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Enhancing Teamwork in Nursing Students

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Enhancing Teamwork in Nursing Students

by

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A project submitted to the faculty of
Gardner-Webb University Hunt School of Nursing
in partial fulfillment of the requirements for the degree of
Doctor of Nursing Practice

2020

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07/20/2020
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Acknowledgements

I would like to thank my chair, Dr. Tracy Arnold for all of her encouragement and advice. I would also like to thank Kimberly Brown, a committee member, who has been especially helpful in the planning of this project. And, I would like to thank Ruth Henderson, committee member, Master TeamSTEPPS® Trainer and Simulation Coordinator, whose expertise and support was invaluable in the planning and implantation of this project.

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Abstract

The purpose of this project was to equip senior practical nursing students ($n = 11$) with the skills needed to increase their feelings of preparedness to join an intradisciplinary team in the workplace after graduation. This project utilized a pre-test/post-test design using TeamSTEPPS® Teamwork Attitudes Questionnaire (T-TAQ) to determine if participation in TeamSTEPPS® training and a simulation exercise enhanced perception of teamwork in senior practical nursing students. A paired t-test was performed to analyze the data collected from the questionnaires acquired before and after the TeamSTEPPS® training. The results showed a t-value of 8.49, greater than the critical t-value of 2.23, demonstrating a significant difference in the before and the after training questionnaire results, confirmed by $p < .001$, showing high significance. The results of the project showed an increase in the T-TAQ scores after the training, demonstrating and enhancement of the students' perception of teamwork.

Key Words Teamwork, TeamSTEPPS®, simulation, nursing, students

Enhancing Teamwork in Nursing Students

Patient outcomes improve when teams work well together. Studies have shown that patients with diabetes, hypertension, and chronic pain demonstrated improvement in their conditions when a cohesive healthcare team was involved in their care (Lutfiyya et al., 2019). Attributes of effective teamwork include a shared understanding and respect of the responsibilities and the roles of all team members, shared training, and effective leadership. Team members who demonstrate understanding of and appreciation for their colleagues' role work more effectively to improve patient outcomes (Beard et al., 2015; Delunas & Rouse, 2014; Inman et al., 2016; Ryan, 2017).

Background

At a private University in the southeastern United States, ongoing discussions with members of the nursing advisory board noted that practical nursing graduates continue to have difficulty demonstrating effective teamwork in the work place. The literature suggests that a less cohesive and efficient healthcare team, negatively affects patient outcomes (Lutfiyya et al., 2019). As a result of advisory board discussions, faculty members implemented TeamSTEPPS® training as an intervention to equip students with the skills needed to assimilate into the workforce as an effective member of the healthcare team. The complexities of the nursing profession require collaboration with intra and inter-disciplinary teams to address complex issues facing patients and are essential to promoting a culture of safety (Carson et al., 2018).

Methodology

This project utilized a pre-test/post-test design to determine if participation in TeamSTEPPS® training and a simulation exercise enhanced perception of teamwork.

To begin, participants were asked to complete the pre-test TeamSTEPPS® Teamwork Attitudes Questionnaire (T-TAQ). The T-TAQ is a 30-item questionnaire that asks participants to answer six questions in each of the following categories: Team structure, leadership, mutual support, situation monitoring, and communication. The questions are designed to measure individual attitudes about each of the categories. Questions were based on a 5-point Likert scale with answer choices ranging from Strongly Disagree (1 point) to Strongly Agree (5 points). The total minimum score on the T-TAQ is 30 and the total maximum score is 150. The higher scores on the T-TAQ correlate with a more positive perception of teamwork (Agency for Healthcare Research and Quality [AHRQ], 2017).

Following completion of the questionnaire, participants completed TeamSTEPPS® training, facilitated by the Simulation Coordinator at the University, who is also a TeamSTEPPS® Master Trainer. The training required students to attend a TeamSTEPPS® training lecture and then participate in a simulation where they utilized skills learned in the lecture. The lecture portion of the training lasted approximately two hours and the simulation lasted approximately 50 minutes. During the simulation, participants were divided into groups of two to three participants. Each group was asked to review the simulated patient's history and physician orders prior to the start of the simulation and work together in their roles (charge nurse, staff nurse, or nursing supervisor) to complete the simulation. After completing the simulation, the participants debriefed about the simulation. Upon completion of the TeamSTEPPS® training and simulation experience, students completed a post-test T-TAQ.

Results

For each questionnaire, points were totaled for each category. The pre-test scores on the T-TAQ were compared to the results of the post-test T-TAQ scores utilizing a paired t-test to determine if there was a change in attitude toward teamwork by the participants. The independent variable was the TeamSTEPPS® training and simulation. The dependent variable of enhancement of the perception of teamwork after the application of the independent variable was measured.

Eleven participants completed the pre-test and post-test T-TAQ and participated in the TeamSTEPPS® training and simulation experience. The mean pre-test score was 139 and the post-test score was 146.5. A paired t-test was utilized to compare pre-test and post-test scores. The results showed a t-value of 8.49, greater than the critical t-value of 2.23, demonstrating a significant difference in the pre-test and post-test T-TAQ scores, confirmed by $p < .001$, showing high significance. This is confirmed by the two-tailed P-value was 0.000006913, less than 0.05, showing high significance. The Pearson correlation $r = 0.765$ shows a strong positive correlation.

Discussion

The results of the project demonstrated the TeamSTEPPS® training and simulation experience increased the participants' perceptions of teamwork. There was a significant difference in pre-test and post-test scores. Although the sample size was small, the project demonstrated the effectiveness of the TeamSTEPPS® training and simulation experience with nursing students. The project warrants further investigation in the future with a larger sample size.

Conclusion

There was an opportunity for growth identified by the members of the nursing advisory board, noting practical nursing graduates continued to have difficulty demonstrating effective teamwork in the work place. TeamSTEPPS[®] training was utilized as an intervention to equip students with the skills needed to assimilate into the workforce as an effective member of the healthcare team. The results demonstrated the positive impact TeamSTEPPS[®] training had on the participants' perceptions of teamwork. The potential result of the increase in perceptions of teamwork is more effective collaboration with intra and inter-disciplinary teams for these nursing graduates as they prepare to enter the workforce after graduation, promoting a culture of safety for improved patient outcomes.

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