



International Journal of Nursing and Healthcare Research

Journal home page: www.ijnhr.com

<https://doi.org/10.36673/IJNHR.2020.v04.i01.A03>



MENTORSHIP MEDIATED CLINICAL SITE ORIENTATION FRAMEWORK

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ABSTRACT

The anticipation of beginning clinical has been identified as an event that can negatively impact a Registered Resident Nurse Anesthetist (RRNA) and inhibit the retainment of information and produce poor outcomes. The purpose of this mixed-methods research study was to investigate if a formalized mentorship mediated clinical site orientation will decrease stress and anxiety and improve self-confidence for RRNAs entering clinical for the first time. This initial effort serves as a foundation in which the Rutgers Nurse Anesthesia Mentorship Program can further efforts at professional collaboration and improved performance by decreasing stress and anxiety. A curriculum revision can be explored based on the results of this study. Future research can build upon this framework. It can be implemented in other nurse anesthesia programs across the country to determine its effectiveness in other settings and clinical sites.

KEYWORDS

Nurse anesthesia, Nurse Anesthesia resident, Graduate nursing education, Clinical rotation, Role transition, Pre-clinical, Mentor, Mentorship, Preceptorship, Peer mentor, Anxiety and Stress.

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INTRODUCTION

Nurse anesthesia residents are likely to endure high levels of stress and anxiety throughout the duration of their education. The successful completion of a nurse anesthesia program requires dedication, diligence, and most importantly, a strong support system. Providing peer support through a mentorship program during nurse anesthesia education has shown to have positive effects on morale, self-confidence, and retention rates^{1,2}. Currently, there is an established mentorship program at Rutgers University, however there are significant limitations that arise with the current practice model when

RRNAs transition from the didactic only to the part-time clinical phase of the nurse anesthesia program. With the current model, nurse anesthesia residents may be assigned to a clinical site that their mentor has never rotated through, thus decreasing the efficacy of the peer support system. The authors of this study aim to investigate if a formalized mentorship mediated clinical site orientation will decrease stress and anxiety as well as increase self-confidence for registered resident nurse anesthetists (RRNAs) entering clinical for the first time.

The results of this study have the potential to change current practice. The investigators of this study expect that the mentorship mediated clinical site orientation framework will reduce stress and improve self-confidence, therefore easing the transition into the clinical phase of nurse anesthesia education. If the results indicate positive outcomes, nurse anesthesia programs across the country can adopt this framework when orienting students to their first clinical site.

A review of both past and present clinical and scholarly literature was conducted with the assistance of the medical librarian at our university. The following databases were used to obtain evidence-based practice guidelines, recommendations, and supportive evidence to achieve an in-depth understanding of the stress that nurse anesthesia residents experience from entering clinical and whether a peer-mentorship driven clinical site orientation would be effective in alleviating this anxiety: CINAHL, MEDLINE, EBSCOhost, Google Scholar, and the Joanna Briggs Institute of Evidence-Based Practice Database. Multiple searches were completed with selected search terms used and interchanged in various ways. The combination of key terms including nurse anesthesia, nurse anesthesia resident, graduate nursing education, clinical rotation, role transition, pre-clinical, mentor, mentorship, preceptorship, peer mentor, anxiety, and stress were used in the databases previously mentioned. Once duplicates were removed, our search yielded 175 articles. Upon further review, 28 scholarly articles and 7 additional sources were applicable to our project and of relevance to the stress that RRNAs experience when

entering clinical for the first time as well as the efficacy of a mentorship program in nurse anesthesia programs. Only one article focused on the impact that a pre-clinical program would have on students preparing to begin their first clinical rotation.

