EDUCATIONAL INTERVENTION ON MENTORING IMPROVES, COMPETENCE, CONFIDENCE, AND READINESS FOR PRACTICE IN STUDENT REGISTERED NURSE ANESTHETISTS

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A Project Report Submitted to the Faculty of The School of Nursing at The University of North Carolina at Greensboro in Partial Fulfillment of the Requirements for the Doctorate in Nursing Practice

Greensboro, North Carolina 2024

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Dedication and Acknowledgements

Having the opportunity to achieve my dream of becoming a certified registered nurse anesthetist would not have been possible without the love and support of my family. Dad, thank you for being with me the entirety of the journey. The ups and downs were daunting, but we did it. Thank you for your emotional and financial support. Caitlin, thank you for listening to me rant about school and life and talk to me as I journeyed to different clinical sites. Mom, thank you for encouraging me to always better myself and apply for school. While the family lost you as I started the fall semester of 2022, I want you to know that I made it and I hope I did you proud. I wouldn't have made it without all of you and your encouragement. Thank you.

Ahmed, you managed to enter my life when I was close to rock bottom. Between a rigorous academic program, many clinical hours, a terminal illness in the family, and a divorce you stuck right with me when I didn't know if I could keep going. Thank you for all the love, encouragement, and cooked meals throughout the program. We did it, babe!

Lastly, thank you to all my dear friends who helped me along the way. Thank you to Jenny and Frances who have watched me as I began to apply to school and Frances buying me my first scrub cap even before I was accepted. Thanks to my classmates who rode all the ups and downs of the program as I did. Special thanks to Olivia, Megan, Anna, and Cynthia for not only being great classmates, but also friends who I was able to share this journey with. I thank you for all the long nights and carpool rides where we vented and encouraged each other. I hope to continue to share milestones, and stories, as we move into our careers.

Abstract

Background: Student Registered Nurse Anesthetists (SRNAs) face significant personal and professional stressors during their nurse anesthesia program. The literature has demonstrated strong peer mentorship programs can help lessen stress, increase confidence, and enhance a student's academic performance. **Purpose:** To provide an early education session which reinforces the personal and educational benefits of mentorship, provides peer mentor training to help better prepare mentees, and, to assess the impact of this intervention on mentee's clinical confidence, clinical performance, and patient outcomes. **Methods:** An education intervention was conducted with mentees and mentors, from the matriculation classes of 2025 and 2026, which focused on the importance of peer mentorship, provided tips to mentors to better prepare mentees for clinicals rotations. Student mentee perceptions were obtained using a survey, which was distributed following the initiation of their clinical rotations. The survey assessed the mentees perception of how peer mentorship impacted their confidence and stress levels, their clinical preparedness, and patient interactions. **Results:** Thirty-eight out of forty students (95%) completed the survey. Most respondents either 'strongly agreed' or 'agreed' that mentors interactions provided them helpful guidance around communication practices with preceptors and surgical staff, improved their sense of clinical preparedness, and improved their confidence levels. Conclusions: Peer mentorship helps students feel better prepared as they transition into clinical rotations by decreasing stress levels, improving confidence, and sense of preparedness. Additional research is needed to help maximize the type(s) and length of educational intervention(s) required to maximize this benefit, and to better define the timing, structure, and requirements of peer mentorship program.

Key Words: Peer mentors, confidence, competence, clinical practice, patient outcomes, readiness, stress

Background and Significance

Personal stressors for SRNAs include less time for friends and family, sleep disruption, financial issues, anxiety, and transitioning back into the role of a student. Common academic causes of stress include ineffective time management, clinical assignments, different teaching styles, and fear of dismissal due to poor grades (Chipas et al., 2012). Student peer mentorship research suggest that interactions between peer mentees and mentors are supportive and enhance empathy (Andersen and Watkins, 2018), help to manage stress (Demir et al., 2014), provide personal satisfaction (Smith et al., 2015), and fosters a sense of community among students (Lombardo et al., 2017).

The concept of mentoring is as old as the nursing profession itself (Olaolorunpo 2019). Bynum (2015) suggests mentoring occurs when the more knowledgeable person provides professional support to a less experienced individual specifically designed to nurture both professional and personal growth. Peer-group clinical mentoring programs are an essential and integral strategy for teaching and learning amongst peer-mentees during clinical practice (Fernandez et al. 2018). Mentor and mentee programs encourage and help develop personal and professional interactions, improve working relationships, and provide a more supportive learning environment for incoming students in the nurse anesthesia program. Additionally, the development and delivery of an educational program that focuses on mentorship can help to support clinical preparedness and promote better patient outcomes (Akinla et al., 2018).

Purpose Statement

This Doctor of Nursing Practice (DNP) project was designed to create, deliver, and assess the effects of providing a training session for mentors and mentees that focuses on the importance of developing a mentor/mentee relationship. The training provided tips for mentors to engage and communicate with mentees and to help them better prepare for upcoming clinical rotations, to improve their clinical experience, lower their stress level and improve clinical interactions with preceptors, operating room staff and patients.

Literature Review

To gain a better understanding of the potential benefits of a peer mentorship program, a comprehensive literature review was completed by searching CINAHL and PubMed. Included search terms: student nurse anesthetist, mentoring, mentor program, peer mentorship, academic performance, clinical performance, stress, stress reduction, and patient outcomes. The project research limited to articles published 2009 to present. Search criteria and article selection resulted in thirty-two articles which were published 2009 to present, were peer-reviewed, prospective cohort, retrospective cohort, or cross-sectional studies. Articles published before 2009 and those that were not peer-reviewed were excluded.

