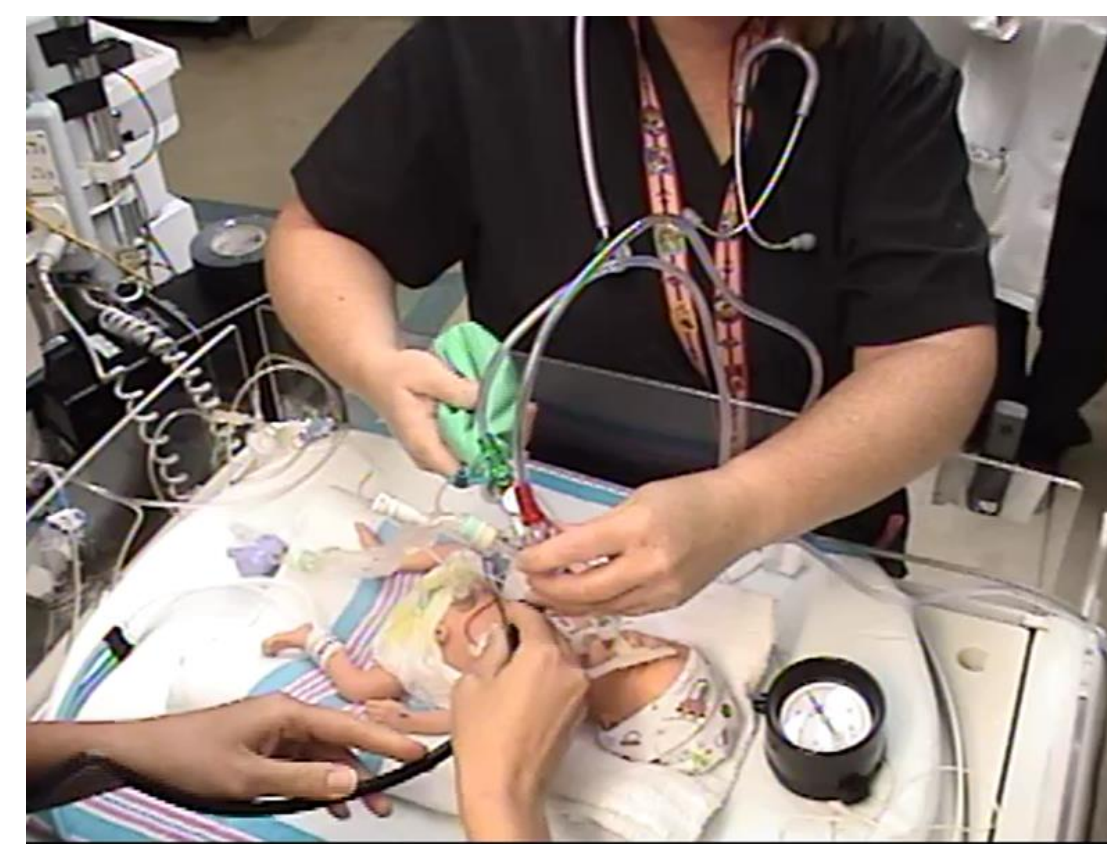
METHODS

Setting: The setting was a Neonatal Intensive Care Unit (NICU) and Labor & Delivery area in the Northeast region of Ohio. The NICU is a level IIIB, which provides care for not only critically ill neonates and infants but comprehensive care for neonates, 1000 grams or less or 28 weeks gestation age or less (AAP, 2012b).

Intervention: The project was structured so that during the implementation phase education was provided on the newly designed resuscitation documentation form. Prior TeamSTEPPS training had already occurred within the previous year for all staff.

Sample: A purposeful sample of nurses (n=61) volunteered to participate in the training and simulation exercise.

Data Collection: Demographic information was collected and the Student Satisfaction and Self-Confidence in Learning Scale (NLN, 2005) was used in a nonrandomized descriptive evaluation with a posttest one-group design.

RESULTS

The analysis found 49% of the nurses were confident in their resuscitation skills, 50% were satisfied with the simulation experience, and 47% reported communication needed to be improved for an effective resuscitation process.