MATERIAL AND METHODS

Study Design

The project was a mixed-methods research design that encompassed a clearly defined mentorship driven clinical site orientation curriculum that was site specific for residents of the third-year cohort who were entering clinical for the first time. The mentors in the third-year cohort received a formalized training on the expectations and guidelines for conducting the clinical site orientation. Residents from the third-year cohort who previously rotated at a designated clinical site were assigned to orient RRNAs from the second-year cohort who were appointed to that specific clinical site. In addition, a clinical site orientation checklist was provided by the investigators to guide the mentorship mediated clinical site orientation process. The checklist ensured that residents received a physical tour of the hospital campus with a focus on the operating room suites, pre-operative area, post anesthesia care unit (PACU), equipment rooms, locker rooms, parking and public transportation, anesthesia office and lounge, and cafeteria which differs between institutions. The checklist also confirmed that the RRNAs understood the documentation system, policies and procedures, clinical schedule, coverage and different care team models, and the patient assignment process which also varies amongst institutions. There was an emphasis on clinical components such as where controlled substances are stored and reconciled, how to complete an anesthesia machine checkout, equipment setup and organization, medication administration, emergency management, and a review of a proper induction for a patient undergoing general anesthesia. The orientation checklist (Figure No.1) can be seen in Appendix A.

A clear introduction and description of the scope of practice for RRNAs was provided along with expectations for the first day of clinical. The role and

responsibility of a CRNA differs immensely from that of a critical care nurse. Nurse anesthesia residents need a clear understanding of the expectations and requirements in order to perform at the highest level. Any questions that the residents from the second-year cohort needed answered were resolved by the guidance and support of the RRNAs in the third-year cohort.

The Perceived Stress Scale (PSS) (Figure No.2) was administered anonymously to the RRNAs in the third-year cohort in order to gauge the level of anxiety that was experienced prior to entering their first clinical rotation in their second year of nurse anesthesia school. The third-year cohort did not have a mentorship mediated clinical site orientation. The PSS was developed by Sheldon Cohen and his colleagues³. It is the most widely used psychological instrument for measuring stress. It is comprised of ten questions that relate to feelings and thoughts during the last month and the degree to which certain situations are measured as stressful⁴. RRNAs in the third-year cohort were asked to recall these feelings during the month prior to their first clinical rotation in order to answer the questions. The PSS can be found in Appendix B.

The PSS mentioned above was also administered to the RRNAs in the second-year cohort to determine their level of anxiety prior to entering clinical and participating in the mentorship driven clinical site orientation. In addition, a second anonymous, descriptive survey was administered to the RRNAs at the completion of the orientation. It consisted of 17 Likert- style questions (Figure No.3) along with three open ended questions. It was an adaptation of a 19-item Likert style survey⁵. It was utilized in this study to explore the benefits of the program and its effects on stress reduction as they transition into clinical. This can be found in Appendix C.

Setting and Resources

An in-depth information session detailing the formalized mentorship driven clinical site orientation program and guidelines was presented to second and third-year cohorts at 65 Bergen Street in Newark, New Jersey in classroom GA-60 on June 3, 2019. A Power Point presentation was provided to ensure that

the mentors understand their responsibility and role as they provide the clinical site orientation.

RRNAs from the second-year cohort experienced the mentorship driven clinical site orientation at their assigned hospital with the supervision and guidance of a mentor from the third-year cohort that had the opportunity to rotate at that site previously. This occurred the week of June 10, 2019. Printed copies of the clinical site orientation checklist were provided.

Study Population

Study participants included current RRNAs at Rutgers University (21 residents from the third-year cohort that does not include the two residents that conducted this project, 22 residents from the second-year cohort). The RRNAs in the second-year cohort participated in the clinical site orientation since they had not begun their clinical rotations. The clinical site orientation checklist was uploaded to the Nurse Anesthesia Program Portal on Canvas by the program administrator. Matriculated RRNAs and faculty were informed how to locate it. All DNP Project team members were present.

Eligibility criteria to participate in this study required current status as a full-time matriculated DNP-RRNA at Rutgers University. Exclusion criteria included individuals who were not enrolled in the nurse anesthesia program at Rutgers University.

