Peer Mentorship: Reported Outcomes Among Student Registered Nurse Anesthetists

Aja Rivera
*DePaul University*, arivera416@msn.com

Champagna Conner
*DePaul University*, cc.conner13@gmail.com

Follow this and additional works at: [https://via.library.depaul.edu/csh_etd](https://via.library.depaul.edu/csh_etd)

Part of the *Nursing Commons*

**Recommended Citation**
[https://via.library.depaul.edu/csh_etd/350](https://via.library.depaul.edu/csh_etd/350)

This Dissertation is brought to you for free and open access by the College of Science and Health at Digital Commons@DePaul. It has been accepted for inclusion in College of Science and Health Theses and Dissertations by an authorized administrator of Digital Commons@DePaul. For more information, please contact digitalservices@depaul.edu.
Peer Mentorship: Reported Outcomes Among Student Registered Nurse Anesthetists

Enrolled in the DNP Program

Champagna Conner & Aja Rivera

DePaul University

NorthShore University HealthSystem School of Nurse Anesthesia
# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>5</td>
</tr>
<tr>
<td>Background</td>
<td></td>
</tr>
<tr>
<td>Problem Statement</td>
<td>10</td>
</tr>
<tr>
<td>Purpose of the Project</td>
<td>10</td>
</tr>
<tr>
<td>Research Questions</td>
<td>10</td>
</tr>
<tr>
<td>Theoretical Framework</td>
<td>11</td>
</tr>
<tr>
<td>Literature Review</td>
<td>12</td>
</tr>
<tr>
<td>Search Method</td>
<td>12</td>
</tr>
<tr>
<td>Stress/Anxiety</td>
<td>13</td>
</tr>
<tr>
<td>Peer Mentorship</td>
<td>15</td>
</tr>
<tr>
<td>Emotional Support/Social Isolation</td>
<td>17</td>
</tr>
<tr>
<td>Preparedness for Didactics and Clinical Rotations</td>
<td>18</td>
</tr>
<tr>
<td>Design/Methods</td>
<td>19</td>
</tr>
<tr>
<td>Study Design</td>
<td>19</td>
</tr>
<tr>
<td>Sample and Setting</td>
<td>20</td>
</tr>
<tr>
<td>Peer Mentorship Program Development</td>
<td>21</td>
</tr>
<tr>
<td>Peer Mentorship Program</td>
<td></td>
</tr>
<tr>
<td>Recruitment Procedures</td>
<td>22</td>
</tr>
<tr>
<td>Peer Mentorship Program Implementation</td>
<td>23</td>
</tr>
</tbody>
</table>
Instruments 25

Data Collection Procedures Error! Bookmark not defined.

Data Analytic Procedures Error! Bookmark not defined.

Human Subjects Protection Error! Bookmark not defined.

Conclusion 34

References 36

APPENDIX A: Survey 39

Peer Mentorship Program Demographics Survey 39

APPENDIX B: Survey 42

Qualtrics Peer Mentorship Program Evaluation Survey 42

APPENDIX C 45

Recruitment Email Script 45

APPENDIX D 47

INFORMATION SHEET FOR PARTICIPATION IN RESEARCH STUDY 47

Appendix E 49

Facebook Discussion Questions 49

Appendix F 51

Post-participation survey email 51

Table 1. Evidence-based Matrix of Data on Studies Related to Stress and Mentorship Among CRNAs and SRNAs 52
Table 2. Demographics Table
68
Table 3: Stress and Anxiety Descriptive Statistics of Survey Responses
69
Table 4: Emotional Support Descriptive Statistics of Survey Responses
69
Table 5: Preparedness Descriptive Statistics of Survey Responses
70
Table 6: Mentor Evaluation Descriptive Statistics of Survey Responses
70
Table 7: Group Mentorship Evaluation Statistics
71
Table 8: Comparison of Mentor Evaluation Means Scores for Second-year and Third-Year SRNAs
71
Appendix G: IRB Documents
72
Appendix H: FCOI Certificates
74
Appendix I: Proof of CITI Training
76
Abstract

Background: Student Registered Nurse Anesthetist (SRNAs) experience high levels of stress and anxiety while enrolled in a demanding nurse anesthesia program; a peer mentorship program fosters an encouraging support system for SRNAs.

Purpose: The purpose of this project was to evaluate if a peer mentorship program was effective at diminishing stress & anxiety, social isolation, enhancing preparedness amongst the first and second-year SRNAs, and to evaluate the perceived effectiveness of mentorship amongst students enrolled in the NorthShore University HealthSystem School of Nurse Anesthesia (NSUHS SONA).

Methods: This quantitative, descriptive, cross-sectional study design involved three cohorts of SRNAs. Participants communicated through personal interaction and Facebook discussion posts. Then they completed a post participation survey with Likert-scale responses to evaluate the program’s outcome on stress and anxiety, social isolation, preparedness for didactic and clinical rotations, and the perceived effectiveness of mentorship.

Results: The post-participation survey reported the following range of mean scores for each construct: stress and anxiety (M= 1.71-2.43), emotional support (M =1.14 -1.86), preparedness (M =1.86-2.50), and mentorship evaluation (M= 2.00-3.42). Lower mean scores were a positive reflection on the intended goals of the peer mentorship program. Overall, the participants in this study reported that the peer mentorship program should be continued at NSUHS SONA.
Conclusion: Mentorship is beneficial to graduate students enrolled at NSUHS SONA. A well-structured and well-planned mentorship program should be integrated throughout the nurse anesthesia curriculum.

Key words: mentorship, peer mentorship, stress, anxiety, social isolation, preparedness, emotional support
Peer Mentorship: Reported Outcomes Among Student Registered Nurse Anesthetists Enrolled in the DNP Program

Introduction

Background and Significance

Admission to a nurse anesthesia program is a highly competitive and rigorous process. Once a student begins a nurse anesthesia program, there is an almost immediate increase of life stressors (Perez & Carroll-Perez, 1999). Student registered nurse anesthetists (SRNAs) are exposed to a highly demanding and complex curriculum which leads to several common stressors. These common stressors are identified as loss of income, information overload in courses, lack of time for one’s self and family, and the ultimate goal of meeting self-expectations (Griffin, Yancy, & Dudley, 2017). These stressors can seriously impact the well-being of SRNAs. Conner (2015) reported that some ramifications of stress experienced by SRNAs can be exhibited as sleep disturbance, high anxiety, and possible failure to complete their education. From the beginning to the end of nurse anesthesia school, SRNAs will have to deal with an increased number of stressors. Developing strategies to help manage the stress is beneficial for the well-being of the SRNA.

As current students enrolled in NorthShore University HealthSystem School of Nurse Anesthesia (NSUHS SONA), the authors have witnessed the stressors and social isolation that SRNAs experience due to school obligations. Through this personal experience, the authors have observed that it has been beneficial to one’s well-being and anxiety level to have a senior classmate or former student of the program discuss studying advice, fears, or concerns. It may be beneficial to have a peer mentorship program as a part of nurse anesthesia education. Establishing a relationship with a senior member in the same program of study can be valuable to
SRNAs that have a plethora of concerns about the “what-ifs”, “why’s”, and “how’s” that they will encounter. Conner (2015) mentioned that a support system as a principal coping mechanism that can be “protective for those experiencing adverse levels of stress” (p.135). A peer mentorship program offers accessible peers that can relate to one another because they have encountered similar stressors and experiences.

While some level of stress and anxiety is necessary for a student to be productive and motivated to succeed, a surplus of stress can lead to a path of academic failure, discontent, and a plethora of emotional and physiological disturbances (Perez & Carroll-Perez, 1999). It would be an unrealistic expectation to completely abolish the stress and anxiety of anesthesia training. However, implementing plans to address this issue in nurse anesthesia programs would be beneficial in assisting students throughout this stressful time.

Not only are nurse anesthesia students enrolled in a highly competitive program experienced by a select few, but each year objectives change as the SRNA advances in the program. For instance, at NSUHS SONA, first-year SRNAs are heavily involved in the didactic portion of the program. First-year SRNAs experience stress related to taking multiple exams and then they transition from fundamental science courses into anesthesia-focused learning. Second-year SRNAs experience stress related to transitioning from the classroom into the beginning of clinical residency in the operating room. Lastly, third-year SRNAs stress can be contributed to completing requirements for clinical residency while preparing for the national board exam and completing their final projects.

Peer mentorship opens doors for communication and offers a wide range of support services that are beneficial to SRNAs. Establishing a peer mentorship program may also assist with adaptation to life as a SRNA by offering a sense of security, acting as a professional
resource, assisting with strategies to boost academic performance, and supporting mental health and well-being (Lombardo, Wong, Sanzone, Filion, & Tsimicalis, 2017). In order to establish a peer mentorship program to effectively target the needs of undergraduate nursing students, Lombardo et al., 2017, performed a qualitative descriptive study utilizing an interview with the nursing students to identify relevant themes that were directly related to their experience in transitioning as a new nursing student. The peer mentorship program was developed based off of research from a previous integrative review from Wong, C., Stake-Doucet, N., Lombardo, C., Sanzone, L., & Tsimicalis, A. (2016). The integrative review revealed while peer mentorship programs in nursing students yielded positive outcomes, the design, implementation, and evaluation process posed several challenges. Wong et al. (2016), described these challenges with the structure of the program, orientation process, and issues among the mentor-mentee relationship. Recommendations included a formal needs assessment of students and faculty, individualizing mentorship to unique characteristics, and collaboration with both faculty and students (Wong et al., 2016). Lombardo et al. (2017), explored the perceptions of mentees that participated in the study to reveal commons themes about the nursing students experience as they transitioned in the nursing program. The study was able to uncover a more in-depth comprehension of the nursing students’ concerns as they progressed throughout the program, and the beneficial outcomes of being a part of a peer mentorship programs. In addition, matching mentees with mentors based off of mentees preferences, providing peer mentorship workshops and activities, and providing support from faculty would improve mentoring outcomes (Lombardo et al., 2017).
Problem Statement

NSUHS SONA currently does not have a formal peer mentorship program incorporated into the program curriculum; establishing a peer mentorship program for all cohorts in the NSUHS SONA can provide the opportunity to for SRNAs to receive peer support throughout the most stressful times of the program. The benefits of participating in peer mentorship programs for students have been previously studied (Chipas & McKenna, 2011; Meno, Keaveny, & O’Donell, 2003; Lombardo, Wong, Sanzone, Filion, & Tsimicalis, 2017). However, there is limited data in peer mentorship programs involving all three levels of SRNAs in a nurse anesthesia school.

Purpose of the Project

The purpose of this project was to evaluate if a peer mentorship program was effective at diminishing stress and anxiety, social isolation, enhancing preparedness amongst the first and second-year SRNAs, and to evaluate the perceived effectiveness of mentorship amongst students enrolled in the NorthShore University HealthSystem School of Nurse Anesthesia (NSUHS SONA).

Research Questions

- Among first-year SRNAs, is peer mentorship effective in decreasing stress and anxiety, social isolation, and enhancing preparedness?
- Among second-year SRNAs, is peer mentorship effective in decreasing stress and anxiety, social isolation, and enhancing preparedness?
- Do second-year SRNAs that participated in the peer mentorship program perceive that their role as a mentor was effective in decreasing stress and anxiety, social isolation, and enhancing preparedness for first-year SRNAs?
• Do third-year SRNAs that participated in the peer mentorship program perceive that their role as a mentor was effective in decreasing stress and anxiety, social isolation, and enhancing preparedness for second and first-year SRNAs?

