

Implementation of an Orientation Program for Student Registered Nurse Anesthetists (SRNAs)
and Their Support Persons: A Program Evaluation

Chelsea F. Murrell, BSN, RN, SRNA

Bryan College of Health Sciences

Doctoral Capstone

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Abstract

Research has shown that the support persons of graduate students may experience stress just as their students experience stress. This effect is known as the crossover effect. Prior surveys from support persons of Student Registered Nurse Anesthetists (SRNAs) have demonstrated a need for preventative interventions in order to mitigate stress. An orientation seminar was developed and implemented for the primary support persons of SRNAs and the SRNAs. The orientation seminar was held at a small Midwestern Doctor of Nurse Anesthesia Practice (DNAP) program. All primary support persons were invited to complete a survey about stress 5 months after the orientation seminar. The survey was completed regardless of attendance. Overall, the support persons who attended the orientation seminar reported it as beneficial. First year, second year and third year SRNAs were surveyed regarding their stress levels, with results consistent with previous years' surveys.

Key Words: Student Registered Nurse Anesthetist, SRNA, Stress, Orientation Program, Support Person

Introduction

Graduate programs, such as doctoral nurse anesthesia programs, can present time consuming and mentally challenging events in an individual's life. Student Registered Nurse Anesthetists (SRNAs) may experience extended hours dedicated to studies and prolonged periods of time spent at clinical sites which can contribute to a loss of personal time with family and friends. The loss of personal time and additional factors, including financial strain, lack of time or sleep, relationship stress, and health issues, can produce stress in the SRNA.^{3,6}

Alleviation of these stressors include the use of exercise, venting to classmates, utilization of the College's stress management program, and relying upon a support person.^{1,3,4,6} Even though the SRNA's support person may cushion the effects of stress, there is the possibility that the stress may cross over to the support person.⁵ The support person may demonstrate similar emotions as the SRNA, which can affect one another with either positive or negative emotions; also known as the crossover effect.⁵

Medical education programs frequently focus on stress and burnout in students yet fail to incorporate students' social support.² Thus, researchers recommend that academic programs provide stress management programs that incorporate students' families and friends.³ Research focuses on the levels and causes of stress in the graduate students' and their support persons, but there is a lack of research specific to the stressors of SRNAs' and their support persons. Thus, the purpose of study is to determine if an orientation program has an impact on perceived stress levels in SRNAs and their primary support persons.

Methods

Exempt status was obtained from the IRB in April 2019 (Appendix I). Twenty-one first year SRNAs beginning the Doctor of Nurse Anesthesia Practice (DNAP) in May 2019 received an email invitation to the orientation seminar from the program director in early April 2019. The SRNA and the person they identified as their primary support person were invited to an orientation seminar. A primary support person may include a spouse, significant other, parent, grandparent, roommate, or friend and was defined as any individual that the student primarily relied on for emotional and social support in times of stress.

A third year SRNA constructed and implemented an orientation seminar which included development of an agenda and recruitment of guest speakers and panel members (Appendix II). The SRNA was the facilitator for the seminar and was responsible for the evaluation of the seminar. The orientation seminar took place on a Saturday morning in May, two weeks after the SRNAs began the doctoral program, and was scheduled for two hours. Those who attended the orientation seminar did not receive compensation, although light refreshments were provided. A total of 27 people attended, 15 SRNAs and their 12 identified Support Persons.

The first hour consisted of a formal information session led by the DNAP program director with the SRNA leader of the seminar acting as facilitator and/or student ambassador. The attendees were encouraged to ask questions at any time. Information discussed included student requirements for classroom attendance and the number of hours commonly spent on studies. Differences in these requirements during the two phases of the program were discussed. Home clinical sites and rural rotations were discussed in detail and included discussion regarding on-call and weekend shifts, travel to rural site locations, and examples of housing/meals provided at these sites.

During the first hour of the orientation seminar, a brief discussion occurred regarding substance abuse and the role of support persons in identifying substance abuse. Two counselors from the college Student Success Center and an employee from a counseling facility were present to share information about the psychological support services available to students and their families. Information included was that the services are confidential and free of charge while in the program. Handouts and discussion regarding time and stress management strategies for students and support persons were also provided.

A financial officer from the Financial Aid department was present to answer questions regarding financial aid and scholarships available throughout the program. Attendees were given contact information for the college bursar in addition to common financial obligations students will have throughout the program. A 15-minute break was provided before the start of second hour where discussion with panel members occurred.

A 5-person panel of current SRNAs, newly graduated Certified Registered Nurse Anesthetists (CRNAs) and their identified support persons led a question and answer session during the second hour. No DNAP faculty were present during this discussion, and the third year SRNA facilitator was present at the discussion. First year SRNAs and their support persons were encouraged to ask questions. The SRNA facilitator provided questions in moments of silence from the attendees. Discussion topics included clinical rotations, personal/family time, and finances. Questions asked by attendees covered topics including housing on rotations, common study hours, how to prepare financially, unpredictability of schedule/lack of free time, and how to balance personal/family life and school. At the end of the discussion panel members shared pieces of advice they had for the first year SRNAs and support persons. A few topics that emerged included “take time for yourself and your support person” and “students should personalize their studies to best meet their needs and their support persons’ needs”.

