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Active Learning Techniques to Improve Emotional Intelligence Among Student Registered Nurse Anesthetists

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Executive Summary

Introduction of the Problem

Emotional intelligence has been demonstrated to promote positive healthcare professional and student outcomes in varying levels of education and specializations. With healthcare's increasing challenges and complexities, the demand for high-quality professionals withholds. Such demand has led to researchers exploring holistic human characteristics and abilities that promote success, such as emotional intelligence. The focus of this doctoral project explores the data regarding emotional intelligence and healthcare profession outcomes, focusing on student registered nurse anesthetists (SRNAs).

Emotional intelligence is a high-level skill necessary for delivering competent nursing care (Christianson et al., 2021). Further, nurse anesthesia is a doctoral-level specialization that requires applying skills and experiences from bedside nursing care to promote increased critical thinking as a provider. SRNAs face the high-stress operating room environment while enduring a rigorous program encompassing extensive clinical hours, frequent examinations in variable formats, and multiple other strenuous curriculum requirements. With active learning strategies for emotional intelligence training, SRNAs can use the knowledge gained to improve success in academic and clinical settings. For this review and doctoral project, emotional intelligence training involves the delivery of an emotional intelligence presentation and the implementation of active learning strategies for reinforcement. With emotional intelligence training, the anticipation is that first-year SRNAs will have improved scores on the MSCEIT in Spring 2022 compared to the cohort's initial test scores before emotional intelligence training.

Literature Review

There were two primary aims for the literature review: Is there a relationship between emotional intelligence and clinical or academic performance? And can emotional intelligence be improved with education or training? Articles included were from 2009-present, had full-text availability, and were written in the English language. Seven databases were utilized including Academic Search Complete, CINAHL Plus, Consumer Health Complete-EBSCOhost, Healthsource: Nursing/Academic Edition, ERIC, APA PsycInfo, and Medline Complete. Due to emotional intelligence becoming an emerging topic in healthcare, the search terms were widely encompassing to include many healthcare fields and specialties for each aim of the review.

Multiple themes emerged from this review including students with higher emotional intelligence levels performing better academically (Collins, 2013; Fernandez et al., 2012; Snowden et al., 2018; Kim & Shin, 2021; Alenezi et al., 2020). Additionally, students with higher levels of emotional intelligence also perform better in clinical settings (Al et al., 2017; Kim & Sohn, 2019; Rankin, 2013; Christianson et al., 2021). While not a focus of this project, the literature suggests that emotional intelligence can reduce occupational burnout and aid in conflict management (Al et al., 2017; Xie et al., 2021). Both concepts are vital in the anesthesia profession and are therefore mentioned here.

The importance of training to improve emotional intelligence is relative to this doctoral project. Emotional intelligence training was involved in many leadership programs for medical residents. Additionally, higher emotional intelligence levels were observed following emotional intelligence training for nursing students and medical sciences students (Goudarzian et al., 2019; Lolaty et al., 2012). The results from the studies revealed that emotional intelligence is a component of promoting effective leadership and communication (Cerrone et al., 2017; Farver et al., 2016; True et al., 2020). Abbasi et al. (2018) also showed that emotional intelligence

improves with training in medical residents by comparing pre-and post-emotional intelligence scores between a control and intervention group.

Project Methods

This project aimed to provide emotional intelligence education to first-year Student Registered Nurse Anesthetists (SRNAs) enrolled in a nurse anesthesia educational program at a mid-sized university in the Midwestern United States during the Spring 2022 semester, the semester before the initiation of clinical anesthesia rotations. The education was based on the ability model of emotional intelligence proposed by Mayer and Salovey, and included a presentation given by an expert in the field of emotional intelligence and two active learning strategy sessions implemented by a second-year SRNA that followed. Upon interviewing for admission into the nurse anesthesia program in the summer of 2020, applicants were asked to complete the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT) which served as their baseline emotional intelligence scores. These same students were asked to complete the MSCEIT and a Likert-style survey after the educational intervention during the Spring 2022 semester.

Before the educational intervention, each participant received their pre-admission MSCEIT results and the comparative scoring standards from the MSCEIT manual. These results included the overall EI score with ranked percentile, as well as individualized branch scores. Additionally, the participants received two area scores, experiential and reasoning. An hour-long PowerPoint presentation was then delivered by a content expert in Industrial-Occupational Psychology. The presentation provided background information on emotional intelligence and its clinical relevance to the anesthesia profession. On two additional days the students were required to be on campus for didactic coursework, the participants engaged in active learning sessions to

further reinforce the concepts of EI. Each active learning session was 30-45 minutes and included classroom and small group discussions and case studies. After the active learning sessions, students were asked to complete the MSCEIT and take an anonymous Likert-style survey.