Study Intervention

The study intervention consisted of the creation and application of a mentorship driven clinical site orientation for RRNAs entering clinical for the first time. The control group was comprised of RRNAs from the third-year cohort since they did not receive a formalized clinical site orientation prior to beginning their rotation. The intervention group consisted of the 22 RRNAs in the second-year cohort who were about to begin the clinical component of the program. All individuals from these cohorts were offered the option to participate in this study.

The first element of this project took place on June 3, 2019 with the distribution of the PSS by the program administrator to the RRNAs in the second and third-year cohorts to determine anxiety levels prior to beginning clinical in their second year. This cohort served as the intervention group. This helped us to

determine the perception of stress during the month before nurse anesthesia residents begin their clinical rotation.

As previously discussed in the study design section of this project, the second component of this intervention involved the mentors in the third-year cohort receiving a formalized training on the expectations and guidelines for conducting the clinical site orientation. This was conducted on June 3, 2019 at 65 Bergen Street in Newark, New Jersey in classroom GA-60.

The principal intervention took place the week of - June 10, 2019. This was the week before the second-year cohort was scheduled to begin their first day of clinical. Clinical assignments for the second-year cohort were made by the program director. Mentors from the third-year cohort were assigned to conduct the orientation at one hospital site based on previous clinical settings that they have rotated through. No mentor conducted an orientation at a site that they did not complete a clinical rotation at. There was be a ratio of one mentor to one to two RRNAs. The clinical site orientation checklist was filled out by each RRNA in the second-year cohort during their clinical site orientation to verify completion and to ensure all key elements have been met. Mentorship pairings were posted on the nurse anesthesia portal by the program administrator.

The mentors from the third-year cohort conducted the clinical site tour at their assigned location. This included a tour of the perioperative setting, lockers rooms, anesthesia office, and cafeteria. A demonstration of a proper anesthesia setup and machine check was completed. In addition, an overview on where equipment and medications are stored was also performed. The workflow of the site was also be discussed.

At the conclusion of the intervention, the RRNAs in the second-year cohort completed a second anonymous, descriptive survey. A 17-item Likert style survey that was formulated and used in a previously was utilized in this study to explore the benefits of the program and its effects on stress reduction as RRNAs transition into clinical⁵. The adapted survey consisted of 17 Likert-style questions along with three open ended questions.

Outcome Measures

Outcome measures focused on any decrease in stress and anxiety and an increase in self-confidence prior to RRNAs entering their first clinical rotation as well as the benefits and perceptions of the pre-clinical orientation experience. The PSS was administered to all study participants from the third-year cohort and second-year cohort. A second survey was administered to the RRNAs that participated in the pre-clinical experience. It was a 17-item Likert-style survey that explored the benefits of the intervention program and their perceived anxiety toward beginning clinical following the mentorship driven clinical site orientation. These surveys were administered through the Qualtrics online survey software.

Another tool that was employed was Power Point to create and present instructions and guidelines to the mentors in the third-year cohort conducted the orientations at the designated clinical sites.

The purpose of the pre-clinical experience was to allow for a smoother transition into clinical. Measuring levels of stress prior to clinical in both the intervention and control group and then measuring stress levels following the orientation process in just the control group allowed the investigators to gauge any positive or negative outcomes related to the implementation of the orientation. It also identified any benefits of the program or elements that needed to be included if this program continues in the future. The project created positive outcomes. It is our aspiration that this framework could serve as the foundation for a component of the Rutgers Nurse Anesthesia Program that is implemented for years to come as a method to ease the transition into clinical for residents in their second year of the doctoral program.