To close, attendees were thanked for coming and reminded that this orientation seminar was part of a capstone project, and that emails containing links to a stress survey would be coming later in the year. First year SRNAs were told to expect an email link to the SRNA Stress Survey in July of 2019 from program administration; and in September of 2019, an email with instructions to forward the email to their support persons. This email would contain a link to the Support Person Stress Survey. All attendees were informed that responding to the surveys would be considered as consent to participate in the study. Attendees were dismissed and the orientation seminar ended, although several attendees remained to have casual conversations with other attendees and panel members.

First year SRNAs received an email in September of 2019 with instructions to forward the invitation for the Support Person Stress Survey to the person they identified as their primary support person. The email described the purpose of the Support Person Stress Survey and requested participation of their support person which was done by clicking on a link in the email (Appendix III). The link took the support person to an online survey which was a modification of a previously developed SRNA Support Person Stress Survey. The Support Person Stress Survey was administered by Levic in 2017 as part of her doctoral capstone titled “Stress in the Student Registered Nurse Anesthetist’s Support Person: A Descriptive Study”.⁷ It was modified and

administered again by Ferguson in 2018 as part of a doctoral capstone titled “Implementation of an Orientation Seminar for Graduate Students in Nurse Anesthesia and Their Support Persons: A Program Evaluation”.⁸ A reminder email was sent in the same fashion two weeks after the initial email to encourage participation of the survey.

Levic surveyed support persons of SRNAs enrolled in three doctoral nurse anesthesia programs in 2017. Questions regarding the length of time the SRNA had attended the program and duration of clinical experience were eliminated in the modified 2018 survey. Ferguson added a question which asked if the support person attended the orientation seminar. An open-ended question requesting suggestions for improvement and feedback about the orientation seminar that took place in May of 2019 was also added to the survey. The online survey was hosted using the Survey Planet website with a password secured, private subscription account that was accessible only by the SRNA facilitator of the orientation seminar. Results from this Support Person Stress Survey were compared to Levic’s 2017 results and Ferguson’s 2018 results.^{7,8} All support persons were invited to complete the survey regardless of attendance to the orientation seminar in May of 2019. Email invitations to complete the survey detailed that completion of the survey was considered consent to participate in the study.

The DNAP program administration conducted an online survey of SRNA Perceived Stress in July each year (Appendix IV). First year, second year, and third year SRNAs received an email invitation (Appendix V) to the same survey in July of 2019. All SRNAs received an invitation to complete the SRNA Perceived Stress Survey regardless of attendance to the 2018 or 2019 orientation seminars. A reminder email was sent two weeks after the initial email to encourage participation. The SRNA Perceived Stress Survey was conducted through the Typhon Evaluations and Surveys function in the same fashion as it was conducted in 2015, 2017 and 2018. Each SRNA in the DNAP program has a Typhon account. The survey results are only viewable by the program administration. The survey results were compiled by the program director and provided to the third year SRNA orientation seminar facilitator. No individual identifiers were provided to the facilitator. The results were compared to the first year SRNA’s perceived stress in July of 2015/2017 and 2018. A comparison of average daily stress ratings, the amount of stress due to school, and sources of stress was done for the 2021 graduates by comparing their 1st year ratings obtained by Ferguson in 2018 to their 2nd year ratings obtained in 2019.

Results

Both the 2018 and 2019 groups were offered an orientation seminar, and most had attended the seminar. Nine support persons of the 20 first year SRNAs responded to the Support Person Stress Survey sent in September 2019. All the surveys were complete and provided nine surveys to be analyzed.

Three of the support persons responding to the survey were male, and 6 were female. Most support persons were in the 25-34-year age range (77.8%, n=7) while the remaining 2 were in the 35-44-year age range. Five support persons were employed full time. Three support persons had taken a sick day within the last two years, while 6 support persons reported their last sick day

was taken greater than two years ago. Most support persons were married to the SRNA (88.9%, n=8) (Table 1) while 1 reported the relationship as ‘Other’ stating “I am her sister”.

Support person Overall Daily Stress was evaluated using a 1 to 5 scale with 1 being low stress and 5 being high stress. Any rating of 3 or higher was moderate/high stress. The average rating for Overall Daily Stress was 2.5. This was lower than Levic’s survey, where Overall Daily Stress was rated at 3.1 and equal to Ferguson’s survey result of 2.5. Two of the 9 support persons rated their overall stress as a 4 or 5 in 2019 while 4 of 19 (21%) support persons in Levic’s 2017 survey rated their overall stress as a 4 or 5 and 0 of 9 support persons rated their overall stress as a 4 or 5 in Ferguson’s 2018 survey (Table 2) .

The 2017, 2018 and 2019 Support Person Overall Stress ratings were compared with the Fisher’s Exact test. Responses to the Overall Daily Stress ratings were categorized with ratings of 1 or 2 representing low stress, and 3, 4, or 5 representing moderate/high stress. Levic found in 2017 that 16 of 19 (84%) first year SRNA support persons reported moderate/high stress while 5 of 9 (56%) of Ferguson’s 2018 support persons reported moderate/high stress. Murrell’s 2019 survey results found that 5 out of 9 support persons (56%) reported moderate/high stress. Two support persons in the 2017 group had selected a rating of 5, while 0 of the support persons from 2018/2019 selected a rating of a 5. When comparing the three groups, 2017, 2018 and 2019, no statistically significant difference was found ($p=0.16$) (Table 3). This could be due to the small sample size in the 2018 and 2019 study. The 2018 and 2019 ratings were combined into a single group and compared to the 2017 ratings. There was a significant difference in Support Persons Overall Daily Stress between the two groups ($p=0.05$) (Table 4).