**Theoretical Framework**

The Neuman Systems Model, which was initially developed in 1970, views an individual with a holistic approach (Neuman, 1995). Most importantly, the Neuman Systems Model directs its focus on threats to an individual's well-being such as specific stressors that the individual may experience (Turner & Kaylor, 2015). Neuman equates health with wellness and defines it “as the condition of optimal stability of the client/client system” (Tourville & Ingalls, 2003, p. 26).

Wellness, or health, is maintained depending upon five main factors (physical, physiological, sociocultural, developmental, and spiritual) that an individual possesses and how they respond to interactions within their environment (Tourville & Ingalls, 2003). The environment can be anything that has an impact on a person and can be internal and/or external. The purpose of this model is to keep a system or individual stable in health and wellness, and to intercept when the balance is off to help alleviate stress or develop appropriate coping strategies (Moscaritolo, 2009).

Stress and its impact on individuals are integral to this model and this project. Stress, anxiety, social isolation, and the need to enhance preparedness in nurse anesthesia education are well-known health issues and they are major concerns for students. The Neuman Systems Model directly speaks to this issue by its focus on maintaining health and wellness of an individual. Implementing a peer mentorship program to help alleviate stress and anxiety in SRNAs is congruent with the overall theme of the Neuman Systems Model because it leads to
implementation of strategies to help alleviate the high levels of stress and anxiety among SRNAs.

**Literature Review**

**Search Method**

The initial literature search included articles from the last five years, in the English language, and was conducted using two databases: CINAHL and ProQuest Nursing and Allied Health Data Base. During the computerized search on these databases the following medical subject headings (MeSH) terms were used: peer mentorship, mentorship, mentor, nurse, nurse anesthesia, anesthesia, social isolation, and stress. Using these MeSH terms yielded about 160 articles, but very few recent studies addressed the specific topic of evaluation of peer mentorship in nurse anesthesia programs.

The literature search was expanded to include PubMed database, CINAHL, and ProQuest databases. The search was expanded again with the year limits starting from 1985 to 2018, with peer reviewed articles, and in the English language. These articles included studies that contributed data specific to the goals of this project such as peer mentorship and its effects on stress and anxiety, social isolation, and preparedness for SRNAs. Additional medical subject headings for the second search included: nursing students, nursing education, SRNA, stress, anxiety, wellness, well-being, self-efficacy, coaching, peer coaching, mentoring, social isolation, and psychosocial support. These additional medical subject headings provided a total of 89 research articles on CINAHL complete database and total of 69 results on PubMed.

A total of twelve articles were deemed most appropriate in supporting the scope and nature of this project and have therefore been included in this literature review. The focal point of the literature review was to obtain background information on peer mentorship and SRNAs,
and the benefit of implementation of peer mentorship programs. The literature review centers around the four constructs to determine the effects of peer mentorship on SRNAs: stress and anxiety, social isolation, preparedness, and mentorship.

**Stress and Anxiety**

The National Institute of Mental Health (NIMH, n.d.) defines the concept of stress as “how the brain and body respond to any demand; every type of demand or stressor—such as exercise, work, school, major life changes, or traumatic events.” SRNAs have undoubtedly entered into a profession that operates under stressful conditions. Therefore, a majority of education and training will also take place under these circumstances. SRNAs have long clinical hours and depending upon whether the program in front-loaded or integrated could impact their schedule further while having to study for additional courses and exams. With such a restrictive schedule, the SRNA is left with less time available for themselves to take part in any type of self-care or destressing activities. Downey, McDonald and Downey (2017) noted that anesthesia trainees suffered from a lack of sleep and physical exercise, had very little spare time, and concluded that these stressors had the potential to manifest physically or mentally in students.

In addition to identifying areas of stress, Downey et al. (2017) also identified coping strategies in an attempt to improve and maintain SRNAs well-being. Coping strategies named by Downey et al. (2017) included the following: talking to friends or family, exercising, taking time off, talking to a mentor, drinking alcohol, attending counseling, taking prescribed meditation, using nicotine, and using recreational drugs. Downey et al. (2017) noted that debriefing with a mentor as a coping strategy to relieve stress was only reported by 34% of study participants in the study, which may indicate a lack of mentoring programs or participants not
seeking a mentor. Having a support person to be a positive figure in the hectic and demanding life of an SRNA, could help ameliorate the adverse levels of stress associated with the program.

Collins and Andrejco (2015) took a different approach to addressing stress among SRNAs. They hypothesized that Emotional Intelligence (EI) was a predictive factor for how SRNAs handled stress through the nurse anesthesia program. According to Collins and Andrejco (2015), EI is "the ability to monitor one's own feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions" (p.57). Due to SRNAs frequent involvement in stressful situations, the ability to critically think and act appropriately throughout any high stress situation is an important attribute for SRNAs to possess. Collins and Andrejco (2015) conducted this EI test to determine if EI improved within SRNAs from the first year of the program until the last year. The results showed no statistically significant change in EI over the course of the program, but it did show that EI training reduced stress in SRNAs (Collins & Andrejco, 2015). Because of these results, Collins and Andrejco (2015) recommended that EI training be included in anesthesia curriculums to help decrease stress in SRNAs.

Chipas et al. (2012) conducted a descriptive study that revealed nurse anesthesia students experienced an above average level of stress, which was a major area of concern among the students. In addition to the stressful nature of nurse anesthesia training, the type of program also contributed to added stress among students. There are two types of programs in nurse anesthesia training: front-loaded and integrated. Front-loaded programs are designed to provide all didactic content prior to starting clinical residency. Integrated programs are designed to integrate course work in addition to clinical rotations. According to Chipas et al. (2012), students in integrated programs experienced a statistically significant higher level of stress as compared to students in a
front-loaded program with a mean stress score of 7.9 vs 7.1, (P < .05). NSUHS SONA’s curriculum is structured as an integrated program with didactic content that is integrated into the 20-month clinical residency. SRNAs from NSUHS SONA entering clinical residency must still manage coursework and exams, while preparing for clinical residency four to five days a week. Because SRNAs in the NSUHS SONA experience an integrated program that requires them to manage coursework and exams while also preparing for clinical residency, they may experience more stress than students in front-loaded programs.

Chipas and McKenna (2011) performed a descriptive study surveying CRNAs and SRNAs to determine their overall level of stress, their most common stressors, symptoms of stress, and satisfaction. SRNAs were found to be more stressed than CRNAs with a score of 7.2 on a 10-point Likert scale as compared to 4.25 for CRNAs (Chipas & McKenna, 2011). Furthermore, SRNAs reported that 90% of their stress came from work (school) (Chipas & McKenna, 2011). This study highlights the fact that the educational training (work) involved in anesthesia school is highly stressful in itself. Chipas and McKenna (2011) recommended that stress management strategies be included in the education and training of SRNAs. When stress management education is initiated during the training of nurse anesthesia students, it can continue to be used throughout the career of practicing nurse anesthetists. (Chipas & McKenna, 2011).

**Peer Mentorship**

Meno, Keaveny, and O’Donell (2003), distributed a survey to obtain opinions from SRNAs to determine the value of a mentorship program in the clinical setting and to distinguish between Certified Registered Nurse Anesthetists (CRNAs) as a mentor versus an educator. Meno et al. (2003) stated “effective mentoring has the potential to impart a lasting, positive
impression that can serve to motivate and encourage students as they progress through the program” (p. 337). SRNAs also reported that mentors had the added attributes of being "knowledgeable, approachable, and encouraging" (p.340). 93% of the participants reported a distinct difference between a mentor and educator, and that the support of a mentor throughout the program was highly valued (Meno et al., 2003).

Lombardo, Wong, Sanzone, Filion, and Tsimicalis (2017) interviewed undergraduate nursing students and reported the comprehensive perception of peer mentorship in an undergraduate nursing program. In this qualitative descriptive study, Lombardo et al. (2017) identified common themes related to the student experience as well as helpful mentor behaviors and factors that affected mentoring relationships. These themes included the following: assistance transitioning through new experiences, gaining advanced information from mentors, obtaining emotional support from mentors, obtaining study tips from mentors, and support from mentors concerning mental health and well-being (Lombardo et al., 2017). Lombardo et al. (2017) went on to explain that improvement in mental health was measured by a self-reported decrease in stress and anxiety levels among undergraduate nursing students.

In a qualitative study, Hamrin, Weycer, Pachler, and Fournier (2006) evaluated the effectiveness of graduate nursing student-led peer support groups. The study consisted of graduate student peer group leaders that already completed a mental health nursing specialty course and pre-specialty graduate nursing student group members. The results obtained from a questionnaire revealed the most common themes from group members after participation in the peer led support group. These common themes included: access to guidance, help with coping with traumatic experiences, and help forming therapeutic alliances with patients (Hamrin et al., 2006).
Emotional Support/Social Isolation

According to a study conducted by Lee and Goldstein (2016), social support can be used as a suitable way to address stress and manage person well-being. “Social support helps individuals maintain or regain strengths, particularly when they are under stress or encountering stressful life events, and thereby decreasing the potentially detrimental consequences of stress” (Lee & Goldstein, 2016, p. 570). Lee and Goldstein surveyed 636 undergraduate students from various backgrounds to determine the effects of three sources of social support (family, friends, and romantic partners) on loneliness and stress. Social support from friends (vs family or romantic partners) was found to have the greatest positive impact on buffering the effect of stress and loneliness. This buffering effect was not seen with family members or romantic partners. This further supports the need for peers to mentor each other to reduce stress and loneliness. Lee and Goldstein (2016) also found that females had a greater negative impact of stress when friends and family support was lacking. Given that the majority of SRNAs are female, this finding is important to consider during the development and recruitment in a peer mentorship program.

Conner (2015) suggested that stress, self-efficacy, and social support are three areas that should be addressed to increase retention and academic success in CRNA programs. Social support serves as a protective mechanism for individuals with adverse levels of stress while improving coping skills and increasing self-efficacy (Conner, 2015). Conner’s review of a study by Chipas et al. (2012), revealed that in order to improve their overall well-being, SRNAs suggested peer support, exercise programs, access to health and stress management tips, and also for anesthesia schools to be required to incorporate wellness in the curriculum. Based upon these
two studies, peer mentorship can help alleviate stress, promote mental wellness, and provide some of the socialization that SRNAs are missing due to increased time requirements of school. In the studies conducted by Harmin et al. (2006) and Meno et al. (2003) participants expressed the positive results experienced when they had some form of support. Harmin et al. (2006) explained how group members of the study were able to address feelings of isolation, loneliness, and the opportunity to network with other nursing students after participating in the peer led support groups. Participating SRNAs in this study felt that most appropriate candidate for the role of mentors are members of the anesthesia profession. Having relatability in roles helps establish a connection with the mentor. Completing doctoral education and training for a new profession with a demanding schedule, complex coursework, and social isolation warrants having the support system. In comments obtained from the Meno et al. (2003) survey, CRNAs reported that “the complexity within the field of nursing requires a consistent and considerable support system to ensure success” (p. 337).