Review of Current Evidence

The challenges of graduate school can cause stressors that lead to a lack of confidence and impact the clinical performance of new SRNA's. SRNA students must navigate a challenging educational curriculum with intense clinical and academic requirements. The support of peer mentorship can lead to an increased sense of confidence and competence (Mesica et al.,

2021). Increased confidence and competence are components of safe and professional practice and are a key construct in the development of capable healthcare professionals (Gottlieb et al., 2021). Current research supports both academic and professional benefits for the mentor and mentee in peer led mentorship relationships (Reeves et al., 2022). An increase in confidence and competence, and better clinically prepared students leads to a better academic experience and improved clinical performance and outcomes.

Stress of Clinical

Stress has earned a bad reputation, but it is important to recognize that the adaptive purpose of a physiological stress response is to promote survival during fight or flight. While long-term stress is generally harmful, short-term stress can be protective as it prepares us to deal with challenge (Dhabhar, 2014). Unmanaged stress can lead to an inferior academic performance, decreased retention of knowledge, and poor health of SRNAs (Chipas et al., 2012). "Good stress" involves taking a chance on something one wants, like interviewing for a job or admission to school, or giving a talk before strangers, and feeling rewarded when we are successful (McEwan, 2019). Common sources of stress, mentioned by students include, anxiety, experiences at a new clinical site, fear of making mistakes, concerns about performing clinical skills and using hospital equipment and lack of support from nursing personnel. Stress and anxiety are further compounded by advanced healthcare technology: first experiences at a new clinical site, fear of making mistakes, concerns about performing clinical skills and using hospital equipment and lack of support from nursing personnel (Moscaritolo, 2009). The transition from the classroom environment to a clinical patient-focused environment is a normal curricular adjustment for SRNAs, yet it remains a source of stress and anxiety for many students (Tubog et al., 2023). The most common reported negative behaviors experienced in the clinical setting include belittling behavior, physical abuse, being

assigned tasks as punishments, verbal threats, sexual harassment, and racial discrimination. These behaviors, reported by SRNA's, lead to negative clinical experiences, and decreases in confidence (Elisha & Rutledge, 2011).

Positive clinical experiences lead to better communication, an increase in skills and knowledge, and an improved confidence (Park & Cho 2022). To help decrease the stress associated with clinical rotations, and to promote positive experiences, it is important for students to feel prepared for the clinical environment, and to feel safe, comfortably interact and learn from their preceptors (Banneheke et al. 2017). Clinical preparedness demonstrates favorable effects on a student's willingness, eagerness, communication, and interactions which leads to a better clinical experience (Saadeh et al., 2021). The idea is not to eliminate all stress but to minimize longer-term stress and to make the clinical teaching environment one that allows for feelings of accomplishment and reward.

Mentoring Benefits and Skills

Benefits of mentoring include, stress reduction, improved confidence, a sense of belonging, a better academic and clinical experiences, and the fostering of personal development. The importance of good mentorship decreases roadblocks that can impact professional development and success in academia (McRae and Zimmerman, 2019). Peer mentorship allows for greater comfort and security, validation, support, and role-modeling from individuals currently or recently facing similar career-stage challenges (Andersen & Watkins, 2018).

To foster the learning of mentors, interventions should prepare the mentor to offer sound support, increase mentor competence, and negative and positive characteristics of mentors should be discussed to provide a successful mentoring workshop (Straus et al., 2013). A one-on-one style, where older nursing students were paired with, and taught how to mentor, first year nursing

students showed positive outcomes regarding social support, collaboration and leadership, and competence (Anderson & Watkins 2018). Mikkonen et al. (2022) looked at mentor competence and noted positive and negative characteristics associated with mentors that can be influenced by mentoring workshops. More effective mentors that were able to provide better goal-oriented mentoring and student-centered evaluation gained this knowledge via experience and attending mentorship workshops. The eight themes identified in this qualitative project that help mold an effective mentor include open communication and accessibility, a willingness to take on goals and challenges, passion and inspiration for the mentorship role, a caring personal relationship, instilling mutual respect and trust, a willingness to exchange knowledge, independence and collaboration, and role modeling.

Mentoring has been shown to provide benefits for both mentor and mentee including improving job performance, developing and supporting of organizational leaders, and helping to socialize mentors (Murrell et al., 2021). Mentees noted psychological support, acceptance, and confirmation, identifying short term goals, and open communication about personal and professional obstacles. Mentors reported the development of personal relationships lead to enhanced personal gratification and increased self-satisfaction when watching mentors succeed (Hee et al., 2020). Providing a SRNA mentee access to an engaged and committed mentor will favorably affect a mentees future confidence and competence.