The highest average stress ratings reported in 2019 were related to Time/Lack of Time with SRNA (2.5), Work (2.4), and Financial (2.4). Results from 2018 were similar with highest average stress ratings being Time/Lack of Time with SRNA (3.3) and Household Responsibilities (3.0). The highest average stress rating survey results for 2017 were Time (3.0) and Household Responsibilities (2.8). Support persons in all studies rated Relationship with the SRNA at a low average stress rating, with 1.7 in 2019, 2.6 in 2018, and 2.3 in 2017. Interestingly Murrell’s 2019 survey found Health of a Loved one to have an average daily stress rating of 2.3, while in the 2018 survey Health of a Loved one was only rated at 1.4 and in 2017 it was rated 1.7. The question of Quality of Sleep being a source of stress was introduced into the survey in 2018 and received a result of 2.4 in 2018 compared to a low stress score of 1.8 in 2019. All other categories were responsible for low levels of stress (Table 5 & 6).

Most support persons in this study (77.8%) did not think they could have been better prepared for the SRNA entering the DNAP program. This was consistent with both Ferguson’s (78%) and Levic’s (74%) findings. Most of Levic’s respondents did not attend an orientation seminar (89.5%) prior to their SRNA entering a DNAP program, but 82% indicated they would have liked to. The 2018 Support Person Stress Survey indicated that 89% had attended the orientation seminar, with all those support persons indicating that the seminar was helpful (Table 7). The 2019 Support Person Stress Survey indicated that 89% had attended the orientation seminar, with 8 of those support persons indicating that the seminar was helpful while 1 stated they did not attend the seminar.

The amount of time the SRNA studies continues to be selected as ‘Most Surprising’ with the highest frequency (89%) by support persons in 2019. This is consistent with Levic’s survey, where 42% of first year support persons selected the amount of time the SRNA spent studying as ‘Most Surprising’ and with Ferguson’s survey where 69% were most surprised by the amount of time the SRNA spent studying. In 2017 and 2018 the second most frequent item selected as ‘Most Surprising’ was the stress level of the SRNA, selected by 37% of 2017 support persons and 22% of 2018 support persons (Table 8). The second most frequent item selected as ‘Most Surprising’ in 2019 was the cost of the program (11.1%).

Three open ended questions were included. Eight of 9 responded to the question “What do you find most stressful about the SRNA being in school?”. The answers were related to lack of time together and financial stress. Others touched on SRNA Stress Level and Household Responsibility shifting to the support person (Table 9). When asked, “What do you think could have prepared you better before the student (SRNA) started school?” 5 support persons answered. Two answered ‘nothing’; 1 support person stated “We had to move to Lincoln later than originally planned. Moving earlier would have helped”. Other responses included financial preparation and understanding the time the SRNA would spend in school or studying (Table 10).

The final question of the 2019 Support Person Stress Survey was “What do you suggest for improvement in the orientation program/seminar?” Six support persons responded. Three indicated they had no suggestions for improvement or stated that it was ‘informative’ and good to meet other support persons. Three support persons gave suggestions for future orientation seminars. These suggestions included more details on clinical rotations, explanations of how student loans work, pointing out that breaks in the program do not mean free time for the student, and suggestions of later class start times (Table 11).

The Support Person Stress Survey closed with an opportunity for support persons to add any additional comments they had. One support person utilized this option stating “I haven't been stressed. It probably helps that I have a tendency to not worry a long time about things. If it is something that I can change, I consider changing it. If I can't change it, worrying won't solve it. The primary thing that disturbs me, is the amount of money we will pay each month in loan interest at the end.” (Table 12).

All 20 first year SRNAs were invited to complete the SRNA Stress Survey in July 2019. The 20 first year SRNAs had completed three months of the DNAP program by July. Only 18 of the 1st year SRNAs completed the survey. Results were analyzed and compared to survey results from 1st year SRNAs who completed the survey in 2015/2017, and 2018. This SRNA Stress Survey asked the SRNA to rate their perceived stress on a 10-point scale with 1 being low stress, 5 being average stress, and 10 being extreme stress. SRNAs reported average daily stress ratings of 5.6 in 2015/17, 5.8 in 2018, and 5.22 in 2019 (Table 13). In 2015/17, SRNAs reported that 68% of their stress was from school, while school was responsible for 79% of 2018, and 73% of 2019 1st year SRNA stress (Table 14).

Sources of stress were further subcategorized and evaluated on an 10-point scale with 0 being never, 2 almost never, 4 sometimes, 6 fairly often, 8 very often, and 10 daily. Results were averaged and ranked from most frequent to least frequent sources of 1st year SRNA stress. The

2015/17 1st year SRNAs reported Academic Performance (6.3) and Time Management/Workload (6.0) as their most common sources of stress. The 2018 1st year SRNAs also reported these two categories as their most common sources of stress but responded with Time Management/Workload (7.1) and Academic Performance (5.9). The 2019 1st year SRNAs reported Time Management/Workload (6.0) and Academic Performance (5.17) as the most common sources of stress, although the rating of the scores decreased from previous years. Financial Resources followed, with 2015/17 1st year SRNAs reporting a score of 5.5, 2018 students reporting 4.6, and 2019 reporting a 3.56. Least common sources of stress were Clinical Preceptor Relationships, scoring a 1.0 in 2015/17, 0.0 in 2018, and 0.33 in 2019 (Table 15).