**Preparedness for Didactics and Clinical Rotations**

A qualitative, descriptive study conducted by Lombardo et al. (2017) revealed that undergraduate nursing students enrolled in a peer mentorship program discovered better study skills and improved time management. Students that participated in the peer mentorship program also reported decreased stress related to clinical residency after connecting with mentors. One student reported difficulty sleeping the night before clinical residency due to anxiety, but after connecting with a mentor, the stress level was greatly decreased with improved clinical performance (Lombardo et al., 2017). Participants in this study sought advice from their mentors for “advanced information about the nursing program, study strategies, and required textbooks” to help them prepare for the undergraduate nursing program (p.228).
Pegram and Fordham-Clarke (2015) implemented a peer learning program to prepare pre-registration nursing students for an objective structured clinical exam (OSCE). Implementation and facilitation of a peer learning program was found to assist nursing students in their preparation for the exam by providing an information environment conducive to learning (Pegram & Fordham-Clarke, 2015). The students in this study reported that they felt more confidence and more prepared for the OSCE (Pegram & Fordham-Clarke, 2015). Participants also mentioned that peer learning provided the chance to practice clinical skills with constructive feedback from peers (Pegram & Fordham-Clarke, 2015). The common theme of acquiring tips and advanced knowledge about the exam reportedly contributed to nursing student’s improvement in their performance and perception of a lower level of anxiety (Pegram & Fordham-Clarke, 2015). No one can completely relate to the stressors and challenges of the SRNA training better than someone who has been through it as well. Access to a support system such as a mentor that is experienced and knowledgeable in the specific area of study, not only boosts social support but also can serve as a means to establishing open communication and professional feedback from a trusted source.

Methods

Study Design

A quantitative, descriptive, cross-sectional study design with three cohorts was implemented utilizing SRNAs enrolled at NSUHS SONA. The mentorship program was evaluated with a post-participation peer mentorship evaluation survey. All three cohorts received a survey.
Sample and Setting

Participants of the study were recruited from the NSUHS SONA located at NorthShore University Health System School of Nurse Anesthesia in Evanston, Illinois. SRNAs in the program are all bachelors or masters prepared nurses with a minimum of two years of ICU experience. This study had the potential to include 23 first-year SRNAs, 24 second-year SRNAs, and 19 third-year SRNAs; there were a total of 66 possible participants. Inclusion criteria consisted of full-time students enrolled in NSUHS SONA that voluntarily participated in the peer mentorship program. SRNAs who were not currently enrolled or on leave from the program for any reason were excluded from the peer mentorship program. The setting for this study was Facebook. This online platform was chosen by the authors for the peer mentorship program because of its popularity, accessibility, and user friendliness.

Human Subjects Protection

CITI training has been completed by both researchers to ensure the protection of human subjects involved in the study. The recruitment email (see Appendix B) explained that participation is voluntary, no consequences will occur for non-participation, and that student status will not be affected by one’s choice to participate. If at any time participants choose to not participate in the study, they could email the primary investigators and they would be removed from the Facebook group page. There was no identifiable or personal information contained in the peer mentorship program evaluation online surveys and all records were kept in a password protected computer. Online data obtained from Qualtrics were password-protected and only the study researchers have access to that information. Participants in this study received no direct benefits.
Peer Mentorship Program Development

The development of this peer mentorship program at NSUSH SONA expanded upon a two-cohort program conducted by Stewart (2018). Stewart’s peer mentorship program consisted of second-year SRNAs being mentored by third-year SRNAs with the aim of providing a support system as the second-year SRNAs began their clinical residency. Limitations noted in this study were that the peer mentorship program only evaluated second-year SRNAs beginning their very first clinical rotations and the lack of meaningful mentor-mentee matches.

Based upon recommendations to improve the Stewart (2018) peer mentorship program, all three cohorts enrolled at NSUHS SONA were included in this study. This study also attempted to make mentor-mentee matches more meaningful by pairing SRNAs together that have similar lifestyle factors (children, relocation for school, marital status, etc.). A meaningful match form was distributed to participants before the mentor-mentee matching process. The purpose of the meaningful matches was to optimize the mentor-mentee relationship and to provide an environment where SRNAs can gain a sense of comfort from participation in the peer mentorship program.

Participation in the peer mentorship program was through a Facebook group. Students received an invite to join the NSUHS SONA Peer Mentorship Facebook group and after they accepted the invite, they were able the access and view the peer mentorship program information sheet (see appendix B). Participation in the peer mentorship program included voluntary discussion prompts (see appendix D) that were focused on the key constructs of this research. The Facebook group page served as a platform for convenient professional communication between all three cohorts. All three cohorts were encouraged to participate and respond to the
discussion prompts. The post participation survey answered by the participants also contained questions that focused on the constructs of this research.

The Facebook group created for the peer mentorship program included NSUHS SONA committee members Julia Feczko DNP, CRNA and Karen Kapanke DNP, CRNA. The Facebook account stated that all participants of this peer mentorship program must comply to HIPPA regulations, NSUHS SONA, and DePaul University Code of Academic Integrity and Conduct. Links to NSUHS SONA and DePaul University Code of Academic Integrity and Conduct were posted on the Facebook group page.

**Recruitment Procedures**

Participation in the peer mentorship program was completely voluntary. The program ran from November 2018 to mid-February 2019. Recruitment was done by email (appendix A) and was sent out to all 66 SRNAs currently enrolled at NSUHS SONA by the Committee chair, Julia Feczko, DNP, CRNA. There was a two-week enrollment period to express interest in joining the peer mentorship program. The recruitment email briefly described the peer mentorship program and it provided information on how to enroll. Enrollment in the program required an email reply with a completed demographics form (appendix C). Participants were added to the private Facebook group after the email reply containing the completed demographics form was received by the committee chair. The demographics form was not anonymous because information from it was used to make the meaningful matches. The post-peer mentorship program evaluation survey remained anonymous and there was no way to match up demographic information with post-survey results.
Peer Mentorship Program Implementation

Meaningful matches were made based off the voluntary disclosure of personal information that was included in the demographics survey. Matches were randomly assigned if there was no additional information provided from the mentor/mentee match. Any information obtained from the demographics survey was only viewed by the primary investigators and was not shared with any other participants. The list of paired matches was made from the demographics survey and then posted on the Facebook group. Once the pairs were posted to the Facebook page, it was up to the individual students to determine the mode, scope, and frequency of communication.

Third-year SRNAs functioned in the role of the mentor to second and first-year SRNAs. Second-year SRNAs functioned as a mentor to first-year SRNAs and a mentee to a third-year SRNA. First-year SRNAs functioned in the role of mentee only. Questions in the post-mentorship program survey were individualized depending on the role of the student (mentor vs mentee vs both). After matches were made, first, second, and third-year SRNAs had the opportunity to meet their mentors/mentees at NSUHS SONA monthly seminar clubs on a voluntary basis. The December seminar club meeting served as an opportunity for second-year SRNAs to meet with third-year SRNAs prior to the start of their clinical residency. This brief meeting allowed third-year SRNAs to provide information and insight to second-year SRNAs that have rotated through the same first clinical site. Seminar club is a monthly conference held in Frank Auditorium at Evanston Hospital on the second Saturday of the month. It is part of the curriculum at NSUHS SONA so all second and third-year students attend, and some first-year students also attend. While the seminar club is used as opportunity for students to present
Peer Mentorship Program Evaluation

Following implementation and completion of the peer mentorship program, a Peer Mentorship Evaluation Survey was distributed using the Qualtrics program. Qualtrics is an online research platform available to DePaul faculty and students. The online survey was designed to utilize the logic feature so that first, second, and third-year students can respond to specific questions that are applicable to them. With this feature in place, the mentorship evaluation was limited only to second and third-years SRNAs due to their roles in the peer mentorship program as mentors. The post participation survey was sent by an email (see Appendix F) to all peer mentorship program participants by committee chair Julia Feczko DNP, CRNA. The Peer Mentorship Evaluation Survey (see appendix B) evaluated the constructs of the peer mentorship program: stress and anxiety, social isolation, and preparedness, and the perceived effectiveness of mentorship amongst SRNAs.

Data was analyzed using the International Business Machines’ (IBM) Statistical Package for Social Sciences (SPSS) software version 25 (IBM, 2018). The demographics survey was separate from the Peer Mentorship Evaluation Survey responses, therefore demographic information was not matched with respondents’ specific responses. Overall outcome information was obtained as opposed to group analysis. Descriptive statistics utilizing means and percentages were used to obtain overall outcome information, and participants also described their responses to their perceived outcomes of peer mentorship program. Independent t test and Analysis of Variance (ANOVA) were used to examine any statistically significant mean scores in stress and anxiety, emotional support, and preparedness between first-year SRNA and second-year SRNAs.
and between first-year SRNAs and second-year SRNAs respectively. An alpha level of 0.05 was set for statistical significance level for this study.

**Instruments**

The Peer Mentorship Program Evaluation Survey was adapted and used for this study with the permission obtained from Stewart (2018). A five-point Likert-type survey was used to evaluate the constructs. Stewart’s Peer Mentorship Program Evaluation survey (2018) had a total of twenty items on the survey that demonstrated adequate reliability with a Cronbach’s alpha value of 0.884 and focused on three constructs: stress and anxiety, emotional support, and preparation. The construct of stress and anxiety has a Cronbach’s alpha reliability coefficient of 0.864, support had a reliability coefficient of 0.77, and preparation had a reliability coefficient of 0.714. Stewart’s Peer Mentorship Program Evaluation survey was adapted, then reviewed by the program committee members for content validity as described by Polit and Beck (2006). Edits were made as needed to ensure clarity and applicability of the questions to this study. One question for each construct was added to include the evaluation for the use of Facebook within the program for the stress and anxiety, emotional support, and preparedness constructs. The authors also added the mentor evaluation construct the original Peer Mentorship Evaluation Survey. The final peer mentorship program evaluation survey can be found in appendix G.

**Reliability of the Instruments**

The Cronbach’s alpha coefficient was used to analyze the reliability of the surveys in measuring the constructs. In this study, all four constructs measured in the data analysis had a Cronbach’s alpha coefficient greater than 0.7, which indicates adequate reliability and validity of the data collected. The Cronbach’s alpha coefficient for stress and anxiety was 0.806, emotional support was 0.888, preparedness was 0.806, and mentorship evaluation was 0.928. The
constructs of stress and anxiety, emotional support, and preparedness were limited to evaluation to only the first and second-years SRNAs.

**Results**

**Sample**

Twenty-one SRNAs participated in this study. Third-year SRNAs had (n=11), second-year SRNAs had (n=7), and first-year SRNAs had (n=3).

**Post Participation Survey Findings**

A total of 15 post-participation surveys were completed with a 71% response rate. One survey was incomplete; therefore, it was removed from data analysis. The breakdown of cohorts that completed the surveys are as follows: 53.3% third-year SRNAs (n=8), 40% second-year SRNAs (n=6), and 6.7% first-year SRNAs (n=1).

**Demographics**

A total of 21 of participants completed all the requirements of the study by joining the Facebook group (see Table 2). 86% (n=20) of the participants were female and 13% (n=3) were male. 65% (n=15) of participants were in the 26-30 age range, 22% (n=5) were 31-35, 9% (n=2) were 36-40, and 4% (n=1) were 20-25 years of age. Most participants listed Caucasian (82%; n=19) as their ethnicity, 13% (n=3) listed Asian, and 5% (n=1) identified with other as an ethnicity. One third of the participants reported 2-3 years (30%; n=7) of nursing experience and another 30% (n=7) reported 6-7 years of nursing experience. 48% (n=11) of the participants reported 3-4 years of critical care nursing experience. 91% (n=21) of the participants recorded their highest level of education as a bachelor’s degree and the remaining participants have a master’s degree (9%; n=2).