Confidence and Competence

Confidence and competence go hand-in-hand in fostering professional development (Gottlieb et al., 2021). Confidence is a wavering construct that is influenced by many factors that relates to self-perception, support, and current surroundings (Gottlieb et al., 2021). Low levels of self-competence and confidence can lead to frustration, low performance, and increased turnover

and burnout (Serafin et al., 2022). Peer mentoring compliments a participants competence level and increases self-esteem and confidence (Sibiya et al., 2019). Systematic reviews conclude that peer mentorship in graduate students fosters personal and professional development, reduces stress, increases confidence and well-being, which improves productivity, efficacy, and leads to better clinical performance (Akinla et al, 2018; Schmidt & Hansson, 2018). In one peer mentorship program, student participants reported that their program fostered more open communication which led to a better understanding of expectations and increased confidence to handle class and clinical issues (Pallaria et al. 2021). The literature suggests mentorship can help increase confidence and competence which leads to a better clinical experience, a more prepared student, and better patient satisfaction. The impact of student confidence on patient outcomes has not been well evaluated in the literature and additional research is needed which better measures how confidence translates into competence (Gottlieb et al., 2021).

Gaps

The literature demonstrates the favorable effects peer mentorship has on stress, confidence, competence, and clinical preparedness, but this type of research is limited related to SRNA training. Additionally, details regarding how, and when, to train peer mentors is also limited. There are links in the literature which suggest student confidence, competence and preparedness may lead to better patient outcomes, although evaluation around this connection is limited. The lack of research in these areas demonstrates a combination of empirical, knowledge and practical research gaps, which require future research.

Theoretical Framework

The theoretical framework used in this project is Lewin's Change Theory. Lewin's Change Theory focuses on identifying the driving and restraining forces that may be at play within a group with a strategy to ramp up the driving forces for change, to slow down the restraining forces that encourage people not to change or a plan to focus on both issues. Change Theory utilizes a three-step process characterized by unfreezing, change, and refreezing. The unfreezing process in this project focused on ramping up the driving forces by delivering an upfront educational session which focused on the importance of mentorship and provided tips for how to be better mentors. An informal mentorship program has been in place within the graduate nursing program but it was lacking in upfront training. A better understanding of the importance of mentoring and an educational component that provides participants the tools needed to be better mentors will result in better outcomes (i.e., confidence and competence).

The change step comes when the intervention is implemented. The goal of the change step is for the participants to take what they have learned during the training, to adopt it and to incorporate it into their day-to-day mentoring interactions. The educational session also provided information around potential negative traits seen in mentors which, if present, can hinder the relationship and lessen benefits of mentoring.

The refreezing step in Lewin's Change Theory occurs when the change has been adopted and has become the new normal way. In this project, the added upfront training resulted in favorable feedback from the first year SRNA students related to them feeling less stressed and better prepared for clinical rotation. Ongoing evaluation to look for any existing gaps is an important step to ensure continued improvement. Project outcomes and recommendations will be presented to the facility for consideration and adoption.

Methods

Project Design

This project is post educational follow up design that seeks to evaluate confidence, competence, and preparedness to handle the stressors of the clinical setting while enrolled in a graduate program. The project also assessed how peer mentorship can positively affect the above factors. An education intervention included members from the class of 2025 and 2026 who acted as the mentor and mentee groups, respectively. Survey questions were distributed to the mentee group after they began their clinical rotations in the spring semester of 2024.

Evidence Based Model

The John Hopkins evidence-based practice model was created to help guide researchers develop a model that implements the best practice available using current research and evidence-based practice to guide clinical decision making. The model focuses on the PET process, which is broken down into: practice question, evidence, and translation. The goal of the PET process is to identify the practice question, identify the best evidence to answer the question, and translate the evidence to practice.

The first step in this evidence-based model is to develop the research question and identify, stakeholders. Stakeholders in this project include faculty, and members of class of 2025 and 2026. After identifying the stakeholder, and the need for change, the PICOT question was developed. The PICOT question for this project is, does an early educational intervention on mentoring improve a SRNA mentees confidence level, competence, and their readiness for clinical rotations?

The second step is to identify the evidence to support the practice question. The literature demonstrates the stress of transitioning to clinical rotations affects a student's confidence level, academic performance, and can their overall clinical performance. Research supports peer

mentorship as it has been shown to increase sense of self-worth, decreases anxiety, increases confidence, and clinical performance.

The third step is to apply the information into practice. Research shows that having a peer mentorship program is beneficial to a student's sense of well-being, their clinical performance, and personal resilience. Using the John Hopkins evidence-based practice model as a guide, the PI led an educational session that discussed how to be an effective peer mentor and how to support your mentee as they enter clinical rotations. Mentees were offered support, and encouraged to ask questions. The class of 2026 was provided a survey in the spring semester of 2024 which evaluated outcomes including confidence, competence, and readiness for clinical practice. Outcome evaluation helped guide the recommendations for practice change in support of peer mentorship.

Permissions

Permission for the project was obtained from the nursing program director, the university, and the Institutional Review Board (IRB).

Project Setting and Sample

The educational interventions included students from the 2025 and 2025 matriculation classes at a graduate school of nursing at a southeastern U.S. public research university. The education session was delivered in the classroom setting during non-class time. The survey was developed on Qualtrics and distributed to participants during the spring semester of 2024, after clinical rotations had begun. The project participants included incoming SRNAs (class of 2026) as the mentees and the mentors were SRNA students (class of 2025). Inclusion criteria was SRNAs in the class of 2025 and 2026. Exclusion criteria were students in other SRNA classes, SRNAs enrolled in a master's program or other healthcare specialties. The sample was a

convenience sample; participants include SRNAs enrolled in the doctorate program without exclusion of gender, age, race, or relationship status.