Graduates of 2021 completed the survey as 1st year SRNAs in 2018 and as 2nd year SRNAs in 2019. In 2018, 14 SRNA graduates of 2021 completed the survey and 11 SRNA graduates of 2021 completed the same survey in 2019. The results were analyzed and compared. The SRNAs reported an average daily stress rating of 5.8 in 2018, and 6.55 in 2019 (Table 16). In 2018, SRNAs reported that 79% of their stress was from school, while in 2019 school was responsible for 84.5% of their stress (Table 17). While comparing the 2018 and 2019 rating of sources of stress, Time Management/Workload (7.1) and Academic Performance (5.9) were the two most common sources of stress in 2018. In 2019, the two most common sources of stress were Clinical Performance (7.45) and Time Management/Workload (7.36). The lowest sources of stress in 2018 was Clinical Performance (0.07) and Clinical Preceptor Relationships (0.0), while the lowest sources of stress in 2019 were Peer (Classmate) Relationships (1.73) and Faculty Relationships (1.64) (Table 18).

Discussion

Most support persons in this study were married to the SRNA, between the ages of 25-34, and employed full-time. Attendance at the orientation seminar was high, with the majority of the first year SRNAs attending with a support person.

Support person average daily stress ratings were low, with lack of time with SRNA, work, and financial responsibilities being the three major causes of daily stress. Despite the small sample size, support persons overall indicated that they found the orientation seminar helpful. Only one person responded “other” stating they “did not attend” the orientation seminar.

The Support Person Stress Survey asked support persons if they could have been better prepared for the SRNA starting the anesthesia program. In Levic’s 2017, Ferguson’s 2018, and this 2019 survey, support persons indicated there was nothing that could have better prepared them for their SRNA starting school. Levic’s 2017 results indicated support persons would have liked to attend a seminar/orientation program prior to the SRNA starting school. The majority of support persons in Ferguson’s 2018 and this 2019 Support Person Stress Survey attended an orientation seminar offered at the beginning of the first year SRNA’s program. All the support persons who attended indicated that it was helpful, although they did not feel they could have been any better prepared for their SRNA entering school.

Support persons in 2019 were most surprised by the amount of time the SRNA spends studying, in addition to the cost of the program. This was different from the 2015/20017 and 2018 results

that show the second most surprising was the high stress level of the SRNA. Future orientation seminars could stress the amount of time the SRNA spends studying or provide a glimpse of a typical week for 1st year SRNAs via a spreadsheet or calendar example. A spread sheet detailing the costs or a longer discussion with the financial aid officer may be beneficial in future orientation seminars.

The open-ended questions in the Support Person Stress Survey gave support persons the ability to explain concerns or questions they had regarding the orientation seminar. Overall, support persons wanted more detailed information regarding clinical rotations, explanations of how student loans work, pointing out that breaks in the program do not mean free time for the student, and suggestions of later class start times. Future orientation seminars could utilize handouts or calendars detailing these topics and a longer allotted time for financial aid officers to speak could be provided. The question and answer panel could have pre-established questions and answers from previous orientation programs to discuss topics such as clinical rotations and how to best implement free time or family time between studies.

First year SRNAs were invited to complete the same SRNA Stress Survey that 1st year SRNAs had taken in 2015/2017 and 2018. The 2016 survey results were omitted as this was the year the SRNA orientation seminar leader was a first year SRNA. The response rate was the same in 2019 as in 2018 but was less in 2019 (82%) than in 2015/17 (100%). SRNAs were invited to complete the SRNA Stress Survey in the same fashion as previous years, and it is unclear why the response rate was decreased from the initial survey in 2015/2017. SRNAs reported average daily stress levels in the 'average' level on a 10-point scale and indicated that most of this stress was from school, with Time Management/Workload and Academic Performance being their highest sources of stress. This was consistent with results from 2015/17 and 2018 indicating that SRNAs are not-excessively stressed by outside sources, allowing them to focus on academic performance.

In 2018, 14 SRNA graduates of 2021 completed the 1st year SRNA Stress Survey and 11 SRNA graduates of 2021 completed the same survey in 2019 as 2nd year SRNAs. These SRNAs reported a higher average daily stress level in the 1st year compared to the 2nd year survey. The SRNAs reported that their stress from school was lower in 2018 than in 2019. Time Management/Workload and Academic Performance were the two most common sources of stress in 2018, while Clinical Performance and Time Management/Workload were the most common in 2019. The lowest sources of stress in 2018 and 2019 differed as well with results showing that the sources of stress can change based on the year of the program.

There were limitations to the evaluation tools and outcome measurements. Small sample size limits the ability to demonstrate a statistically significant change in the outcomes measured. To assist with this limitation, future researchers could increase completion of surveys by utilizing text messaging to remind SRNAs and support persons of the need to complete the surveys. Also, to improve sample sizes it could be beneficial for a future seminar to utilize the same survey immediately after the orientation seminar to increase the support person participant number.