RESULTS

Perceived Stress Scale

The Perceived Stress Scale (PSS) was sent to both the second and third-year cohorts. The survey (Table No.1) was completed by 100% of the residents in the third-year cohort (21/21) and 100% of the residents in the second-year cohort (22/22). Self-reported survey responses were assessed on a 5-

point Likert scale. Participants were able to choose “never”, “almost never”, “sometimes”, “fairly often”, or “often in response to the 10 survey questions, and numerical values were assigned from 0-4, respectively. Mean values were calculated, statistical testing was completed using the Qualtrics software, and results are shown in Table No.1. The mean overall pre-clinical stress scores for the third-year and second-year cohorts were 3.38 and 3.18, respectively. The difference in mean stress was not found to be statistically significant between the two cohorts ($t=-0.91$, $p= 0.368$). The third-year cohort felt like things were going their way to a lesser extent ($t= 4.62$, $p <0.0001$) than the second-year cohort. The third-year cohort also felt as though they were less likely to be able to control irritations in their lives ($t= 2.51$, $p = 0.015$) than the second-year cohort.

Mentorship Mediated Clinical Site Orientation Assessment Survey

A link to the mentorship mediated clinical site orientation assessment survey was sent to study participants. The survey (Table No.2) was completed by 100% (22/22) of the individuals who were sent the survey. When asked if the mentorship mediated clinical site orientation (MMCSO) increased confidence towards the clinical year, 100% strongly agreed. 100% of participants also strongly agreed that the MMCSO was beneficial to their education. When asked if the MMCSO helped to reduce anxiety towards the clinical year, 95.45% strongly agreed and 4.55% agreed (Table No.2). 100% of participants were able to obtain hands on practice doing an anesthesia machine checkout. Only 68.18% of participants were able to get hands on practice with a pre-operative evaluation. 100% of study participants stated they would recommend the MMCSO to be integrated into a front-loaded program as it was presented to them (Table No.3). 63% of participants suggested that 2-4 hours would be the most beneficial amount of time allotted to complete the MMCSO (Table No.2).

All qualitative comments were examined by the principal investigators. When asked to describe any other hands on experience participants had during their pre-clinical experience, responses indicated,

“Sim lab, airway workshop, and anesthesia machine checkout” (Table No.2). Participant suggestions on how to improve the MMCSO included, “spending an entire day with a senior” and “should be two days” (Table No.2).

DISCUSSION

Implications for Clinical Practice

The mentorship mediated clinical site orientation framework can be instituted into nurse anesthesia programs throughout the country as an effective way to immerse RRNAs into the clinical experience prior to the beginning of the first rotation. As described in the results section, the implementation of this program shows that it can lead to decreased levels of stress and anxiety in nurse anesthesia residents. Theoretically, this can lead to improved self-confidence amongst RRNAs during their clinical practicum. A better understanding of expectations, the operating room environment, and the workflow of the designated clinical site can increase professional collaboration and teamwork in the operating room.

Implications for Healthcare Policy

The World Health Organization defines health policy as “decisions, plans, and actions that are undertaken to achieve specific health care goals within a society”⁶. The AANA foundation has recognized three domains to further healthy policy research that include policy, education, and practice. The practice domain explores initiatives to secure the future of the quality of care that is delivered by nurse anesthetists⁷. Identifying events and triggers of high levels of stress and anxiety in nurse anesthesia residents and developing ways to alleviate it can improve their emotional and physical well-being. As previously described, high levels of stress can impede a person’s ability to learn and lead to negative consequences on both an emotional and physical level leading to a decline in academic and clinical performance^{8,9}. It can also impair an individual’s ability to create new memories¹⁰. Creating methods to alleviate these sources of stress can foster a healthier learning environment and lead to improvements in the quality of care that is delivered by RRNAs during their training. This in

turn can translate to improved delivery of care as they progress throughout their career as an anesthesia provider.

Implications for Quality/Safety

Medical errors still exist in our society today despite advancements in healthcare technology. As previously discussed, a certain level of stress can serve as a motivator, but too much can lead to a failure in the ability to retain information and decreases in performance level¹¹⁻¹³. The institution of a framework to decrease the effects of increased stress in RRNAs may lead to increased performance levels. The ultimate goal is that the decline in stress levels will improve clinical skills and lead to less medical errors in the operating room.