**Evaluation of Peer Mentorship Program**
Stress and anxiety. The mean score for the question the peer mentorship program helped to decrease anxiety was 1.86 (SD=1.06), indicating that almost all (85.7%, n=6) participants either strongly agreed or somewhat agreed with this statement. A mean score of 2.43 (SD=1.39) was reported when examining the statement that peer mentorship program helped to decrease stress. Over half (57.1%, n=4) of the respondents either strongly agreed or somewhat agreed with this statement. The mean score for the statement provided insight into how stressful time commitments are in the NSUSHS SONA program was 1.71 (SD=1.11). 85.7% (n= 6) of participants strongly agreed or somewhat agreed with this statement. This is the lowest mean score out of all the questions in the stress and anxiety construct and it conveys that the peer mentorship program was successfully able to convey the time requirements needed for the nurse anesthesia program. The mean score for the statement provided good insight into managing didactic work was 2.43 (SD=1.51). 42.9% (n=3) of the participants strongly agreed with this statement and 42.9% (n=3) were neutral by recording that they neither agreed nor disagreed as seen in Table 3. The mean score for the statement Facebook discussion prompts helped to decrease stress and anxiety was 2.14 (SD=1.34). 85.7% (n=6) of participants reported that they either strongly agreed or somewhat agreed with this statement.

Emotional Support. This construct achieved the lowest overall mean score of all of the constructs (see Table 4). The lowest mean score achieved in this section was the statement that addressed feeling more connected to students in other SRNA levels with a mean score of 1.14 (SD= 0.37). 85.7% (n=6) recorded a strongly agree response demonstrating the value of the peer mentorship program in being a source as emotional support to nurse anesthesia students. The mean of 1.43 (SD=0.53) for the statement the peer mentorship program helped me to feel more a part of the NSUHS SONA family. 100% (n=7) of participants reported strongly agree or
somewhat agree for this statement. A mean score of 1.57 ($SD=0.78$) was received for the statement *peer mentorship helped participants feel more supported by peers* with 85.7% (n=6) expressing that they either strongly agreed or somewhat agreed.

Students had the chance to express concerns and frequently asked questions in the Facebook group. 85.7% (n=3) participants reported either strongly agree or somewhat agree that the Facebook group was a beneficial source of emotional support with a mean score of 1.71 ($SD=0.75$). 57% (n=4) of participants answered somewhat agree for the statement that *peer mentorship program has increased my professional network* with a mean score of 1.86 ($SD=0.69$).

**Preparedness.** Seventy-one percent (n=5) of respondents answered either strongly agree or somewhat agree for the statement the program provided useful study techniques to manage didactic work and it had the lowest mean score of 1.86 ($SD=0.90$) in this section. The statement participation in the Facebook group assisted with how to prepare for didactic coursework had a mean of 2.29 ($SD=1.11$) with 57.1% (n=4) of participants recording either strongly agree or somewhat agree and 28.6% (n=2) participants were neutral. The mean score for the statement the peer mentorship program helped me to better understand how to prepare for the demands of didactic coursework was 2.14 ($SD=1.46$) with 57% (n=4) of participants answering strongly agree. The statement the Facebook group assisted with preparation for clinical rotations had a mean score of 2.50 ($SD=1.00$) and the response of somewhat agree was recorded from 75% (n=4) of participants (see Table 5).

**Mentor Evaluation.** This portion of the evaluation was solely for the mentors (second-year SRNAs and third-year SRNAs) to evaluate their participation in the peer mentorship program (see Table 6). A mean score of 2.00 ($SD=0.73$) was achieved for the statement mentors
felt that their participation contributed to decreased stress and anxiety in first and second-year SRNAs; with 75% (n=9) answering either strongly agree or somewhat agree. 50% (n=6) of participants somewhat agreed with the statement that they felt that they helped to prepare first and second year SRNAs for clinical rotations and the mean score was 2.00 (SD=1.12). The statement about perception of professional growth by mentors had a mean score of 2.00 (SD=1.27) and 50% (n=6) of mentors strongly agreed with this statement. The mean score was 2.25 (SD=1.05) for the statement mentors felt that they helped to prepare first and second year SRNAs for didactic course work and 58% (n=7) of mentors reported somewhat agree for this statement. The statement providing support to first and second year SRNAs had a mean score of 3.42 (SD=1.56) with a majority (66%) of participants reporting agree (n=4) or somewhat agree (n=4).

Both second-year SRNA and third-year SRNA participants served as mentors in this study. The mean score for the evaluation of the mentorship program was 2.91(SD=1.19) in second-year SRNAs and 1.75 (SD=0.49) in third-year SRNAs (see Table 7 and 8).

Discussion

Overall, the peer mentorship program yielded positive results based on the feedback from the participants that completed the survey. The goal of the study was to obtain lower mean scores and these results demonstrate that the goal of the study was met. There were some areas identified that could use some improvement. For instance, the peer mentorship program demonstrated higher undesired mean scores in the construct of stress and anxiety. The mean score for the peer mentorship program helped decrease my level of stress was 2.43, however when the same question was asked about anxiety the mean score was 1.86. The observed higher mean scores in the statements in stress and anxiety construct reflect that there are some
improvements that should be made in the future so that participants can have an improved experience in the perceived reduction in stress and anxiety.

One or two scenarios could explain the higher mean score in the stress category. Perhaps, based on the known fact that the life of an SRNA is always stressful despite having a mentor, this could be one area that would be difficult to adequately evaluate. Maybe having a mentor was beneficial and helped to alleviate anxiety with fears of what to expect in clinical and didactic coursework. However, this does not change the fact the SRNA remains overwhelmed with new clinical experiences, having to manage time to prepare for clinicals and study for exams, while concurrently taking DePaul courses. The second possible scenario is that there was little interaction with the mentor-mentee pair, since it was at their own discretion. Nonetheless, some level of stress can be a motivator causing an improved performance, but extreme levels of stress can lead to negative consequences such as illness, substance abuse, and overall dissatisfaction (Griffin, Yancey, & Dudley, 2017). Keeping mental wellness as a priority in the journey of life as a SRNA is crucial in abetting their success in the program.

The constructs of emotional support and preparedness resulted in lower mean scores which showed that participants identified that the peer mentorship program was supportive and assisted with preparation for various stages in the program. A support system is an essential coping method for all and serves as a strong defense mechanism when experiencing higher than normal levels of stress (Conner, 2015). In addition, the lower mean scores for the construct *emotional support* from the study leads to the conclusion that the peer mentorship program was able to serve as a functional coping mechanism by providing emotional support to the participants.

The low mean scores in the *mentorship* construct revealed that participants perceived mentorship as both valued and useful to mentees (first-year and second-year SRNAs). The
mentors (second-year and third-year SRNAs) in the peer mentorship program also expressed the importance of their participation in this program. Mentors in this program had the opportunity to provide counsel, guidance, and insight to their mentees. The mean score of 3.42 was reported for the question that mentors provided support to first and second year SRNAs and it was among the highest mean score of the mentorship evaluation portion of the survey. This finding is scored in the neutral range and could be due to several factors. Perhaps this could be due to the fact that there was not constant interaction and lack of connections with mentors and mentees. Another explanation for this undesired mean score could be that the mentors did not have formal training in their roles, therefore they may have been uncertain or unclear of how to be an effective mentor. One solution to improve the perception of providing support to mentees would be to establish a more formalized mentorship program with clearly defined roles and expectations of the mentors.

The solution of providing mentor training within the program would require extensive planning which that could include an in-service or online training module from an experienced person in mentorship. School faculty involvement would be necessary with arranging and executing a more robust and formal mentorship program. According to Lombardo et al. (2017), the foundation of a formal mentorship program has standardized guidelines which includes clear delineation of the roles and responsibilities of the mentees and mentors, and the monitoring the occurrences of mentoring.

The comparison of the mean scores between second-year SRNAs and third-year SRNAs for the perception of mentorship in the program revealed unexpected results. The mean scores are higher among the second-year SRNAs which could mean that the third-year SRNAs found this peer mentorship program more beneficial. There are a few factors that may contribute to the
second-year SRNA group results. This could be because second-year SRNAs experience a higher level of stress due to just starting clinical rotations along with demanding didactic work and frequent testing, which leaves less time available to serve as mentors to first-year SRNAs. Third-year SRNAs have completed the demanding didactic portion of anesthesia lectures and exams therefore, they may have more time and mental energy to dedicate towards peer mentorship.

Limitations

This study had a small study sample for this peer mentorship program. A total of 21 participants out of a possible 66 were in the study and 15 post participation surveys were completed. Second, this study was conducted at one nurse anesthesia program. It would be insightful to observe whether the peer mentorship program had similar or different results if conducted at other nurse anesthesia programs that have a front-loaded curriculum as well as an integrated curriculum. Lastly, the peer mentorship program had a limited timeline due to this study’s compliance with the IRB and DNP guidelines. The ability to begin the peer mentorship program from the time of matriculation to the completion and graduation of the program would provide more accurate and in depth understanding of the impact of this peer mentorship program.

Recommendations

The authors would recommend continuing this program at NSUHS SONA. There was a general consensus amongst participants that the peer mentorship program should be continued at NSUHS SONA. 83.3 % (n=12) of participants agreed with the statement that this peer mentorship program should be continued at NSUHS SONA. One participant commented that “…. this this mentorship program should continue in the future and maybe have a volunteer to run the Facebook page”.
This program could be improved by becoming a more formal program integrated into the curriculum with faculty support and participation. The peer mentorship program could start from the time of matriculation and be continued until graduation in order to establish meaningful peer connections and provide support from the very beginning of the program. The ability to begin the peer mentorship program at the time of matriculation to the completion and graduation of the program would provide more accurate and in depth understanding of the impact of this peer mentorship program. Establishing peer mentorship in the early stages, provides immediate access to a support system as the SRNA enters a completely foreign, overwhelming, and stressful environment.

It would also be beneficial to incorporate Certified Registered Nurse Anesthetists (CRNAs) as mentors into the program. These CRNA mentors could be from NorthShore sites and from other clinical rotation sites that SRNAs are assigned to while in the NSUHS SONA program. The clinical environment is the largest portion of the nurse anesthesia education. 21 months of the 36-month program is spent in clinical residency, therefore relationships become established with CRNAs at the clinical sites over time. As clinical instructors, CRNAs have more insight into an SRNAs clinical performance which could be a major source of stress for some SRNAs. Instituting CRNAs as mentors could greatly improve some of the stressors faced by second-year SRNAs starting their first clinicals or to any SRNA that is having issues in their clinical residency by simply having a support system that can offer expert advice and feedback.

Facebook was used as the discussion platform in this study, but there are other social media platforms that could have been considered. The authors chose Facebook as the discussion platform with the notion it would be the best method for participation in discussion posts. However, some students actually suggested other discussion platforms to use or did not
participate in the study because they felt social media platforms such as Facebook, was a
distraction with their studies and they had deactivated all of their social media accounts.

Mentor and mentees interactions were not assessed in this study, which brings a recommendation to do so in future studies. In addition, a solution to possibly improve the perception of mentor support would be to schedule in person meetings to encourage a meaningful connection. Also, some participants may find it difficult in making a meaningful connection if only using social media platforms. The addition of in person meetings would further foster the mentor-mentee relationship while creating an informal, open, supportive environment. This suggestion of scheduled in person meetings may prove to be challenging due to the limited time constraints for both mentors and mentees. If these interactions were incorporated into the program and time was provided to allow these interactions such as scheduled class days, this could make a huge impact on the well-being of nurse anesthesia students.