Another limitation is the SRNA orientation seminar facilitator relied upon the 1st year SRNA to forward the email invitation and reminders to their support person. To prevent this as a future

limitation, 1st year SRNAs could be asked to provide their support persons emails directly, or in future orientation seminars the support persons attending could be asked to provide email addresses to be used to distribute the follow-up survey.

Another suggestion is to add open-ended questions to evaluate the question and answer panel, as this was not included in the previous 2015/2017, 2018 or 2019. Questions evaluating the specifics of the agenda and question and answer panel could provide information to aid in future research. These questions could be added to the support persons survey.

Conclusions

Research has shown that outside stressors may affect the welfare of graduate students, including SRNAs, and their support persons through the crossover effect.^{4,5} The support person may demonstrate similar emotions as the SRNA, which can affect one another with either positive or negative emotions.⁵ Therefore, research has recommended academic programs provide training that include students' support persons to aid in prevention of the crossover effect. Also, training may limit the stressors that graduate students and their support persons may encounter.⁶

An orientation seminar for support persons of 1st year SRNAs was developed and implemented based on results of previous studies of support persons and impacts of orientation programs on the graduate students and their support persons. Support persons have indicated a need or want for an orientation seminar to assist in preparing for the stressors associated with their loved one entering a demanding nurse anesthesia program.^{7,8} Support person attendance to an orientation seminar did not significantly reduce the 1st year SRNA stress levels nor did the overall stress levels of the graduates decrease over their time spent in the program.

Overall, support persons indicated that they could not have better prepared for their SRNA entering school, yet those that did attend an orientation seminar found it to be helpful and informative. Future orientation seminars can be adjusted to better prepare the support persons for the challenges associated with having a SRNA enrolled in a graduate nurse anesthesia program.

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Appendix I

IRB Letter



April 9, 2019

Chelsea Murrell, RN
Bryan College of Health Sciences
1555 S. 52nd St.
Lincoln, NE 68506

IRB#: 1903-001

Title of Protocol: Implementation of an Orientation Program for Student Registered Nurse Anesthetists (SNRAs) and their Support Persons: A Program Evaluation

Dear Ms. Murrell,

As a member of Bryan College of Health Science's IRB I have reviewed the revisions submitted for the above-titled *Request for Review* and determined it to be exempt from IRB Committee review.

This letter constitutes official notification of approval from Bryan College of Health Science's IRB. Please inform the IRB of any changes to your proposed plan or of any breach of confidentiality.

Respectfully submitted on behalf of the IRB,

Jane Smith, PhD
IRB Member
Bryan College of Health Sciences

Appendix II

Educational Program Outline

Hour One: Sharon Hadenfeldt, PhD, CRNA and Chelsea Murrell, BSN, RN, SRNA

- A. Introduction
 - a. Welcoming
 - b. Discussion of Agenda
- B. Program Breakdown
 - a. Discussion of three phases
 - b. Clinical Rotations: Home Hospital vs. Rural Rotations
 - c. Location and discussion of DNAP clinical handbook
 - d. Classroom Hours
 - e. Study Hours
 - f. Substance Use Disorder
- C. Finances: Guest Speaker – Maggie Hackwith
 - a. Loans
 - b. Scholarships
 - c. Extra Costs/Travel expenses
 - d. Larry Morrison Contact Information
- D. College Resources: Guest Speaker -Patty Bollinger
 - a. Stress Management
 - b. Emotional support services
 - c. College resources including writing center

Break: 10-15 minutes

Hour Two: Informational Panel with Moderator Chelsea Murrell, BSN, RN, SRNA

- A. Q&A Panel
 - a. Introductions
 - b. Backgrounds of guest speakers
 - c. Personal Experiences
 - d. Biggest challenge or stressor
 - e. Advice/Recommendations
- B. Student Support Person Sign-up
 - a. Support persons can share contact information with one another
- C. Closing

Appendix III

Email invitation to SRNAs to forward on to Support persons

Chelsea Murrell, a second year DNAP student, is conducting a survey on perceived stress as experienced by SRNAs and their primary support person. Stress can be defined as a physical, emotional, or mental response to an actual or perceived stimulus. Stress levels for SRNA support persons who attended an orientation seminar will be compared to the stress levels for SRNA support persons who did not attend an orientation seminar. The results will be compared to the stress levels of support persons who attended the 2018 orientation.

Please forward this email to the person you define as your primary source of emotional and psychological support. The support person must be 20 years of age or older to participate in the survey. This person is often a significant other, friend, parent, or grandparent. Please notify them of this email and the request to complete the survey.

This survey can be completed whether your support person attended the orientation seminar in May or not. No identifying information will be obtained, and it will take no longer than 5 minutes to complete. **Please do not complete this survey yourself**, this survey is focused on perceived stress as experienced by SRNA primary **support persons**.

Thanks for your participation.

Sincerely,
Chelsea Murrell

SRNA Support Person: Please follow the [link](#) to access the survey. By completing this survey, you provide your consent to participate in this study. However, your participation is completely voluntary and you may choose to not participate at any time.

If the link is not clickable, you may have to cut and paste the above address into your browser.

Hello!