Implications for Education

As described in the results section, the development and implementation of a mentorship mediated clinical site orientation has advantageous effects in nurse anesthesia residents.

These include increased confidence and decreased stress and anxiety toward entering the first clinical rotation. Nurse anesthesia residents felt more prepared to begin clinical and apply what they learned in the classroom to the operating room. The goal is to advance patient safety and care by enhancing the health and well-being of the provider. The positive results of this project can encourage future residents to apply to nurse anesthesia programs. The benefits of this formalized orientation can encourage individuals to endure the demands of a nurse anesthesia program. Having the opportunity to see RRNAs providing guidance and advice to other RRNAs during such a difficult part of the program can inspire others to do the same and give back in order to promote the education of future nurse anesthetists.

Table No.1: Perceived Stress Scale

S.No	Questions	Third-year cohort	Second-year cohort	t-value	df	p-value
1	In the last month, how often have you been upset because of something that happened unexpectedly?	2.57	2.33	-0.94	41	0.347
2	In the last month, how often have you felt that you were unable to control the important things in your life?	2.52	2.19	-1.18	41	0.246
3	In the last month, how often have you felt nervous and “stressed”?	3.38	3.19	-0.91	41	0.368
4	In the last month, how often have you felt confident about your ability to handle your personal problems?	1.86	2.18	1.54	41	0.126
5	In the last month, how often have you felt that things were going your way?	1.57	2.62	4.62	41	< 0.0001
6	In the last month, how often have you found that you could not cope with all the things that you had to do?	2.43	2.24	-0.94	41	0.352
7	In the last month, how often have you been able to control irritations in your life?	1.67	2.33	2.51	41	0.015
8	In the last month, how often have you felt that you were on top of things?	2.00	2.43	1.93	41	0.061
9	In the last month, how often have you been angered because of things that were outside of your control?	2.48	2.00	-1.64	41	0.071
10	In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	2.43	1.91	-1.86	41	0.066

Table No.2: Mentorship Mediated Clinical Site Orientation Assessment Survey

Item	Question	SA	A	N	D	SD	
1	The MMCSO was beneficial to my education	100					
2	The MMCSO helped to reinforce the didactic curriculum	90.91	9.09				
3	The MMCSO increased my confidence towards the clinical year	100					
4	The MMCSO helped reduce my anxiety towards the clinical year	95.45	4.55				
5	The MMCSO increased my time spent reviewing didactic content	63.64	23.73	9.09			
6	The MMCSO encouraged me to want to learn the theory behind what I experienced	77.27	18.18	4.55			
7	The MMCSO motivated me to study	81.82	13.64	4.55			
8	The MMCSO created an understanding of the impact of anesthesia and surgery on patient's lives	86.36	13.64				
9	The MMCSO promoted professional association	90.91	9.09				
10	The MMCSO promoted the integration of prior knowledge and new knowledge	95.45	4.55				
Item	Question	VH	H	N	NH	NR	
11	Describe the MMCSO in improving your understanding of the future responsibilities of a CRNA	90.91	9.09				
12	Describe the MMCSO in improving your professional development as a CRNA	85.71	14.29				
Item	Question				YES	NO	NR
13	During the MMCSO, were you able to get hands on practice with the airway equipment?				95.45	4.55	
14	During the MMCSO, were you able to get hands-on practice doing an anesthesia machine checkout?				100		
15	During the MMCSO, were you able to get hands-on practice with pre-operative evaluation?				68.18	31.82	
16	Would you recommend the MMCSO to be integrated into a front-loaded CRNA program as it has been presented to you?				100		
Item	Question	0-2	2-4	4-8	8-12	>12	NR
17	How many hours in the MMCSO do you consider would be the MOST beneficial	9.09	63.64	18.18	4.55	4.55	
Item	Question						
18	Please describe any other hands-on practice you had during your pre-clinical experience						
	Machine pre-check, setting up airway equipment, suction						
	Anesthesia machine, airway setup, fluid warmer setup, OR table arm board placement, drug cart						
	Anesthesia room set up						
	Previous OR experience made being in the OR much more comfortable						
	Simulation would have been much more beneficial had it taken place in a real OR						
	Setting up fluid warmer						
	Induction and emergence sequences						
	Sim lab. However, since we had out checkout on a machine that didn't work and was out of date, it was hard to fully conceptualize the idea. I would suggest to have the machine checkout AFTER MMCSO						
	My onsite mentor was extremely helpful and patient. I genuinely believe this experience was beneficial						
Discussing medications and dosages was also extremely helpful							