Project Implementation

Separate recruitment emails were sent to SRNA's in the class of 2025 and 2026 during the 2023 fall semester that described the project and the presentation on mentorship. The email further explained that an educational intervention on mentorship will take place after school hours during the fall semester. Participation in the educational intervention and survey participation was voluntary.

The educational intervention, a mentorship workshop, for the class of 2025 took place on November 3rd of 2023 and took fifteen minutes to complete. The workshop focused on tips and tricks for mentors to engage with their mentees, how to increase competence and confidence, what to expect in the clinical setting, how to be prepared for the first day of clinical, and how to better communicate with preceptors and clinical staff. Positive and negative characteristics, and attitudes, of mentors were discussed, with the goal of mentors being better prepared to guide their mentee.

The educational intervention with the class of 2026 took place October 23rd of 2023 and took twenty minutes. The educational intervention discussed how mentees can best engage with their mentor, how to get the most out of the mentor/mentee relationship to improve their graduate school experience, and appropriate questions to ask about clinical guidance. Once the class of 2026 begun their first clinical rotation in the spring of 2024 a survey was distributed by the PI, in February 2024, to gauge their perception on clinical preparedness, how preparedness affected patient outcomes, and how confident and competent they felt going into their clinical rotation. The class of 2026 was evaluated after starting their clinical rotation via a 27-question survey

utilizing Likert-style questions The survey assessed confidence, competence, readiness for clinical practice, and peer mentorship. Once they completed the survey, their answers were recorded, placed into a spreadsheet. The data was analyzed around areas of clinical preparedness, patient outcomes, the helpfulness of the mentoring experience, and overall confidence and competence provided by peer mentoring.

The educational interventions with both classes allowed the participants to ask any questions of the PI related to project expectations and participation. At the educational intervention a PowerPoint was presented by the PI followed by an open discussion and question and answer session.

Instruments

The survey (Appendix C) contained 27 Likert scale questions. Likert scale questions were chosen to best assess the class of 2026's readiness for clinical practice, the peer mentorship experience, if the peer mentorship experience increased confidence and competence, and if increased confidence and competence translated into the clinical setting regarding communication with OR staff and preceptors, preparedness, and patient outcomes. The survey was created by the PI and was not tested for reliability or validity.

Data Collection and Storage (IRB Approval)

The survey was created by the PI using Qualtrics software. The survey did not contain any personal identifiable information. The PI distributed the paper survey to the class of 2026. The data was entered into an excel file by the PI and the results were analyzed. All results were secured on the PI's personal password protected laptop. The project results were shared with the DNP committee in a summary format upon the PI's program completion and no participant names were used. Only the PI had access to the anonymous, raw data.

Budget, Time, and Resources

No financial resources are required for the implantation of this DNP project. The educational intervention presented by the principal investigator took fifteen minutes for the class of 2025 and twenty minutes for the class of 2026.

Data Analysis

Non-personally identifiable data was collected from participants from the survey and the information was entered into a Microsoft Excel spreadsheet. This spreadsheet was used to group questions relating to confidence, competence, mentorship, and readiness for clinical practice into separate categories for analysis. Likert scale questions were used to assess the effectiveness that an educational intervention given to peer mentors had on increased confidence, competence, readiness for clinical practice, and effects on patient outcome in a first year SRNA class when they started clinical rotations. This allowed the PI to record, compare, and analyze the questions to analyze the overall success of the implementation of the mentorship educational intervention.

Results

Survey

Forty out of forty first year SRNAs took part in the educational intervention in November of 2023. Thirty-eight out of forty completed the survey yielding a completion rate of 95%. All but four questions in the survey questions used a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." The four questions that were not answered via the 5-point Likert scale questions inquired about the helpfulness of peer mentorship with a range from "very helpful" to "not helpful." A question inquiring how often they spoke about case set ups ranged from "regularly" to "we did not discuss this topic." A "yes" or "no" was asked regrading if they met with their mentor prior to starting clinical. A question assessed the number of times the mentor and mentee met or spoke after the initial meet and greet session.

Two questions asked about meeting and/or speaking with the mentor prior to starting clinical. The first question assessed the number of times that the mentee and preceptor met in person, or talked with, their mentor prior to starting clinical; options of included 1-2 times, 2-5 times, 6-10 times, and 10+ times with the most frequent being 1-2 times with 15/38 (39%) of students and 10/38 (26%) meeting or speaking with their mentor 10+ times prior to the start of clinical. All thirty-eight of thirty-eight (100%) students met with their mentor prior to starting clinical.

Six questions asked participants to reflect on their experience on various topics they discussed with their mentors that helped them prepare them for clinical rotations. Twenty-three of thirty-eight (60.5%) of participants strongly agreed/agreed that their mentor gave them helpful guidance on personal matters. Twenty-four of thirty-eight (63%) strongly agreed/agreed that their mentor gave them helpful studying tips. Twenty-one of thirty-eight (55%) strongly agreed/agreed that their mentor helped them prepare for their first day of clinical. Twenty of thirty-eight (52.6%) agreed that their mentor talked with them about clinical sites prior to starting clinical. Fifteen of thirty-eight (39%) participants talked with their mentor briefly, or multiple times, on how to setup surgical cases. Nineteen of thirty-eight (50%) strongly agreed/agreed that their mentor provided them tips to better communicate with patients.