My name is Chelsea Murrell and I am a Student Registered Nurse Anesthetist (SRNA) at Bryan College of Health Sciences in Lincoln, Nebraska. As part of a requirement for the Doctor of Nurse Anesthesia Practice program, I am conducting a study to determine if an orientation seminar has an effect on perceived stress as experienced by SRNAs and their primary support persons. Stress is defined as a physical, emotional, or mental response to an actual or perceived stimulus. Prior research provides evidence that indicates that if your stress level is reduced, your loved one will also perceive less stress, thereby helping him/her to become more successful in school.

It would be helpful if you would take five minutes to complete this survey for my Capstone project. My goal is to compare the stress levels of support persons who attended an orientation program to the stress levels of support persons who did not attend an orientation program, compare the stress levels of those who attended the 2018 orientation program to those that attend the 2019 orientation program, and evaluate/compare the stress levels and program effectiveness of those who attended the 2018 orientation program, one year later. This survey can be completed regardless of your attendance at the orientation seminar that took place in May of 2019.

This survey is completely anonymous with no identifying information collected. You must be 20 years or older to participate. **Please do not provide any identifying information** about the student or yourself such as names, state/city, or program the student is attending. This will keep your information and responses anonymous.

If you would like assistance with any stress you might be feeling, there will be resources at the end of this survey you may contact. Also, if you have any other questions, please contact me at chelsea.murrell@bryanhealthcollege.edu, or my research advisor Sharon Hadenfeldt, PhD, CRNA at sharon.hadenfeldt@bryanhealth.org or 402-481-8606.

Thank you for your time,
Chelsea Murrell, BSN, RN, SRNA
Bryan College of Health Sciences

Please follow the [link](#) to access the survey. By completing this survey, you provide your consent to participate in this study. However, your participation is completely voluntary and you may choose to not participate at any time.

Support Person Stress Survey

By completing this survey, you provide your consent to participate in this study. However, your participation is completely voluntary and you may choose to not participate at any time.

The following questions will tell me a little bit about yourself:

1. What is your gender?
 - Male
 - Female

2. What is your age?
 - 24 years old or less
 - 25-34
 - 35-44
 - 45-54
 - 55 years old or greater

3. Which one of the following most accurately describes your employment status?

- Employed, full-time
- Employed, part-time
- Retired
- Unemployed
- Student
- Other ____

4. When did you last take a sick day?

- 0-3 months ago
- 4-6 months ago
- 7-11 months ago
- 1-2 years ago
- >2 years ago

The following questions will tell me a little bit about the student (SRNA):

5. What is your relationship with the student (SRNA)?

- I am married to him/her
- I am engaged to him/her
- I am in a committed relationship with him/her
- I am the parent/grandparent of him/her
- I am a child of him/her
- I cohabit with him/her
- I am a friend of him/her
- Other ____

The following questions pertain to both your overall stress as well as specific causes of stress. As a reminder, please do not answer any open-ended questions with identifying information such as your name or name of the student, city/state, or name of the program.

6. During the last year, have any of the following occurred (please mark all that apply)?

- | | |
|--|--|
| Salary/benefits decreased | Marriage/legal union |
| Bankruptcy/financial stress | Military deployment – self |
| Birth of a child | Military deployment – significant other/friend |
| Caring for debilitated/chronically ill loved one | Moved |
| Changed jobs | Personal illness or injury |
| Death of a spouse/partner/child | Pregnancy |
| Death of a family member/close friend | Promotion |
| Demotion | Quit a job |
| Divorce | Retirement |
| Marital/partner reconciliation | Started school (yourself) |
| Marital/partner separation | |

7. How would you rate your overall stress level on an average day in the past month? (1-Low stress, 5-Extreme stress)

1 2 3 4 5 NA

8. How would you rate your stress level in the past month as a result of each of the following? (1-Low stress, 5-Extreme stress)

Work-related issues	1	2	3	4	5	NA	
Your relationship w/the student	1	2	3	4	5	NA	
Financial issues		1	2	3	4	5	NA
Personal health issues		1	2	3	4	5	NA
Health of a loved one	1	2	3	4	5	NA	
Quality of sleep at night	1	2	3	4	5	NA	
Time/lack of time spent w/student	1	2	3	4	5	NA	
Caring for children	1	2	3	4	5	NA	
Caring for pets		1	2	3	4	5	NA
Taking care of household chores	1	2	3	4	5	NA	

9. What do you find most stressful about the student (SRNA) being in school?

10. What has surprised you the most since the student (SRNA) has started nurse anesthesia school?

- Amount of time dedicated to studying
- Being in clinical away from home
- Cost of the program
- Stress level of the student
- Other _____

11. Do you feel you could have been better prepared before the student (SRNA) started school?

- Yes
- No

12. What do you think could have prepared you better before the student (SRNA) started school?

13. Did you attend a seminar or information session about what to expect for the duration of the program?

- Yes

- No

14. Do you think the seminar/program was helpful?

- Yes
- No
- Did not attend

15. What would you suggest for improvement in the seminar/program?

16. Use this space to add any additional comments.

Thank you again for your time in completing this survey! If you feel you need to talk with someone about your stress or you have thoughts of harming yourself or others, please contact:

- Bryan College of Health Sciences: Patty Bollinger, MSN, APRN-CNS, Professional Development Counselor (402-481-3831)
or
- Continuum-Employee Assistance Program: 402-476-0186

If you have any additional questions/concerns, please contact me at chelsea.murrell@bryanhealthcollege.edu or my research advisor Sharon Hadenfeldt, PhD, CRNA at sharon.hadenfeldt@bryanhealth.org or 402-481-8606.