	Airway workshop was also very helpful, prior to starting clinical
	During the MMCSO, I was shown supply rooms, where to find equipment, how to set up the fluid warmer, we went through the entire machine checkout together then independently, and the mentor reviewed my entire preOp assessment. During the MMCSO, we also reviewed computer documentation and how to obtain patient data prior to pre-op. This experience was truly incredible in providing me with confidence prior to my first day of clinical.
	Room setup
	I had no hands-on experience before clinical unless it was in sim or with my mentor
	We practiced setting up the equipment and supplies needed throughout the perioperative period
	Sim was the closest thing but hard because the machine is not the same everywhere
Item	Question
19	Is there anything else you would like to see incorporated in the MMCSO
	No, it was great!! We will always have stress, but this helped reduce some of our stress before beginning
	I would have appreciated being able to shadow a RRNA/CRNA for a pre-op assessment and induction
	No
	Spending an actual clinical day with the senior
	Should be 2 days. One night where you go through everything on the sheet provided. Nest where you shadow the mentor all day for a real life case/ experience
	It should be done on a day where the clinical site mentor does not have clinical that day
	Fantastic idea, alleviated so much anxiety!
	I think the MMCSO did a fantastic job alleviating our anxieties. While sim lab is great, it's such a difference experience than the real thing. Thank you so much for doing this.
	Nothing.
	It was a fantastic experience that helped to ease pre-clinical jitters. I would love to see two, two-hour sessions in total before starting. I think this should be implemented at every program across the country
	No, The MMCSO was more than adequate in easing a novice RRNA into the clinical setting
	I cannot think of anything. My mentor spent so much time with me reviewing everything in the OR and getting me familiar with the layout of the department. This was an incredible experience and extremely grateful
	Medication preparation
	No, you guys did a great job
	It would be great if it could be maintained for each clinical site that we rotate through. It's a great program
	I don't believe more is needed
This decreased my anxiety so much! Was so helpful	



Nurse Anesthesia Program
Mentorship Mediated Clinical Site Orientation Checklist

Mentee: _____ Clinical Site: _____

Mentor: _____ Date of Orientation: _____

Site Orientation:

- Parking and building access
- Introduction to clinical staff & exchange of contact information
- Tour of facility (locker room, bathrooms, cafeteria, lounge, pre-op area, & PACU)
- Pre-operative interview/assessment review & expectations
- PACU transport process & report

OR Orientation:

- OR location and proper attire
- Anesthesia supply closet location and codes
- Malignant hyperthermia cart location/ review
- Anesthesia technician role review & introduction
- Anesthesia machine checkout
- Suction & Airway equipment setup
- Monitor set up, ECG lead placement, & pulse oximeter placement
- IV fluid location, IV line setup, & Fluid warmer setup
- Medication setup & review
 - Medication expectations for the first day
 - Syringe setup and labeling
 - Phenylephrine/Ephedrine dilution
- Care plan review/ expectations
- OR bed manipulation/ controller
- Induction sequence review
- Charting (pre-op evaluation, intra-op charting, and post-op notes)
- Clinical forms review (verification of experience & student evaluation)

Clinical Coordinator Orientation:

- ID badges and scrub access
- Computer access, pharmacy access, & process for reconciliation of controlled substances
- Clinical schedule reviewed
- Procedure for notification in the event of the SRNA's absence reviewed
- Departmental policies & procedures reviewed
- Scope of practice & goals for the rotation reviewed

Signatures:

Mentee: _____ Mentor: _____

Clinical Coordinator: _____

Figure No.1: Appendix A: Clinical Site Orientation Checklist

Please answer the following questions related to the Mentorship Mediated Clinical Site Orientation (MMCSO).