Demographics
- Age: Participants were between 21-70 years of age, with majority between 41-60 years (57.4%).
- Education: Majority, 57% were baccalaureate prepared, 28% associate degree and 20% diploma.
- Experience: 55% have less than 5 years and 24.6% have more than 20 years with remaining 20.4% between 5-20 years.
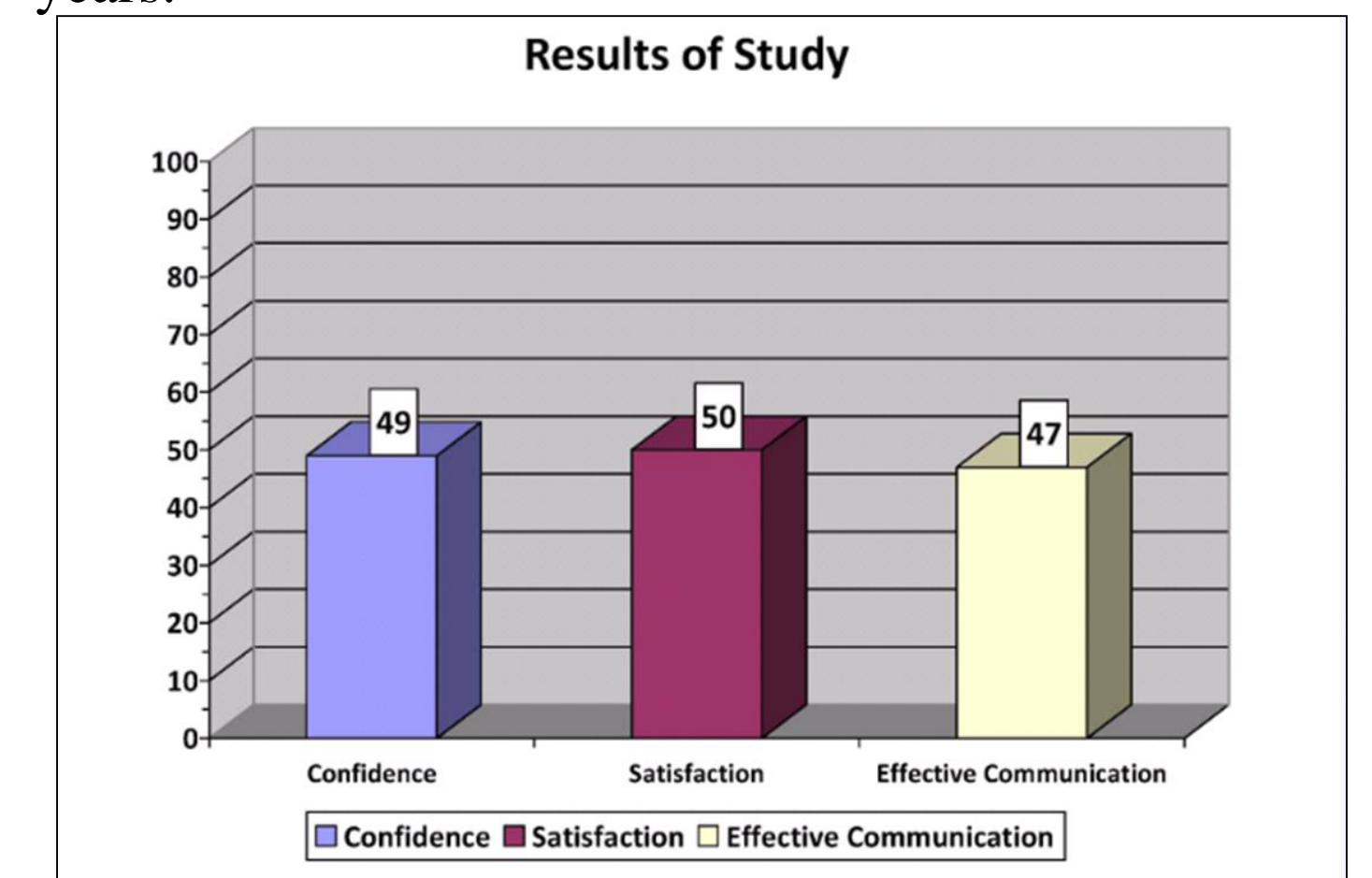
IMPLICATIONS

This project contributes to social change by demonstrating enhanced NRP training within a simulated environment results in integration of communication and teamwork skills essential to improve the process of neonatal resuscitation. Further investigation of this effect on other disciplines involved in NRP or within the interdisciplinary team attending deliveries may be warranted. As code documentation moves to the electronic medical record, repeating this project using electronic documentation may be beneficial.