Sincerely,
Chelsea Murrell

Appendix IV

1st Year SRNA Stress Survey

- 1. How often have you been stressed in the past month for the following items** (0-Never or N/A, 2-Almost Never, 4-Sometimes, 6-Fairly Often, 8-Very Often, 10-Daily)

Time management/workload	0	1	2	3	4	5	6	7	8	9	10
Financial resources	0	1	2	3	4	5	6	7	8	9	10
Academic performance	0	1	2	3	4	5	6	7	8	9	10
Clinical performance	0	1	2	3	4	5	6	7	8	9	10
Completion of the Sr Capstone	0	1	2	3	4	5	6	7	8	9	10
Passing the certification exam	0	1	2	3	4	5	6	7	8	9	10
Obtaining a job after graduation	0	1	2	3	4	5	6	7	8	9	10
Family relationships	0	1	2	3	4	5	6	7	8	9	10
Peer (classmate) relationships	0	1	2	3	4	5	6	7	8	9	10
Faculty relationships	0	1	2	3	4	5	6	7	8	9	10
Clinical preceptor relationships	0	1	2	3	4	5	6	7	8	9	10

- 2. How would you rate your stress on an average day?** (1-Low stress, 5-Average stress, 10-Extreme stress)

1 2 3 4 5 6 7 8 9 10 N/A

- 3. How much of your stress is from school?** (0-no stress, 10-All stress)

1 2 3 4 5 6 7 8 9 10 N/A

Appendix V

Email invitations to SRNAs from Typhon

DNAP Student Name,

Your program director is collecting information on stress experienced by first year SRNAs. This information will only be viewable by the program administration. Information collected will be used to better serve SRNAs throughout the DNAP program.

The survey results will be compiled by the program director and provided to the researcher, Stephanie Ferguson a second year DNAP student, with no individual identifiers to use in her Doctoral Capstone Project. This project is evaluating if an orientation program provided to first year SRNAs and their primary support persons has an effect on perceived levels of stress.

Thanks for your participation.

Sincerely,
Your Program Administrator

By completing this survey, you provide your consent to participate in this study. However, your participation is completely voluntary and you may choose to not participate at any time. To begin the evaluation, click on your personalized link below:

If the link is not clickable, you may have to cut and paste the above address into your browser.

Support Person Results from Levic (2017), Ferguson (2018), & Murrell (2019)

Table 1Support Person Stress Survey Demographic Table

	Levic 2017	Ferguson 2018	Murrell 2019
Gender			
Male	50.0% (n=26)	55.6% (n=5)	33.3% (n=3)
Female	50.0% (n=26)	44.4% (n=4)	66.7% (n=6)
Age			
<25 years	3.9% (n=2)	0.0% (n=0)	0.0% (n=0)
25-34 years	78.9% (n=41)	77.7% (n=7)	77.7% (n=7)
35-44 years	17.3% (n=9)	22.2% (n=2)	22.2% (n=2)
45-54 years	0.0% (n=0)	0.0% (n=0)	0.0% (n=0)
>55 years	0.0% (n=0)	0.0% (n=0)	0.0% (n=0)
Relationship to Student			
Married	71.2% (n=37)	88.9% (n=8)	88.9% (n=8)
Engaged	3.9% (n=2)	0.0% (n=0)	0.0% (n=0)
Committed Relationship	21.2% (n=11)	11.1% (n=1)	0.0% (n=0)
Parent/Grandparent	0.0% (0)	0.0% (n=0)	0.0% (n=0)
Child	*not asked	0.0% (n=0)	0.0% (n=0)
Cohabitate with Student	1.9% (n=1)	0.0% (n=0)	0.0% (n=0)
(SRNA)	1.9% (n=1)	0.0% (n=0)	0.0% (n=0)
Friend	0.0% (n=0)	0.0% (n=0)	11.1% (n=1)
Other			"I am her sister"
Employment Status			
Employed full-time, >40hrs/wk	19.2% (n=10)	*Question not asked	*Question not asked
Employed full-time	53.9% (n=28)	66.7% (n=6)	55.6% (n=5)
Employed part-time	1.9% (n=1)	11.1% (n=1)	0.0% (n=0)
Unemployed	1.9% (n=1)	0.0% (n=0)	0.0% (n=0)
Student	11.5% (n=6)	11.1% (n=1)	11.1% (n=1)
Retired	0.0% (n=0)	0.0% (n=0)	11.1% (n=1)
Other	11.5% (n=6)	11.1% (n=1) *Stay at home parent	22.2% (n=2)
			"Stay at home parent" N/A
Last Sick Day			
0-3 months ago	26.9% (n=14)	22.2% (n=2)	11.1% (n=1)
4-6 months ago	13.5% (n=7)	22.2% (n=2)	0.0% (n=0)
7-11 months ago	9.6% (n=5)	22.2% (n=2)	0.0% (n=0)
1-2 years ago	13.5% (n=7)	33.3% (n=3)	22.2% (n=2)
>2 years ago	36.5% (n=19)	0.0% (n=0)	66.7% (n=6)