Confidence/Competence/Communication

Eleven questions assessed participants to reflect on how confident and competent they felt going into their first clinical rotation and if an increased sense of confidence translated into a better learning experience, better communication with OR staff and preceptors, and improved patient care and outcomes.

Twenty-four of thirty-eight (63%) participants strongly agreed/agreed that meeting with their mentor increased their confidence. Twenty of thirty-eight (52.6%) strongly agreed/agreed that having a mentor increased their confidence going into their first clinical rotation. Twenty-two of thirty-eight (57.8%) strongly agreed/agreed that their mentor provided them tips which led to increased confidence during their clinical experience. Twenty-one of thirty-eight (55.2%) strongly agreed/agreed that feedback they received from their mentor increased their confidence. Twenty-three of thirty-eight (60.5%) strongly agreed/agreed that an increased confidence allowed them to communicate better with their preceptor and OR staff.

Clinical Readiness and Patient Outcomes

Five questions asked participants about clinical readiness. Nineteen of thirty-eight (50%) strongly agreed/agreed that their mentor helped them feel better prepared to provide clinical patient care. Fifteen of thirty-eight (39%) strongly agreed/agreed that discussions with their mentor helped prepare them to perform a pre-assessment on their patients. Eight of thirty-eight (21%) strongly agreed/agreed that their peer mentor helped prepare them to give handoff report to PACU nurses. Eleven of thirty-eight (29%) strongly agreed/agreed that their peer mentor helped prepare them for emergence and extubation. Twenty of thirty-eight (52.6%) felt that communicating with their peer mentor increased their clinical preparedness. Twenty-six of thirty-eight (68%) strongly agreed/agreed that increased confidence led to a better clinical experience. Twenty-nine of thirty-eight (76%) strongly agreed/agreed that an increased sense of confidence improved their ability to care for their patients.

Peer Mentorship

Four questions questioned participants about overall helpfulness of the peer mentorship program. Twenty-four of thirty-eight (63%) strongly agreed/agreed that having a mentor

decreased anxiety related to schoolwork and clinical. Twenty-one of thirty-eight (55%) strongly agreed/agreed that the peer mentorship program helped alleviate classroom and clinical uneasiness. Twenty of thirty-eight (52.6%) strongly agreed/agreed that the relationship they formed with their peer mentor decreased their stress levels related to classwork. Twenty-eight of thirty-eight (73.6%) strongly agreed/agreed that the peer mentorship experience was helpful.

Discussion

There is qualitative and quantitative data which outline the benefits for a peer mentorship program as an essential and integral strategy for teaching and learning during clinical practice (Fernandez et al. 2018). Yarbrough (2022) reports nursing peer mentoring promotes a positive academic and an emotionally supportive environment, decreasing stress and increasing the mentee's confidence and competency. Unfortunately, the current state of peer mentorship remains inadequate as it is not properly implemented in many nursing education institutions (Nowell, 2015). The literature supports the benefits of peer mentorship, but little research has been completed assessing the benefits in SRNA didactic and clinical curriculums. Additionally, there has been limited research completed related to the type and level of training provided to mentors and how the training impacts a mentees clinical performance and competence.

This project was developed to assess the benefits of peer mentors in the SRNA curriculum, to introduce a structured upfront training session for mentors and mentees and to determine the benefits of the program based on participant feedback. The peer mentorship experience was well received and was considered helpful by 73.6% of participants. Positive benefits included less classroom and clinical anxiety (63%), less clinical and classroom uneasiness (55%), improved confidence (63%), which resulted in them feeling better prepared to answer preceptors' questions (65.7%). Mentees believed this experience also improved their

competence, which led to improved patient care (76%) and contributed to a better learning experience (68%).

Survey results around the sense of feeling prepared for clinical rotations was less favorable. While 52.6% felt their communications with peer mentors improved their clinical preparedness, their sense of readiness around emergence and extubation practices and the delivery of handoff communications to PACU nurses were only 29%, and 21% respectively. Additionally, only 39% felt their discussions with their mentor helped prepare them to perform clinical pre-assessments on their patients. These are situations that are known to be stressful for students, which may have influenced their feedback. Peer mentorship, while able to improve confidence and competence, cannot substitute hands-on application. Further interventions should focus on furthering clinical preparedness with the use of simulation training (Ebm et al., 2024).

There were certain limitations related to this project. There was a limited timeline from the start of clinical practice to the time of survey completion; spring of January 2024 through February 2024, which may have impacted survey results. The survey was completed on students who participated in the mentorship program and completed an upfront education session. The same survey was not completed on a group of students not attending upfront training, which limits assessment of the potential benefits of training on the overall mentoring experience. The survey questioned perceived impacts of the program on clinical competence and patient outcomes although these were not formally measured. Knox at al. (2015) suggests the addition of peer mentoring to already well-organized comprehensive diabetic care programs, improves outcomes. It is reasonable to believe a strong mentorship program would translate into improved clinical competencies and, ultimately, more favorable clinical outcomes although additional research is required in this area. The literature has demonstrated the importance of mentor

identification, selection, preparation, and ongoing mentor development. This project focused on the upfront training and preparation of mentors, not on their identification, selection, or ongoing development. Lastly, student participants were selected based on a convenience sample at one university which may cause potential sampling and observer bias.