Evaluation

Analysis of data involved both the Likert-style survey and MSCEIT results. The Likert-style survey results provided subjective data, while the MSCEIT results were utilized to analyze objective data. Paired sample t-tests were done for each task, branch, and area scores as well as total scores. The benchmark for project success was based on the achievement of statistical significance from data showing improved post-MSCEIT scores.

From the data gathered from the 32 students who completed the survey, 84% agreed or strongly agreed that the emotional intelligence presentation improved their understanding of the role of emotional intelligence in promoting success within the program. Also, 100% agreed or strongly agreed that the active learning sessions improved awareness of the importance of emotional intelligence concerning clinical and academic performance. Lastly, 81% of participants agreed or strongly agreed that the information provided in the educational training increased the ability to positively adapt to the demands of the nurse anesthesia program.

Of the 32 students who participated in the emotional intelligence presentation and active learning sessions, 30 had pre- and post-MSCEIT results for comparison. The overall average total pre-MSCEIT score was 106.5 compared with a post-MSCEIT total average score of 107.3. Of the tasks, branches, and area scores that were also analyzed, task one involves recognition of how a person feels based on facial expression, and task three involves the measurement of knowledge of how moods interact and support thinking (Brown, 2002). Both showed statistically

significant increases. Task two measures the ability to perceive the extent of certain landscapes or images expressing emotions (Brown, 2002). This task showed a statistically significant decrease between pre-and post-MSCEIT scores. Scores that remained the same included tasks four (the facilitation task), seven (the emotional management task), and eight (the emotional relations task). Additionally, branch four, which involves managing emotions, and area one, defined as experiential emotional intelligence, also remained the same.

While the benchmark for project success was only partially met, with some of the post-MSCEIT scores reflecting a statistically significant improvement, several areas were substantially positively impacted. In contrast, not all the post-scores reflected an improvement and post-MSCEIT total scores did not reflect a statistically significant improvement. However, the importance of incorporating emotional intelligence education into first-year nurse anesthesia program curricula has been promoted through the feedback of students.

Some limitations of this study included that the emotional intelligence presentation and active learning sessions were scheduled before a required didactic class. Also, the study included a small sample size and a lack of follow-up surveys for students after beginning clinical to further evaluate their perceptions of emotional intelligence education. Lastly, there was a possibility for students not to take the post-MSCEIT test seriously.

Impact on Practice

The goal of this project was to increase emotional intelligence scores for first-year student registered nurse anesthetists at a midwestern university. By increasing emotional intelligence levels, students would be able to better perceive, reason, understand, and manage all the varying emotions that may be encountered clinically and academically, while in the program. Students are challenged to adapt and overcome many aspects of growing into strong anesthesia

providers. Similar to anesthesia curriculums building foundational anesthesia skills first, introducing emotional intelligence education early in nurse anesthesia curriculums allows students to gain an emotional intelligence foundation that can be developed continuously during the curriculum.

As revealed by this project and the associated literature review, emotional intelligence levels can be improved with training and education to promote positive academic and clinical outcomes. Lolaty et al. (2012) note that students who underwent life skills training that included an emotional intelligence focus, showed significant improvement in emotional intelligence scores, compared to those that did not receive training. Academically, students with higher levels of emotional intelligence exemplify higher levels of academic achievement. For example, Fernandez et al. (2012) revealed from a study of 81 undergraduate nursing students, that students with higher emotional intelligence scores performed better academically in terms of peer learning, help-seeking, and critical thinking. Additionally, Kim and Sohn (2019) found that self-efficacy is a mediating factor in emotional intelligence and clinical performance. Further, high emotional intelligence among nursing students supported increased self-efficacy and problem-solving ability, leading to enhanced clinical performance (Kim & Sohn, 2019). Relevant to both academic and clinical settings, high levels of emotional intelligence allow students to better manage conflict and/or confrontation, including constructive criticism and real-time feedback. All of these support the benefit of emotional intelligence training and education for student registered nurse anesthetists.

Conclusions

Emotional intelligence is an emerging concept that applies to healthcare professional programs, and more specifically nurse anesthesia curricula. Early introduction of emotional

intelligence education into nurse anesthesia curriculums can aid students with adapting to the various challenges and stressors that take part in a rigorous doctoral program. Further, the early introduction of emotional intelligence education allows students to positively develop and implement emotional intelligence skills throughout the program to become proficient student registered nurse anesthetists and future certified registered nurse anesthetists. The outcomes related to this project demonstrate the beneficial aspects of incorporating emotional intelligence education into the first year of nurse anesthesia programs. Implications for further study include the utilization of active learning strategies to aid students in understanding and applying emotional intelligence concepts. Additionally, a larger sample size would be beneficial for further study in reducing the probability of bias.

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