Conclusion

Given that stress and anxiety are unavoidable experiences in this program of study, SRNAs have to be able to perform under stressful conditions. This peer mentorship program was conducted to decrease stress and anxiety, increase the perception of emotional support, and to enhance the perception of preparedness among SRNAs at the NSUHS SONA. With the demanding amount of coursework, schedule demands, and lack of time for family and extracurricular activities, SRNAs are constantly plagued with stressors on a daily basis. This research study provided evidence that the continuation and expansion of the peer mentorship program at NSUHS SONA is beneficial for participating SRNAs.
Nurse anesthesia programs can take a proactive and assistive stance for students by providing additional tools that can aid not only with the SRNAs academic success but also their mental wellness. Peer mentorship can be a valuable tool that can be utilized during all phases of the nurse anesthesia program. A mentor is encouraging, knowledgeable, approachable, and serves as a support system to the SRNA as they progress throughout the program. A support person can also serve as an indispensable tool to help improve the mental wellness of the SRNAs. Not only does the ability to access a mentor provide an experienced person for professional advice and feedback, but it also proves to be a positive coping strategy to assist with a positive and successful progression in the nurse anesthesia program.
References


mentees' perceptions of an undergraduate nurse peer mentorship program.


National Institute of Mental Health. (n.d.). 5 things you should know about stress (NIH publication No. OM 16-4310). Retrieved on June 11, 2018, from


APPENDIX A: Survey

Peer Mentorship Program Demographics Survey

*Questions 1-6 are required; Questions 6-11 are optional questions to assist in making meaningful mentor-mentee matches.

Name:

*If you use a name other than the name listed above on your Facebook page please list the name here:

SRNA status: SRNA 1 SRNA 2 SRNA 3

1. What is your gender?
   (1) Male
   (2) Female
2. What is your age range?
   (1) 20-25
   (2) 26-30
   (3) 31-35
   (4) 36-40
   (5) 41-45
   (6) 46 and older

3. What is your ethnicity or race?
   (1) White
   (2) Black or African American
   (3) American Indian or Alaskan Native
   (4) Asian
   (5) Native Hawaiian or Pacific Islander
   (6) Other
4. Prior to being a Student Registered Nurse Anesthetist (SRNA) at NorthShore University HealthSystem School of Nurse Anesthesia (NSUHS SONA), how many years of nursing experience did you have?
   (1) 2-3 years  
   (2) 4-5 years  
   (3) 6-7 years  
   (4) 8-9 years  
   (5) 10+ years

5. How many years of nursing experience were spent working in the critical care setting?
   (1) 18 months- 2 years  
   (2) 3-4 years  
   (3) 5-6 years  
   (4) 7-8 years  
   (5) 10+ years

6. What is your highest level of education prior to starting at NorthShore University Health System School of Nurse Anesthesia?
   (1) Bachelor’s Degree  
   (2) Master’s Degree

7. Did you relocate from another state to attend NorthShore University Health System School of Nurse Anesthesia?
   (1) Yes  
   (2) No

8. How long is your commute time to attend class or clinical rotations?
   (1) 60-90 min  
   (2) 2 hours  
   (3) 3 hours  
   (4) 4+ hours

9. With whom do you share your household?
   (1) spouse  
   (2) significant other  
   (3) roommate  
   (4) parents  
   (5) live alone

10. Do you have children?
    (1) Yes  
    (2) No
11. Please list any additional information about yourself that may be useful when pairing you with your peer mentor-mentee match (i.e. planning a wedding, planning a family, etc.).
APPENDIX B: Survey

Qualtrics Peer Mentorship Program Evaluation Survey

(For SRNA-1: Q1 to Q13 & Q 20 only)
(For SRNA-2: Q1 to Q20)
(For SRNA-3: Q16-20 only)

Please choose one that describes you:
1. SRNA -1
2. SRNA- 2
3. SRNA -3

Directions: Please indicate your level of agreement with the following statements related to your participation in the peer mentorship program at NorthShore University HealthSystem School of Nurse Anesthesia (NSUHS SONA).

Stress and Anxiety

For this study, stress is defined as a perceived threat to a person’s well-being in which they experience an internalized or externalized response in relation to being a doctoral student in the NSUHS SONA program. Anxiety is defined as the perceived amount of worrying or nervousness related to being a doctoral student in the NSUHS SONA program.

1. The peer mentorship program helped decrease my level of stress.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

2. The peer mentorship program helped decrease my level of anxiety.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

3. The peer mentorship program provided me with insight into how stressful the time commitments are in the NSUHS SONA program.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

4. The peer mentorship provided me with good insight into managing the demands of my didactic work.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

5. I feel the Facebook discussion prompts helped to decrease my level of stress and anxiety.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree
**Emotional Support**

6. The peer mentorship program helped me to feel more supported by my peers.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

7. The peer mentorship program helped me to feel more a part of the NSUHS SONA family.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

8. The peer mentorship program helped me to feel more connected to students in other SRNA levels.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

9. The peer mentorship program has increased my professional network.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

10. I feel that the Facebook group was a beneficial source of emotional support.
    1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

**Preparedness for Didactic and Clinical Rotations**

For this study, preparedness is defined as the perceived readiness for clinical rotations and/or didactic expectations.

11. The peer mentorship program helped me to better understand how to prepare for the demands of didactic coursework.
    1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

12. The peer mentorship program provided useful study techniques to manage the didactic portion of the program.
    1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

13. I feel that my participation in the Facebook group has been beneficial in assisting me to be prepared for didactic coursework and/or clinical rotations.
    1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

14. The peer mentorship program helped me to feel prepared for my first clinical rotation.
    1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

15. The peer mentorship program provided useful advice to help me manage the clinical portion of the program.
    1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree
Mentor Evaluation (Q 16- 19 SRNAs 2& 3)

16. I feel that my participation as a mentor has contributed to a decrease in stress and anxiety in the first and second-year SRNAs.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

17. I feel that my participation as a mentor has provided support to first and second-year SRNAs.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

18. I feel that my participation as a mentor has helped to prepare first and second-year SRNAs for the next steps in didactic coursework and clinical rotations.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

19. I feel that this peer mentorship program at NSUHS SONA was beneficial in my professional growth as a mentor.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

20. I feel that this peer mentorship program should be continued at NSUHS SONA.
   1-Strongly Disagree, 2-Disagree, 3-Neutral, 4-Agree, 5-Strongly Agree

Comments

21. Please leave any comments or recommendations for the peer mentorship program.
Greetings SRNAs,

We are conducting our doctoral research with NorthShore University HealthSystem School of Nurse Anesthesia (NSUHS SONA) and DePaul University. Our study involves a peer mentorship program that aims to decrease stress, anxiety, social isolation, and enhance preparedness amongst student registered nurse anesthetist (SRNAs). The purpose of our research is to evaluate if a peer mentorship program can be effective at diminishing stress and anxiety, prevent social isolation, and enhance preparation amongst SRNAs.

Second and third-year SRNA mentors will be matched with first and second year SRNA mentees. Matches will be made based on demographic information that we will use in creating mentor to mentee matches that have similar lifestyle characteristics. A demographic survey will be sent to you after we receive your consent to participate. This survey will include optional questions to assist us in making meaningful matches such as your years of nursing experience, level of education, marital status, living arrangements, and age. Data collected from demographic information will be confidential viewed only by the researchers and committee chair. The demographic survey will only be conducted once, at the beginning of the peer mentorship program. All demographic information will be kept in a locked file in the office of the school.

Matches will be randomly assigned if there is no additional information provided from the demographic survey. Depending on the number of volunteers, matches may be grouped to include multiple mentors or mentees. Names of matched pairs (or groups) will be posted on Facebook. Once matches are made, mentors/mentees will be asked to stay in contact throughout the program but can determine the amount of time and participation that is beneficial to them. The Facebook group will have biweekly discussion prompts from the primary investigators, and it will provide an opportunity for any participating mentor/mentee to ask questions, leave comments, or post advice. Any additional communication (text, email, phone calls, etc.) will be at the discretion of the matched participants.

If you agree to be in this study, you will be asked to meet with your mentor/mentee at monthly seminar clubs, read and post on the Facebook group page, and communicate with your mentor/mentee throughout the program. Participants in the Peer Mentorship Program should follow the Academic Code of Conduct of both NorthShore and DePaul University.

The NorthShore University HealthSystem School of Nurse Anesthesia Student Handbook is located at:

The DePaul University Student Handbook is located at:
At the completion of the study, you will be asked to complete an electronic evaluation survey via email. This survey is anonymous and will contain no identifiable information. It takes approximately ten minutes to complete this survey and will include questions about your participation in the peer mentorship program and its effects on your stress and anxiety, support, and preparation. If there is a question on the survey that you do not want to answer, you may skip it.

Your participation is voluntary, which means you can choose not to participate. There will be no negative consequences if you decide not to participate or change your mind after you begin the study. You can withdraw your participation at any time prior to submitting your survey. Once you submit your evaluation responses, we will be unable to remove your data from the study because the data is anonymous. Your decision whether or not be in the research study will not affect your grades or status within NorthShore University HealthSystem School of Nurse Anesthesia or DePaul University.

If you have any questions, concerns, or complaints about this study or you want to get additional information or provide input about this research, please contact Aja Rivera at arivera416@msn.com or Champagna Conner at cc.conner13@gmail.com. Please report any breaches in the Academic Code of Conduct to Administrative Director Pamela Schwartz, CRNA, DNP at 847-560-2958 or pschwartz@northshore.org

If you are interested in participating in the Peer Mentorship Program, please reply to this email stating your intent to enroll in the Peer Mentorship Program. Once we have your email response, the demographics survey will be emailed to you, along with an invitation to join the private Facebook group. Please return the completed demographics survey to the committee chair Julia Feczko, DNP, CRNA. We ask that you reply no later than November 8, 2018.

We are looking forward to this experience!
Aja Rivera, RN, BSN
Arivera416@msn.com
Champagna Conner, RN, BSN
cc.conner13@gmail.com
NorthShore University HealthSystem School of Nurse Anesthesia
Primary Investigators
APPENDIX D

INFORMATION SHEET FOR PARTICIPATION IN RESEARCH STUDY

Peer Mentorship: Student-Reported Outcomes Among Student Registered Nurse Anesthetists Enrolled in the DNP Program

Principal Investigators: Aja Rivera, RN, BSN, Graduate Student, Champagna Conner RN, BSN, Graduate Student

Institution: DePaul University & NorthShore University HealthSystem School of Nurse Anesthesia

Faculty Advisor: Julia Feczko, CRNA, DNP
NorthShore University HealthSystem School of Nurse Anesthesia, Committee Chair

Research Team: Karen Kapanke, CRNA, DNP
NorthShore University HealthSystem School of Nurse Anesthesia, Committee Member

Collaborators: NorthShore University HealthSystem School of Nurse Anesthesia and DePaul University

We are conducting a research study to learn more about peer mentorship program participation and the effect that it has on Student Registered Nurse Anesthetists (SRNA) perceived stress and anxiety, social isolation, and preparedness. This program will match volunteer second and third year SRNA mentors with first and second year SRNA mentees. Matches will be made based on demographic information that will assist the primary investigators in creating mentor to mentee matches that have similar lifestyle characteristics. A demographic survey will be sent to students to the email address that is on file with the school after receiving a confirmation to participate. The demographic survey will include optional questions to assist in making meaningful matches. Matches will be randomly assigned if there is no additional information provided from the demographic survey. Depending on the number of volunteers, matches may be grouped to include multiple mentors or mentees. Names of matched pairs (or groups) will be posted on Facebook. Once matches are made, mentors/mentees will be asked to stay in contact throughout the program but can determine the amount of time and participation that is beneficial to them. The Facebook group will have biweekly discussion prompts from the primary investigators, and it will provide an opportunity for any participating mentor/mentee to ask questions, leave comments, or post advice. Any additional communication (text, email, phone calls, etc.) will be at the discretion of the matched participants.

The purpose of this research is to evaluate if a peer mentorship program can be effective at diminishing stress and anxiety, prevent social isolation, and enhance preparation amongst SRNAs.