The findings of this project are consistent with current literature which suggest peer mentorship decreases the stress and anxiety of students, helps them in making curricular transitions and improves their confidence. This project added a short upfront training session that was considered to helpful in focusing mentors and directing their future interactions with mentees. The investment in time and energy was minimal and translated into a well-received program that was considered helpful by 73.6% of participants. It is common for peer mentors to lack confidence in their abilities to successfully teach, and they appreciate receiving training related to their teaching role (Bene, 2014). Findings of this project support moving to a more formalized mentorship program that provides upfront mentor training and closely monitors the outcomes of the process.

Barriers and Limitations

Foreseen barriers to the project include a limited timeline from start of clinical practice; the spring of January 2024 through February 2024 when the survey was distributed to the class of 2026. Due to the limited timeline, a decision was made to personally hand out the surveys versus sending them electronically to increase participation. IRB changes were made, and approval was obtained.

The short project timeline limited the amount of clinical experience the class of 2026 completed; January 2024 to February 2024. Based on the short project timeline, the educational

sessions were completed in fall semester of 2023 to maximize on the time mentors had to interact and communicate with their mentees prior to their transition into clinical rotations.

Recommendations

The outcomes of this project support the benefits of maintaining a peer mentorship program based on outcomes including improved confidence and competence, an improved sense of preparedness entering clinical rotations, and lower levels of anxiety and uneasiness related to both coursework and clinical rotations. SRNA programs are encouraged to continue their peer mentorship programs or start them if they do not currently have one. Project results support the incorporation of an early training session for mentors and mentees. A standardized educational intervention for mentors, that addresses key topics, can be adopted, and, if needed, modified based on program feedback. Provided feedback, using open-ended questions and answers, from mentors and mentees will help to guide which areas need to be improved.

Results from the project evaluated a sense of preparedness for clinical rotations, with less favorable feedback in the areas of handoff reporting, and emergence and extubation readiness. Emergence and extubation preparedness are best learned in the clinical setting, but a simulation workshop can be incorporated to simulate this clinical experience. A tool, or flowsheet, can be developed to address standard pre-assessment questions that are often asked by anesthesia which can improve a sense of readiness in future clinical encounters. Another tool, or flowsheet, focusing on efficient handoff reporting can be incorporated to increase consistency and readiness in this area.

The peer mentorship program is beneficial and should be continued in the program. Areas that can be improved upon include the process of mentor identification and selection, mentorship

training including the timing, content, and amount of training. Lastly, additional research is needed to evaluate the impacts of mentorship on clinical competence and patient outcomes.

Conclusion

The aims of this project were to provide an educational intervention for peer mentors and mentees to increase student confidence and competence, to improve student readiness for clinical rotations and to improve patient interactions and outcomes. The educational intervention improved student confidence and competence, student readiness for clinical rotations and perceived patient interactions and outcomes. Survey results demonstrated 72.6% of participants found the peer mentor program to be helpful, and 76% believed the program benefits translated into favorable impacts on patient care. Project results reinforce the importance of a peer mentorship program in the SRNA education. Workshops for mentors with a future focus on content, timing, and duration of training should be considered and may improve the mentoring process. Development of a standardized approach with initial mentor training will help provide a more consistent experience and allow for serial improvements based on participant feedback. Future research should focus on randomized controlled studies comparing peer-mentored group to a group without formalized peer-mentoring and evaluate the impact of mentor training on SRNA mentoring.

References

- Akinla, O., Hagan, P., & Atiomo, W. (2018). A systematic review of the literature describing the outcomes of near-peer mentoring programs for first year medical students. *BMC Medical Education*, 18(1). https://doi.org/10.1186/s12909-018-1195-1
- Andersen, T., & Watkins, K. (2018). The value of peer mentorship as an educational strategy in nursing. *Journal of Nursing Education*, 57(4), 217–224.

 https://doi.org/10.3928/01484834-20180322-05
- Aroke, E., Wilbanks, B., Hicks, T., Thurston, K., & McMullan, S. (2021). Aroke EN, Wilbanks BA, Hicks T, Thurston KL, McMullan SP. Mentoring Team Projects for the Doctor of Nursing Practice: Considerations for Nurse Anesthesia Faculty. AANA J. 2021

 Oct;89(5):435-442. Erratum in: AANA J. 2022 Feb;90(1):15. PMID: 34586998. AANA

 J., 89(5), 435-442.
- Banneheke, H., Nadarajah, V. D., Ramamurthy, S., Sumera, A., Ravindranath, S., Jeevaratnam, K., Efendie, B., Chellamuthu, L., Krishnappa, P., & Peterson, R. (2017). Student preparedness characteristics important for clinical learning: perspectives of supervisors from medicine, pharmacy and nursing. *BMC medical education*, *17*(1), 130. https://doi.org/10.1186/s12909-017-0966-4
- Bruce S. McEwen. The good side od "stress". The International Journal on the Biology of Stress.