Note: SA= Strongly Agree A= Agree N=Neutral D= Disagree SD=Strongly Disagree

Question	SA	A	N	D	SD
1. The MMCSO was beneficial to my education.					
2. The MMCSO helped to reinforce the didactic curriculum.					
3. The MMCSO increased my confidence towards the clinical year.					
4. The MMCSO helped to reduce my anxiety towards the clinical year.					
5. The MMCSO increased my time spent reviewing didactic content.					
6. The MMCSO encouraged me to want to learn the theory behind what I experienced.					
7. The MMCSO motivated me to study.					
8. The MMCSO created an understanding of the impact of anesthesia and surgery on patient's lives.					
9. The MMCSO promoted professional association.					
10. The MMCSO promoted the integration of prior knowledge and new knowledge.					

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Figure No.3: Appendix C: Post Clinical Site Evaluation Survey

Please answer the following questions related to the Mentorship Mediated Clinical Site Orientation (MMCSO).

**Note: VH= Very Helpful H= Helpful SH= Somewhat Helpful NH= Not Helpful
NR= No Response**

Question	VH	H	SH	NH	NR
11. Describe the MMCSO in improving your understanding of future responsibilities of a CRNA.					
12. Describe the MMCSO in improving your professional development as a CRNA.					

Please answer the following questions related to the Mentorship Mediated Clinical Site Orientation (MMCSO).

Note: Y= Yes N= No NR= No Response

Question	Y	N	NR
13. During the MMCSO, were you able to get hands on practice with airway equipment?			
14. During the MMCSO, were you able to get hands-on practice with an anesthesia machine check-out?			
15. During the MMCSO, were you able to get hands-on practice with pre-operative evaluation?			
16. Would you recommend the MMCSO for the didactic portion of a front-loaded CRNA program as it has been presented to you?			

Please answer the following questions related to the Mentorship Mediated Clinical Site Orientation (MMCSO).

Question	0-2	4-8	8-12	>12	NR
17. How many hours in the MMCSO do you consider most beneficial?					

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Please answer the following questions related to the Mentorship Mediated Clinical Site Orientation (MMCSO).

18. Describe the difference between shadowing a nurse anesthetist before started the nurse anesthesia program at Rutgers University and the hands-on-mentorship mediated clinical site orientation.

19. Please describe any other-hands-on practice you had during your pre-clinical experience?

20. Is there anything that you would like to see incorporated into the MMCSO?

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CONCLUSION

A decrease in anxiety and an increase in self-confidence can lead to a better transition into clinical practicum for RRNAs who are beginning their initial clinical rotation. The implementation of a MMCSO can improve preparation and expectations for RRNAs. This early integration into the operating room setting with the guidance of a third-year resident serving as a mentor substantiates the need

for a pre-clinical orientation prior to the first clinical rotation that an RRNA experiences.

This current project serves as a foundation for future research to explore the beneficial effects of implementing a pre-clinical orientation experience. Research can be conducted in other nurse anesthesia programs as well as other medical and clinical specialties.

ACKNOWLEDGEMENT

We would like to thank Dr. Maureen McCartney Anderson for her tireless work, dedication, and motivation not only during the implementation of this project, but in every aspect of our nurse anesthesia education.

CONFLICT OF INTEREST

We declare that we have no conflict of interest.

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Please cite this article in press as: Thomas Pallaria et al. Mentorship mediated clinical site Orientation Framework, *International Journal of Nursing and Healthcare Research*, 4(1), 2020, 10-23.