If you agree to be in this study, you will be asked to meet with your mentor/mentee at monthly seminar clubs, read and post on a private Facebook group page, and communicate with
your mentor/mentee throughout the program. It is expected for matches to uphold the Academic Code of Conduct of both NorthShore and DePaul University.


Participants will be asked to complete an electronic evaluation sent to the email address on file with the school. It is expected to take approximately ten minutes and will include questions about your participation in the peer mentorship program and its effects on your stress and anxiety, support, and preparation. We will also collect demographic information, such as your years of nursing experience, level of education, and age. Data collected from demographic information and electronic survey will be anonymous and confidential. If there is a question you do not want to answer, you may skip it.

Your participation is voluntary, which means you can choose not to participate. There will be no negative consequences if you decide not to participate or change your mind after you begin the study. You can withdraw your participation at any time prior to submitting your survey. Once you submit your evaluation responses, we will be unable to remove your data from the study because the data is anonymous. Your decision whether or not to be in the research study will not affect your grades or status within NorthShore University HealthSystem School of Nurse Anesthesia or DePaul University.

If you have any questions, concerns, or complaints about this study or you want to get additional information or provide input about this research, please contact Aja Rivera at arivera416@msn.com or Champagna Conner at cc.conner13@gmail.com. Please report any disclosures of self-harm or breaches in the Academic Code of Conduct to Administrative Director Pamela Schwartz, CRNA, DNP at 847-560-2958 or porschawrtz@northshore.org
Appendix E

Facebook Discussion Questions

**Week 1**
How do you handle the stress of time commitments and demands of the didactic work?

**Week 2**
How do you manage long commutes to and from class or clinical rotations? What helped you reduce the stress of long commutes?

Have you ever had any physical symptoms of stress? How did you manage the stress and reduce these symptoms?

**Week 3**
How did you prepare for your clinical observation week as a second year SRNA?

What extracurricular activities did you find helped reduce overall stress and anxiety?

**Week 4**
What study method did you find most helpful in preparing for chemistry/physics material as a first-year SRNA?
What study method did you find most helpful in preparing for anesthesia focused material a second and third-year SRNA?

**Week 5**
How did you prepare for the beginning of your very first clinical rotation over the Christmas break?

**Week 6**
Where was your first clinical rotation site and what do you think is most helpful to prepare for it?

**Week 7**
How you manage to spend time with family, friends, or participate in any social activities?

Do you have any relaxation techniques to help if I feel like I am going to have a panic attack?

**Week 8**
What did you find helped to reduce your anxiety of starting your first clinical rotation as a second-year SRNA?

**Week 9**
Besides the peer mentorship program and monthly seminar club meetings, what other types of activities or social events hosted by the school do you think would be helpful in assisting you in feeling more connected with your peers?

**Week 10**
What is the best piece of advice you have received from a CRNA or MDA?
Dear SRNA mentors and mentees,

You have received this email because you have participated in the Peer Mentorship Program. Thank you for your participation in this research. In this email, there is a link to complete an anonymous survey that will take approximately 10 minutes to complete. Your participation in this survey is voluntary and at any time before completing the survey you can chose not to participate. There will be no negative consequences if you decide not to participate. Please note that due to the anonymity of the survey once the survey is complete, the data cannot be withdrawn because there is no way to identify your responses.

Thank you for your time and involvement

Aja Rivera, RN, BSN
Arivera416@msn.com

Champagna Conner, RN, BSN
cc.conner13@gmail.com

NorthShore University HealthSystem School of Nurse Anesthesia
Primary Investigators
Table 1. Evidence-based Matrix of Data on Studies Related to Stress and Mentorship
Among CRNAs and SRNAs

<table>
<thead>
<tr>
<th>Author and Year</th>
<th>Study Objectives</th>
<th>Methods (Design, Sample Size, Setting, Human Subject Issues)</th>
<th>Study Variables or Constructs Measured or Variables Controlled by Researchers</th>
<th>Study Findings</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chipas and McKenna (2011)</td>
<td>The study was designed to assess the level of stress and physical manifestations in CRNAs and SRNAs, and also examines coping mechanisms</td>
<td>Descriptive study using online survey tool sent via email to all members of the AANA, of 28,000 people invited to participate, only 7,537 (26.9%) responded</td>
<td>Online survey which consisted of a self-assessment on stress, coping, satisfaction with work and life, and suggestions, stress coping management, and assessment of chronic illness</td>
<td>Most practitioners, experienced or novice have numerous stressors and can be a major cause of chronic illness</td>
<td>Nurse anesthetists live and work with stress surrounding them. Stress management and coping strategies should be a priority concern for</td>
</tr>
<tr>
<td>Used to handle stress</td>
<td>IRB approval obtained from the board of the Medical University of South Carolina</td>
<td>Maintaining a positive balance. Stress management education should begin in school, and continued into the professional careers of CRNAs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chipas et al. (2012)</td>
<td>To highlight the trends in the stressors of the student registered nurse anesthetist (SRNA)</td>
<td>Descriptive multi-factorial study approval by IRB of the Medical questionnaire emailed to all members of the American Association of Nurse Anesthetists SurveyMonkey questionnaire retained internal consistency based on the SRNAs have above average levels of stress, and it is a major concern</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
University of South Carolina, (AANA), & yielded a sample of 1,282 SRNA participants. Specific questionnaire that focused on stress levels and its effects. Cronbach α \( (r=.80) \) among them. Of 1,374 responses of SRNAs, which accounts for 25% of all SRNAs, enrolled in nurse anesthesia programs, the average level of stress reported by SRNAs was 7.2 on 10-point Likert-type scale among them. There are several sources that cause stress in SRNAs. The type of program is also a component that attributes to the amount of stress in SRNAs such as: demographic statistics, family status, and lifestyle changes and.
| determine if there are any differences between stress in students in front-loaded vs integrated programs, differences in stress in students based on progression in program (i.e., junior or senior) | A statistically significant difference in the amount of stress that students in integrated programs experience vs. Front-loaded (7.9 vs. 7.1; t= -2.42; P<.05) 
the length of time in school showed a continual increase during the first 5 semesters,
Collins and Andrejco (2015) determined if emotional intelligence (EI) of graduate students changes during enrollment in Nurse Anesthesia (NA) programs. They included three Nurse Anesthesia programs in Southeastern US, with a total of 62 first semester and 34 last semester participants and 30 normal curriculum and no additional EI training participants. 

EI measurements from NA students from normal curriculum and no additional EI training showed that EI can be a predictor of NA student success because it can help with stress management. Statistical significance of correlation between overall EI and long term overall EI ($p = 0.000$). 

Statistically significant correlation was identified between there is a need for EI training to be incorporated into NA program curriculum from the beginning of the program.
**Longitudinal study approved by Western Carolina University IRB**

Downey, McDonald, and Downey, (2017) Investigate stress level, most common stressors, mental health issues and coping mechanisms among anesthesia trainees in Austria and New Zealand.

**Survey Method**

- 999 trainees randomly chosen from Australian and New Zealand College of Anesthetist trainees (ANZCA)
- *Ethical approval for survey obtained from Western Sydney Local Health District, Human*

**Survey Monkey used to identify causes of stress and coping strategies**

Exams were identified as a major stressor. Socialization with friends/family identified as most used as coping strategy. The most commonly used coping mechanism is informal (talking with family/friends) while there is a lack of mental and...
<p>| Griffin, Yancey, and Dudley (2017) | Examine the relationship between SRNA's perceived wellness and thriving throughout the academic program | Pilot study of 3 separate cohorts of students pursuing a master's in a nurse anesthesia program in a large Midwestern state university. Participants were followed over a 16-month period. Students that consented to the study were | The theoretical basis for this study based on a salutogenic wellness framework. 4 variables related to thriving in a nurse anesthesia program were measured: Wellness promotion, perceived self-efficacy, academic achievement, and perceived self-efficacy. | The SWPS and PSE scales had high reliability in this study, with reliability in all tests with α &gt; .8. Students perceived wellness and self-efficacy were positively correlated at higher levels of perceived wellness, and perceived self-efficacy. | There is a positive relationship between the students' overall perceived wellness, and emotional domain of wellness, and perceived self-efficacy. |
| Hamrin, Weycer, Pachler, and Fournier (2006) | Explore benefits for graduate nursing students as leaders and peer support group | Qualitative study design | Effectiveness of the peer support program for both peer group leaders and members | Common themes identified were: group leader’s ability to identify with members, anxiety and feelings of | This project was successful in decreasing anxiety in graduate entry level nursing students, while peer |
| notified of the purpose of the study, time commitments, and risks and benefits | technical clinical competence | all testing intervals of self-efficacy and wellness are better able to set goals, maintain persistence in the face of barriers, and recover from setbacks. |
| Evaluate outcomes of participants (decreased stress) | 11 group leaders (graduate specialty nursing students and 30 group members (graduate pre-specialty nursing students) | Leadership values, and tasks | inadequacy in learning new skills, and difficulty adjusting to various preceptors and preceptor styles | No negative outcomes described by group leaders or group members | group leaders gained experience and a sense of competence |</p>
<table>
<thead>
<tr>
<th>Lee and Goldstein (2016)</th>
<th>Examine the role of social support in the association between stress and loneliness in college students</th>
<th>Survey cross sectional design</th>
<th>Social support and association between stress and loneliness</th>
<th>Social support buffered the association between perceived stress and loneliness</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Large ethnically diverse sample of college youth</td>
<td>Stress</td>
<td>Loneliness</td>
<td>Social support from peers may be associated with enhancing individual well-being and reduced levels of stress</td>
</tr>
<tr>
<td></td>
<td>636 undergraduate students</td>
<td></td>
<td></td>
<td>$(p=.007)$ for social support with friends used as a buffer for association between perceived stress and loneliness</td>
</tr>
<tr>
<td></td>
<td>IRB approval from public university</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Social support acts as a buffer to some of the negative psychosocial implications of stress.
Lack of support result in loneliness

| Lombardo, Wong, Sanzone, Filion, and Tsimicalis (2017) | Evaluate the perception of mentees that participated in a recently implemented nurse peer mentorship program | Qualitative descriptive study | Perception of the nurse peer mentorship program by participating mentees | Percentages calculated from 427 responses showed that 72% use talking to a friend for coping strategy | Evaluations needed to improve peer mentorship programs | Approval from McGill University IRB | snowball sampling used for recruiting | Matching process between mentor-mentee can be helpful |
Standardized guidelines may not be helpful mentorship program: program should be flexible

Identified roadblocks for successful mentorship program

To obtain opinions of student nurse anesthetist on mentoring in the clinical setting and to

Descriptive study design  
11 item survey  
Survey sent to all 85 SRNAs perceptions of mentors and educators.  
There is a difference between a mentor and an educator

Mentor role is a concept that is highly valued among CRNAs
| Perez and Carroll-Perez (1999) | To evaluate the common stressors among nurse anesthesia | Descriptive study gathered data life change unit scores of Nurse anesthesia students | Questionnaire used to evaluate the stress levels of nurse anesthesia | The majority of nurse anesthesia students are experiencing more than average stress | Nurse anesthesia students have a more than average stress levels | Three most selected adjectives for mentor included: knowledgeable, approachable and encouraging. | 59% of accredited NA programs have a mentor program in place. |
| students, the accessibility to stress management programs within their institution, and stress coping strategies utilized by students. | nurse anesthesia students | nurse anesthesia paper questionnaire mailed to all 2,200 nurse anesthesia students in the U.S. utilizing the American Association of Nurse Anesthetists (AANA) mailing list | students, and their accessibility to stress management programs in schools. | a life crisis that is moderately significant | level of stress, and programs should acknowledge this fact and offer stress management programs that provide coping strategies such as peer support groups. | IRB approval not required |
| Questionnaire was approved by faculty of | | | | | | |
| Scott-Herring and Singh (2017) | To implement and evaluate an evidence-based CRNA preceptorship-mentorship program. | Surveys to measure quality improvement. Two separate samples: 12 CRNA preceptors and 3 to 5 CRNA orientees. The setting was the CRNA division of an anesthesia department in Charity Hospital/Xavier University School of Nurse Anesthesiology. | Measuring the effectiveness of the CRNA preceptorship-mentorship programs by reports of increased satisfaction, confidence, and comfort. | Scores from Likert scale increased with time $Z = -3.01$ and $p = .002$ for a significant increase from pre-survey to post survey. Preceptor education was helpful for preceptors and New hire CRNAs reported increased satisfaction and comfort. |
the mid-Atlantic region.