 Volume 22, 2019 Issue 5

- Chipas, A., Cordrey, D., Floyd, D., Grubbs, L., Miller, S., & Tyre, B. (2012). Stress: perceptions, manifestations, and coping mechanisms of student registered nurse anesthetists. *AANA journal*, 80(4 Suppl), S49–S55.
- Dhabhar F. S. (2014). Effects of stress on immune function: the good, the bad, and the beautiful. *Immunologic research*, 58(2-3), 193–210. https://doi.org/10.1007/s12026-014-8517-0
- Ebm, C., Del Pozo, C., Barbarello, A., Poli, G., & Brusa, S. (2024). Unleashing excellence: using a project management approach to effectively implement a simulation curriculum to improve residents' preparedness. *BMC medical education*, 24(1), 234.

 https://doi.org/10.1186/s12909-024-05166-y
- Elisha, S., & Rutledge, D. N. (2011). Clinical education experiences: perceptions of student registered nurse anesthetists. *AANA journal*, 79(4 Suppl), S35–S42.
- Fernandez, R., Sheppard-Law, S., Curtis, S., Bancroft, J., & Smith, W. (2018). Exploring the experiences of neophyte nurse mentors: A qualitative study. *Nurse education in practice*, 29, 76–81. https://doi.org/10.1016/j.nepr.2017.11.011
- Gottlieb, M., Chan, T. M., Zaver, F., & Ellaway, R. (2021). Confidence-competence alignment and the role of self-confidence in medical education: A conceptual review. *Medical education*, *56*(1), 37–47. https://doi.org/10.1111/medu.14592

- Hee, J., Toh, Y. L., Yap, H. W., Toh, Y. P., Kanesvaran, R., Mason, S., & Krishna, L. K. (2020).
 The development and design of a framework to match mentees and mentors through a systematic review andthematic analysis of mentoring programs between 2000 and 2015. *Mentoring & Earning: Partnership in Learning*, 28(3), 340–364.
 https://doi.org/10.1080/13611267.2020.1778836
- Horrill, T. C., Rahman Isse, A. A., Armah, N., Bolianatz, J. D., Karpa, J. V., Lelond, S., Martin, K. M., Martin, D. E., McMillan, D., Mitchell, K. M., Rieger, K. L., Scruby, L. S., & West, C. (2021). The development of academic identity in graduate nursing students: An interpretive descriptive study. *Nurse education today*, *103*, 104949.
 https://doi.org/10.1016/j.nedt.2021.104949
- Knox, L., Huff, J., Graham, D., Henry, M., Bracho, A., Henderson, C., & Emsermann, C. (2015).
 What Peer Mentoring Adds to Already Good Patient Care: Implementing the Carpeta
 Roja Peer Mentoring Program in a Well-Resourced Health Care System. *Annals of family medicine*, 13 Suppl 1(Suppl 1), S59–S65. https://doi.org/10.1370/afm.1804
- Kristen L Benè, George Bergus. When learners become teachers: a review of peer teaching in medical student education. Fam Med. 2014 Nov-Dec;46(10):783-7.
- McRae, M., & Zimmerman, K. M. (2019). Identifying Components of Success Within Health Sciences-Focused Mentoring Programs Through a Review of the Literature. *American journal of pharmaceutical education*, 83(1), 6976. https://doi.org/10.5688/ajpe6976

- Mesisca, J., & Mainwaring, J. (2021). Stress, Anxiety, and Well-being in Nurse Anesthesia Doctoral Students. *AANA journal*, 89(5), 396–402.
- Mikkonen, K., Tomietto, M., Tuomikoski, A. M., Miha Kaučič, B., Riklikiene, O., Vizcaya-Moreno, F., Pérez-Cañaveras, R. M., Filej, B., Baltinaite, G., Cicolini, G., & Kääriäinen, M. (2022). Mentors' competence in mentoring nursing students in clinical practice:

 Detecting profiles to enhance mentoring practices. *Nursing open*, *9*(1), 593–603.

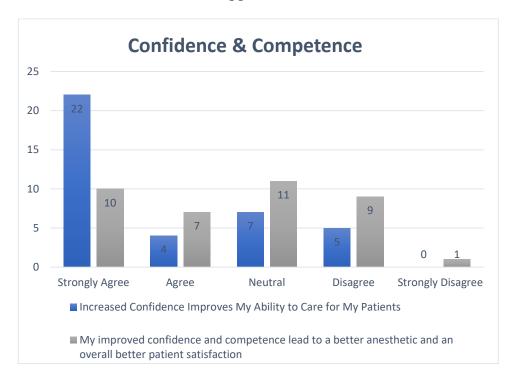
 https://doi.org/10.1002/nop2.1103
- Moscaritolo L. M. (2009). Interventional strategies to decrease nursing student anxiety in the clinical learning environment. *The Journal of nursing education*, 48(1), 17–23. https://doi.org/10.3928/01484834-20090101-08
- Murrell, A. J., Blake-Beard, S., & Porter, D. M., Jr (2021). The Importance of Peer Mentoring, Identity Work and Holding Environments: A Study of African American Leadership Development. *International journal of environmental research and public health*, 18(9), 4920. https://doi.org/10.3390/ijerph18094920
- Nowell, L., White, D. E., Mrklas, K., & Norris, J. M. (2015, February 21). *Mentorship in nursing academia: A systematic review protocol*. Systematic reviews.

 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4342164/
- Olaolorunpo, O. (2019). Mentoring in Nursing: A Concept Analysis. *International Journal of Caring Sciences*, 12(1), 142–148.