IRB approval obtained from large academic center in mid-Atlantic region
Table 2. Demographics Table

<table>
<thead>
<tr>
<th>GENDER</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Female</td>
<td>20</td>
<td>87</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LEVEL OF EDUCATION</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s Degree</td>
<td>21</td>
<td>91</td>
</tr>
<tr>
<td>Master’s Degree</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>AGE</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-25 years</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>26-30 years</td>
<td>15</td>
<td>65</td>
</tr>
<tr>
<td>31-35 years</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>36-40 years</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ETHNICITY</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>19</td>
<td>83</td>
</tr>
<tr>
<td>Asian</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>23</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 3: Stress and Anxiety Descriptive Statistics of Survey Responses

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>The peer mentorship program helped decrease my level of stress.</td>
<td>2.6</td>
</tr>
<tr>
<td>The peer mentorship program helped decrease my level of anxiety.</td>
<td>2.2</td>
</tr>
<tr>
<td>The peer mentorship program provided me with insight into how stressful the</td>
<td>2.1</td>
</tr>
<tr>
<td>time commitments are in the NSUHS SONA program.</td>
<td></td>
</tr>
<tr>
<td>The peer mentorship program provided me with good insight into managing the</td>
<td>1.9</td>
</tr>
<tr>
<td>demands of my didactic work.</td>
<td></td>
</tr>
<tr>
<td>The Facebook discussion prompts helped to decrease my level of stress and</td>
<td>1.5</td>
</tr>
<tr>
<td>anxiety.</td>
<td></td>
</tr>
</tbody>
</table>

Table 4: Emotional Support Descriptive Statistics of Survey Responses

<table>
<thead>
<tr>
<th>Description</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Facebook group was a beneficial source of emotional support.</td>
<td>2.5</td>
</tr>
<tr>
<td>The peer mentorship program has increased my professional network.</td>
<td>2.2</td>
</tr>
<tr>
<td>The peer mentorship program helped me to feel more connected to students in</td>
<td>1.9</td>
</tr>
<tr>
<td>other SRNA levels.</td>
<td></td>
</tr>
<tr>
<td>The peer mentorship program helped me to feel more a part of the NSUHS SONA</td>
<td>1.7</td>
</tr>
<tr>
<td>family.</td>
<td></td>
</tr>
<tr>
<td>The peer mentorship program helped me to feel more supported by my peers.</td>
<td>1.6</td>
</tr>
</tbody>
</table>
Table 5: Preparedness Descriptive Statistics of Survey Responses

<table>
<thead>
<tr>
<th>Preparedness</th>
<th>Mean Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation in the Facebook group assisted me to be prepared for my clinical rotations.</td>
<td>2.5</td>
</tr>
<tr>
<td>Participation in the Facebook group assisted me to be prepared for the didactic coursework.</td>
<td>2.5</td>
</tr>
<tr>
<td>The peer mentorship program provided useful study techniques to manage the didactic portion of the program.</td>
<td>2.0</td>
</tr>
<tr>
<td>The peer mentorship program helped me to better understand how to prepare for the demands of didactic coursework.</td>
<td>2.0</td>
</tr>
</tbody>
</table>

Table 6: Mentor Evaluation Descriptive Statistics of Survey Responses

<table>
<thead>
<tr>
<th>Mentor Evaluation</th>
<th>Mean Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel that my participation as a mentor has contributed to a decrease in stress and anxiety in...</td>
<td>3.5</td>
</tr>
<tr>
<td>I feel that my participation as a mentor has provided support to first and second-year SRNAs</td>
<td>3.0</td>
</tr>
<tr>
<td>I feel that this peer mentorship program should be continued at NSUHS SONA.</td>
<td>3.5</td>
</tr>
<tr>
<td>I feel that this peer mentorship program was beneficial in my professional growth as a mentor.</td>
<td>3.0</td>
</tr>
<tr>
<td>I feel that my participation as a mentor has helped to prepare first and second-year SRNAs for clinical...</td>
<td>3.0</td>
</tr>
<tr>
<td>I feel that my participation as a mentor has helped to prepare first and second-year SRNAs for didactic...</td>
<td>3.0</td>
</tr>
</tbody>
</table>
### Table 7: Group Mentorship Evaluation Statistics

<table>
<thead>
<tr>
<th>Please choose one that describes you:</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Scores of the Mentorship Evaluation</td>
<td>SRNA 2</td>
<td>4</td>
<td>2.9167</td>
<td>1.19799</td>
</tr>
<tr>
<td></td>
<td>SRNA 3</td>
<td>8</td>
<td>1.7500</td>
<td>0.49602</td>
</tr>
</tbody>
</table>

### Table 8: Comparison of Mentor Evaluation Means Scores for Second-Year and Third-Year SRNAs

![Chart showing comparison of mentor evaluation means scores for second-year and third-year SRNAs]
October 2, 2018

Aja Rivera, BSN, RN
Department of School of Nurse Anesthesia
NorthShore University Health System
2650 Ridge Ave.
Evanston IL 60202

Re: EH18-365: Rivera, Aja BSN, RN: Peer Mentorship; Student-Reported Outcomes Among Student Registered Nurse Anesthetists Enrolled in the DNP Program

Dear Ms. Rivera:

Your project, referenced above, has been reviewed in the Research Institute and by a member of the First Friday Institutional Review Board (IRB) of NorthShore University HealthSystem. The Study qualifies for expedited review because the research involves collection of data on individual or group characteristics or behavior, or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies (45 CFR 46.110, Category 7).

The project was reviewed in accordance with the Code of Federal Regulations (45 CFR 46 - as revised and 21 CFR 50, 56, as applicable). The NorthShore University HealthSystem Institutional Review Board has an approved assurance of compliance with OHRP which covers this activity (Federal Wide Assurance: FWA00003000). This project was approved by expedited review on the date of this letter, and has approval through 9/26/2019.

Your request for a waiver of written consent has been granted since the study poses no more than minimal risk, the waiver does not adversely affect the rights and welfare of subjects, and the research could not practically be conducted without the waiver.

Your project will be reviewed at least once per year. A Progress Report Form (RI-5.0) will be due in the Research Institute no later than 45 days prior to the above expiration date. Changes in the experimental protocol must not occur without prior approval of the IRB. Unanticipated problems must be reported to the IRB. If this project is terminated before its next Review, please submit a Termination Report Form (RI-5.1) to the Research Institute.

Thank you for submitting this project.

Sincerely yours,

Douglas Merkel, M.D.
Chairman, Institutional Review Board

cc: Mary Keegan, R.N.
    Robert Stanton, J.D.
    Julia Feczko, DNP, CRNA

Name of Institution or Organization Providing IRB Review (Institution/Organization A): NorthShore University Health System

IRB Registration #: IORG0000308

Federalwide Assurance (FWA) #: 00003000

Name of Institution Relying on the Designated IRB (Institution B): DePaul University

FWA #: 00000099

The Officials signing below agree that (name of Institution B) may rely on the designated IRB for review and continuing oversight of its human subjects research described below: (check one)

(_X_) This agreement applies to all human subjects research covered by Institution B’s FWA.

(_ ) This agreement is limited to the following specific protocol(s):

Name of Research Project: Peer Mentorship: Student-Reported Outcomes Among Student Registered Nurse Anesthetists Enrolled in the DNP Program

Name of Principal Investigator at Institution A: Aja S. Rivera

Name of Principal Investigator at DePaul (Institution B): Champagna Conner

Sponsor or Funding Agency: _____ Award Number, if any: _____ (_X_) Other (describe): Not funded

The review performed by the designated IRB will meet the human subject protection requirements of Institution B’s OHRP-approved FWA. The IRB at Institution/Organization A will follow written procedures for reporting its findings and actions to appropriate officials at Institution B. Relevant minutes of IRB meetings will be made available to Institution B upon request. Institution B remains responsible for ensuring compliance with the IRB’s determinations and with the Terms of its OHRP-approved FWA. This document must be kept on file by both parties and provided to OHRP upon request.

Signature of Signatory Official (Institution/Organization A):

[Signature]

Date: 10/30/2018

Print Full Name: Michael Caplan, M.D.

Institutional Title: Institutional Official

Signature of Signatory Official (Institution B):

[Signature]

Date: 10/30/18

Print Full Name: Lawrence Haner

Institutional Title: Associate Provost for Research
This certificate is awarded to

Aja Rivera

for the successful completion of the course

Financial Conflicts of Interest in Research - 528016

By NorthShore

Date: 8/7/2018
This certificate is awarded to
Champagna Conner
for the successful completion of the course
Financial Conflicts of Interest in Research - 528016
By NorthShore

Date: 6/18/2018
**COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)**

**COMPLETION REPORT - PART 1 OF 2**

**COURSEWORK REQUIREMENTS***

*NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Aja Rivera (ID: 7099999)
- **Institution Affiliation:** DePaul University (ID: 1435)
- **Institution Email:** ariver69@mail.depaul.edu
- **Curriculum Group:** Faculty/Staff/Outside Collaborators
- **Course Learner Group:** Faculty/Staff/Outside Collaborators/Students
- **Stage:** Stage 1 - Basic Course
- **Record ID:** 26723196
- **Completion Date:** 07-Apr-2018
- **Expiration Date:** 06-Apr-2021
- **Minimum Passing:** 80
- **Reported Score**: 90

**REQUIRED AND ELECTIVE MODULES ONLY**

<table>
<thead>
<tr>
<th>Module</th>
<th>Date Completed</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students in Research (ID: 1321)</td>
<td>07-Apr-2018</td>
<td>4/5 (80%)</td>
</tr>
<tr>
<td>Defining Research with Human Subjects - SBE (ID: 491)</td>
<td>07-Apr-2018</td>
<td>4/5 (80%)</td>
</tr>
<tr>
<td>Assessing Risk - SBE (ID: 503)</td>
<td>07-Apr-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>History and Ethical Principles - SBE (ID: 490)</td>
<td>07-Apr-2018</td>
<td>4/5 (80%)</td>
</tr>
<tr>
<td>The Federal Regulations - SBE (ID: 502)</td>
<td>07-Apr-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Informed Consent - SBE (ID: 504)</td>
<td>07-Apr-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Internet-Based Research - SBE (ID: 510)</td>
<td>07-Apr-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Privacy and Confidentiality - SBE (ID: 505)</td>
<td>07-Apr-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Research with Prisoners - SBE (ID: 506)</td>
<td>07-Apr-2018</td>
<td>4/5 (80%)</td>
</tr>
<tr>
<td>Research with Children - SBE (ID: 507)</td>
<td>07-Apr-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Research in Public Elementary and Secondary Schools - SBE (ID: 508)</td>
<td>07-Apr-2018</td>
<td>4/5 (80%)</td>
</tr>
<tr>
<td>International Research - SBE (ID: 509)</td>
<td>07-Apr-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Unanticipated Problems and Reporting Requirements in Social and Behavioral Research (ID: 14928)</td>
<td>07-Apr-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Conflicts of Interest in Human Subjects Research (ID: 17464)</td>
<td>07-Apr-2018</td>
<td>4/5 (80%)</td>
</tr>
<tr>
<td>FERPA: An Introduction (ID: 17407)</td>
<td>07-Apr-2018</td>
<td>4/5 (80%)</td>
</tr>
<tr>
<td>FERPA for Researchers (ID: 17410)</td>
<td>07-Apr-2018</td>
<td>4/5 (80%)</td>
</tr>
<tr>
<td>DePaul University (ID: 12952)</td>
<td>07-Apr-2018</td>
<td>No Quiz</td>
</tr>
</tbody>
</table>