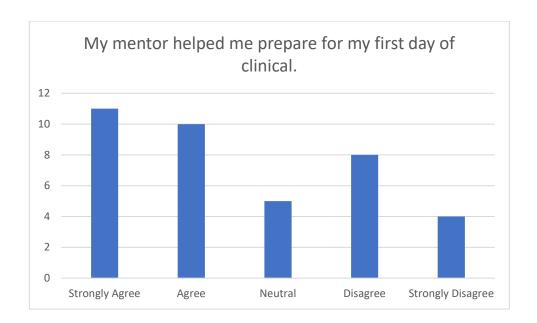
- Pallaria, T., Parrish, C., & Stillwell, A. (2021). Peer mentorship: Implementation of a resident registered nurse anesthetist mentorship program. *Nursing and Health Care*, 1–5. https://doi.org/10.33805/2573.3877.153
- Park, H., & Cho, H. (2022). Effects of a Self-Directed Clinical Practicum on Self-Confidence and Satisfaction with Clinical Practicum among South Korean Nursing Students: A Mixed-Methods Study. *International journal of environmental research and public health*, 19(9), 5231. https://doi.org/10.3390/ijerph19095231
- Reeves, A. G., Bischoff, A. J., Yates, B., Brauer, D. D., & Baranger, A. M. (2022). A Pilot Graduate Student-Led Near-Peer Mentorship Program for Transfer Students Provides a Supportive Network at an R1 Institution. *Journal of chemical education*, *100*(1), 134–142. https://doi.org/10.1021/acs.jchemed.2c00427
- Saadeh, K., Aitken, J. B., Paramasivam, S. J., Cockcroft, P., & Jeevaratnam, K. (2021). Student perspectives of preparedness characteristics for clinical learning within a fully distributed veterinary teaching model. *PloS one*, *16*(5), e0249669. https://doi.org/10.1371/journal.pone.0249669
- Schmidt, M., & Hansson, E. (2018). Doctoral students' well-being: A literature review. *International Journal of Qualitative Studies on Health and Well-Being*, 13(1), 1508171. https://doi.org/10.1080/17482631.2018.1508171
- Serafin, L., Strząska-Kliś, Z., Kolbe, G., Brzozowska, P., Szwed, I., Ostrowska, A., & Czarkowska-Paczek, B. (2022). The relationship between perceived competence and self-

- esteem among novice nurses a cross-sectional study. *Annals of medicine*, *54*(1), 484–494. https://doi.org/10.1080/07853890.2022.2032820
- Sibiya, M. N., Ngxongo, T. S. P., & Beepat, S. Y. (2019). The influence of peer mentoring on critical care nursing students' learning outcomes. *International journal of workplace health management*, 11(3), 130–142. https://doi.org/10.1108/IJWHM-01-2018-0003
- Straus, S. E., Johnson, M. O., Marquez, C., & Feldman, M. D. (2013). Characteristics of successful and failed mentoring relationships: a qualitative study across two academic health centers. *Academic medicine : journal of the Association of American Medical Colleges*, 88(1), 82–89. https://doi.org/10.1097/ACM.0b013e31827647a0
- Tubog, T. D., Shaffer, S. K., Kane, T. D., & Hestand, J. D. (2023). A Qualitative Description of CRNA Clinical Coordinators' and Student Registered Nurse Anesthetists' Perceptions of Clinical Readiness. *AANA journal*, *91*(5), 341–348.
- Yarbrough, A., & Phillips, L. K. (2022). Peer mentoring in nursing education: A concept analysis. *Nursing forum*, *57*(6), 1545–1550. https://doi.org/10.1111/nuf.12832

Appendix A



Appendix B



Appendix C

Survey

	No	Yes
I met with my mentor prior to starting clinical.		

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My mentor gave me helpful guidance on personal matters.					
My mentor gave me helpful studying tips.					
My mentor helped me prepare for my first day of clinical.					
Meeting with my mentor helped to increase my confidence.					
Having a mentor helped to decrease anxiety related to schoolwork and clinical.					
My mentor and I discussed clinical sites prior to starting clinical.					
My mentor's tips and tricks made me feel more confident when reaching out to my preceptor for clinical.					
Having a mentor made me feel more confident going into my clinical rotations.					
My mentor gave me tips that allowed me to be more competent and confident during my days in clinical.					
My mentor gave feedback that helped increase my confidence in clinical.					
Meeting with my mentor better prepared me to provide patient care.					

My mentor made me more competent and confident when		
communicating with a clinical preceptor.		
Discussions with my mentor prepared me to perform a pre-		
assessment on my patients.		
Increased confidence improves my ability to care for patients.		
The mentorship program alleviated classroom and clinical uneasiness.		
Increased confidence led a better learning experience in		
clinical.		
Communication with my peer mentor increased my clinical		
preparedness.		
Communication with my peer mentor improved my handoff		
report to the PACU nurse.		
Communication with my peer mentor prepared me for		
emergence and extubation.		
My improved confidence and competence lead to a better		
anesthetic and an overall better patient satisfaction		
My mentor relationship helped my stress levels related to		
classwork.		
Having increased confidence allowed me to communicate with		
my preceptor and OR staff in a more efficient way.		
Having a sense of confidence allowed me to answer my		
preceptors questions more appropriately.		
My mentor gave me tips to better communicate with my		
patients.		

	1-2	3-5	6-10	10+
How many times did your meet (by phone or in person) with your mentor/mentee since the meet and greet?				
	Not Helpful	Neutral	Helpful	Very Helpful
How helpful would you say your mentoring experience was?				

	No, we did not discuss this topic	Yes, we talked/met once	Yes, we met/talked a few times	Yes, I speak with my mentor regularly
Did you utilize your mentor to discuss ways to have successful setups/cases in clinical?				