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

Verify at: [www.citiprogram.org/verify/?kc926c9c4-e46f-4d9e-8b0d-79d73d69f412-26723196](http://www.citiprogram.org/verify/?kc926c9c4-e46f-4d9e-8b0d-79d73d69f412-26723196)

Collaborative Institutional Training Initiative (CITI Program)

Email: support@citiprogram.org
Phone: 888-529-9529
Web: [https://www.citiprogram.org](https://www.citiprogram.org)
**COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)**

**COMPLETION REPORT - PART 1 OF 2**

**COURSEWORK REQUIREMENTS**

*NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.*

- **Name:** Aja Rivera (ID: 7099999)
- **Institution Affiliation:** NorthShore University HealthSystem Research Institute - Evanston, IL (ID: 1050)
- **Institution Email:** Arivera416@msn.com
- **Phone:** 2197466981
- **Curriculum Group:** Basic/Refresher Course - Human Subjects Research
- **Course Learner Group:** Biomedical Research
- **Stage:** Stage 1 - Basic Course
- **Record ID:** 27260913
- **Completion Date:** 29-May-2018
- **Expiration Date:** 28-May-2021
- **Minimum Passing:** 80
- **Reported Score:** 95

### REQUIRED AND ELECTIVE MODULES ONLY

<table>
<thead>
<tr>
<th>Module</th>
<th>Date Completed</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avoiding Group Harms - U.S. Research Perspectives (ID: 14080)</td>
<td>29-May-2018</td>
<td>3/3</td>
</tr>
<tr>
<td>Recognizing and Reporting Unanticipated Problems Involving Risks to Subjects or Others in Biomedical Research (ID: 14777)</td>
<td>29-May-2018</td>
<td>5/5</td>
</tr>
<tr>
<td>Research Misconduct (RCR-Basic) (ID: 16604)</td>
<td>29-May-2018</td>
<td>5/5</td>
</tr>
<tr>
<td>Populations in Research Requiring Additional Considerations and/or Protections (ID: 16680)</td>
<td>29-May-2018</td>
<td>5/5</td>
</tr>
<tr>
<td>History and Ethics of Human Subjects Research (ID: 498)</td>
<td>29-May-2018</td>
<td>7/7</td>
</tr>
<tr>
<td>Informed Consent (ID: 3)</td>
<td>29-May-2018</td>
<td>5/5</td>
</tr>
<tr>
<td>Social and Behavioral Research (SBR) for Biomedical Researchers (ID: 4)</td>
<td>29-May-2018</td>
<td>4/4</td>
</tr>
<tr>
<td>Records-Based Research (ID: 5)</td>
<td>29-May-2018</td>
<td>3/3</td>
</tr>
<tr>
<td>Genetic Research in Human Populations (ID: 6)</td>
<td>29-May-2018</td>
<td>5/5</td>
</tr>
<tr>
<td>FDA-Regulated Research (ID: 12)</td>
<td>29-May-2018</td>
<td>5/5</td>
</tr>
<tr>
<td>Research and HIPAA Privacy Protections (ID: 14)</td>
<td>29-May-2018</td>
<td>4/5</td>
</tr>
<tr>
<td>Conflicts of Interest in Human Subjects Research (ID: 17484)</td>
<td>07-Apr-2019</td>
<td>4/5</td>
</tr>
<tr>
<td>NorthShore University HealthSystem (ID: 12615)</td>
<td>29-May-2018</td>
<td>No Quiz</td>
</tr>
<tr>
<td>NorthShore University HealthSystem Research Institute: Roles and Responsibilities of the Research Team (ID: 12713)</td>
<td>29-May-2018</td>
<td>6/6</td>
</tr>
<tr>
<td>NorthShore University HealthSystem Research Institute: Forms and Processes (ID: 12714)</td>
<td>29-May-2018</td>
<td>4/6</td>
</tr>
</tbody>
</table>

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid independent learner.

Verify at: [www.citiprogram.org/verify/?k4bc982bc-26c6-4c06-a827-086c26f67795-27260913](http://www.citiprogram.org/verify/?k4bc982bc-26c6-4c06-a827-086c26f67795-27260913)

Collaborative Institutional Training Initiative (CITI Program)

Email: [support@citiprogram.org](mailto:support@citiprogram.org)

Phone: 888-529-5920

Web: [https://www.citiprogram.org](https://www.citiprogram.org)
COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)
COMPLETION REPORT - PART 1 OF 2
COURSEWORK REQUIREMENTS*

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- Name: Champagna Conner (ID: 7082679)
- Institution Affiliation: DePaul University (ID: 1435)
- Institution Email: cc.conner13@gmail.com
- Curriculum Group: Faculty/Staff/Outside Collaborators
- Course Learner Group: Faculty/Staff/Outside Collaborators/Students
- Stage: Stage 1 - Basic Course

- Record ID: 26622186
- Completion Date: 31-Mar-2018
- Expiration Date: 30-Mar-2021
- Minimum Passing: 80
- Reported Score*: 100

### REQUIRED AND ELECTIVE MODULES ONLY

<table>
<thead>
<tr>
<th>Module</th>
<th>Date Completed</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students in Research (ID: 1321)</td>
<td>30-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Defining Research with Human Subjects - SBE (ID: 491)</td>
<td>30-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Assessing Risk - SBE (ID: 503)</td>
<td>30-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>History and Ethical Principles - SBE (ID: 490)</td>
<td>30-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>The Federal Regulations - SBE (ID: 502)</td>
<td>30-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Informed Consent - SBE (ID: 504)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Internet-Based Research - SBE (ID: 510)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Privacy and Confidentiality - SBE (ID: 505)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Research with Prisoners - SBE (ID: 506)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Research with Children - SBE (ID: 507)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Research in Public Elementary and Secondary Schools - SBE (ID: 508)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>International Research - SBE (ID: 509)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Unanticipated Problems and Reporting Requirements in Social and Behavioral Research (ID: 14928)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Conflicts of Interest in Human Subjects Research (ID: 17464)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>FERPA: An Introduction (ID: 17407)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>FERPA for Researchers (ID: 17410)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>DePaul University (ID: 12952)</td>
<td>31-Mar-2018</td>
<td>No Quiz</td>
</tr>
</tbody>
</table>

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

Verify at: [www.citiprogram.org/verify/?k9910f6f9-e8af-4f7c-9df8-297e89b4ad38-26622186](http://www.citiprogram.org/verify/?k9910f6f9-e8af-4f7c-9df8-297e89b4ad38-26622186)

Collaborative Institutional Training Initiative (CITI Program)
Email: support@citiprogram.org
Phone: 888-529-9529
Web: [https://www.citiprogram.org](https://www.citiprogram.org)
**COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE (CITI PROGRAM)**

**COMPLETION REPORT - PART 1 OF 2**

**COURSEWORK REQUIREMENTS**

* NOTE: Scores on this Requirements Report reflect quiz completions at the time all requirements for the course were met. See list below for details. See separate Transcript Report for more recent quiz scores, including those on optional (supplemental) course elements.

- **Name:** Champagna Conner (ID: 7082679)
- **Institution Affiliation:** NorthShore University HealthSystem Research Institute - Evanston, IL (ID: 1050)
- **Institution Email:** cc.conner13@gmail.com
- **Phone:** 773-648-1361
- **Curriculum Group:** Basic/Refresher Course - Human Subjects Research
- **Course Learner Group:** Biomedical Research
- **Stage:** Stage 1 - Basic Course
- **Record ID:** 27735844
- **Completion Date:** 04-Jul-2018
- **Expiration Date:** 03-Jul-2021
- **Minimum Passing:** 80
- **Reported Score:** 99

### REQUIRED AND ELECTIVE MODULES ONLY

<table>
<thead>
<tr>
<th>Module Description</th>
<th>Date Completed</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belmont Report and its Principles (ID: 1127)</td>
<td>04-Jul-2018</td>
<td>3/3 (100%)</td>
</tr>
<tr>
<td>Avoiding Group Harms - U.S. Research Perspectives (ID: 14080)</td>
<td>04-Jul-2018</td>
<td>3/3 (100%)</td>
</tr>
<tr>
<td>Recognizing and Reporting Unanticipated Problems Involving Risks to Subjects or Others in Biomedical Research (ID: 14777)</td>
<td>04-Jul-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Research Misconduct (RCR-Basic) (ID: 16604)</td>
<td>04-Jul-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Populations in Research Requiring Additional Considerations and/or Protections (ID: 16680)</td>
<td>04-Jul-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>History and Ethics of Human Subjects Research (ID: 498)</td>
<td>04-Jul-2018</td>
<td>7/7 (100%)</td>
</tr>
<tr>
<td>Basic Institutional Review Board (IRB) Regulations and Review Process (ID: 2)</td>
<td>04-Jul-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Informed Consent (ID: 3)</td>
<td>04-Jul-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Social and Behavioral Research (SBR) for Biomedical Researchers (ID: 4)</td>
<td>04-Jul-2018</td>
<td>4/4 (100%)</td>
</tr>
<tr>
<td>Records-Based Research (ID: 5)</td>
<td>04-Jul-2018</td>
<td>3/3 (100%)</td>
</tr>
<tr>
<td>Genetic Research in Human Populations (ID: 6)</td>
<td>04-Jul-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>FDA-Regulated Research (ID: 12)</td>
<td>04-Jul-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>Research and HIPAA Privacy Protections (ID: 14)</td>
<td>04-Jul-2018</td>
<td>4/5 (80%)</td>
</tr>
<tr>
<td>Conflicts of Interest in Human Subjects Research (ID: 17464)</td>
<td>31-Mar-2018</td>
<td>5/5 (100%)</td>
</tr>
<tr>
<td>NorthShore University HealthSystem (ID: 12615)</td>
<td>04-Jul-2018</td>
<td>No Quiz</td>
</tr>
<tr>
<td>NorthShore University HealthSystem Research Institute: Roles and Responsibilities of the Research Team (ID: 12713)</td>
<td>04-Jul-2018</td>
<td>6/6 (100%)</td>
</tr>
<tr>
<td>NorthShore University HealthSystem Research Institute: Forms and Processes (ID: 12714)</td>
<td>04-Jul-2018</td>
<td>6/6 (100%)</td>
</tr>
</tbody>
</table>

For this Report to be valid, the learner identified above must have had a valid affiliation with the CITI Program subscribing institution identified above or have been a paid Independent Learner.

Verify at: [www.citiprogram.org/verify/?kb1af4dc-d026-4f69-94f6-b680bedb6-27735844](http://www.citiprogram.org/verify/?kb1af4dc-d026-4f69-94f6-b680bedb6-27735844)