Table 2Support Person Overall Stress on Average Day in the Last Month

Overall Stress	2017 n=19	2018 n=9	2019 n=9
1 Low	5% n=1	0% n=0	22.2% n=2
2	10.5% n=2	44.4% n=4	22.2% n=2
3	63% n=12	55.6% n=5	33.3% n=3
4	10.5% n=2	0% n=0	22.2% n=2
5 High	10.5% n=2	0% n=0	0.0% n=0

Table 3Support Person Overall Stress 2017, 2018,2019

	Low (1, 2)	Moderate/High (3, 4, 5)
2017 n=19	3 (16%)	16 (84%)
2018 n=9	4 (44%)	5 (56%)
2019 n=9	4 (44%)	5 (56%)

p=0.16 *Not statistically significant; Fisher's Exact Test

Table 4Support Person Overall Stress 2017, 2018/2019

	Low (1, 2)	Moderate/High (3, 4, 5)
2017 n=19	3 (16%)	16 (84%)
2018/2019 n=18	8 (44%)	10 (56%)

p=0.05 *Statistically significant; Fisher's Exact Test

Table 5Support Person Stress Rating

Type of Stress	Levic Average Stress Rating 2017 N=19	Ferguson Average Stress Rating 2018 N=9	Murrell Average Stress Rating 2019 N=9	1	2	3	4	5	N/A
Overall Stress	3.1	2.5	2.5						
Work	3.2	1.7	2.4	22.2% (n=2)	44.4% (n=4)	0.0% (n=0)	33.3% (n=3)	0.0% (n=0)	0.0% (n=0)
Time/lack of time w/ Student	3.0	3.3	2.5	22.2% (n=2)	33.3% (n=3)	11.1% (n=1)	33.3% (n=3)	0.0% (n=0)	0.0% (n=0)
Financial	2.8	2.7	2.4	11.1% (n=1)	55.5% (n=5)	11.1% (n=1)	22.2% (n=2)	0.0% (n=0)	0.0% (n=0)
Household	2.8	3	2.1	22.2% (n=2)	55.5% (n=5)	11.1% (n=1)	11.1% (n=1)	0.0% (n=0)	0.0% (n=0)
Caring for Child	2.7	2.8	1.4	77.7% (n=7)	11.1% (n=1)	0.0% (n=0)	11.1% (n=1)	0.0% (n=0)	0.0% (n=0)
Relationship w/ Student	2.3	2.6	1.7	44.4% (n=4)	33.3% (n=3)	22.2% (n=2)	0.0% (n=0)	0.0% (n=0)	0.0% (n=0)
Caring for Pet	2.1	2.1	1.3	66.6% (n=6)	33.3% (n=3)	0.0% (n=0)	0.0% (n=0)	0.0% (n=0)	0.0% (n=0)
Personal Health	1.7	2.1	2	44.4% (n=4)	22.2% (n=2)	22.2% (n=2)	11.1% (n=1)	0.0% (n=0)	0.0% (n=0)
Health of a Loved One	1.7	1.4	2.3	44.4% (n=4)	22.2% (n=2)	11.1% (n=1)	0.0% (n=0)	22.2% (n=2)	0.0% (n=0)
Quality of Sleep	N/A	2.4	1.8	44.4% (n=4)	22.2% (n=2)	33.3% (n=3)	0.0% (n=0)	0.0% (n=0)	0.0% (n=0)

*1= Low Stress, 5= Extreme Stress

Table 6Support Person's Source of Stress

Type of Stress	Average Stress Rating Levic 2017 N=19	Average Stress Rating Ferguson 2018 N=9	Average Stress Rating Murrell 2019 N=9
Overall Stress	3.1	2.5	2.5
Work	3.2	1.7	2.4
Time/lack of time with student	3.0	3.3	2.5
Financial	2.8	2.7	2.4
Household	2.8	3	2.1
Caring for Child	2.7	2.8	1.4
Relationship w/ Student	2.3	2.6	1.7
Caring for Pet	2.1	2.1	1.3
Personal Health	1.7	2.1	2
Health of a Loved One	1.7	1.4	2.3
Quality of Sleep	*Question not asked	2.4	1.8

Table 7**Support Person Preparedness Before the Student Started School**

	Levic 2017		Ferguson 2018		Murrell 2019		
	Yes	No	Yes	No	Yes	No	Other
Do you feel you could have been better prepared?	26% (n=5)	74% (n=14)	22% (n=2)	78% (n=7)	22.2% (n=2)	77.8% (n=7)	0.0% (n=0)
Did you attend a seminar before the student started school?	10.5% (n=2)	89.5% (n=17)	88.9% (n=8)	11.1% (n=1)	88.9% (n=8)	11.1% (n=1)	0.0% (n=0)
*Would you have liked to attend a seminar before the student started school?	82% (n=14)	18% (n=3)	N/A	N/A	N/A	N/A	N/A
**Do you think the seminar was helpful?	N/A	N/A	88.9% (n=8)	11.1% (n=1)	88.9% (n=8)	0.0% (n=0)	11.1% (n=1) *Did not attend

*Question asked by Levic only; **Question asked by Ferguson only

Table 8Support Person Survey: Most Surprising since the SRNA Started School

	Levic 2017 n = 19	Ferguson 2018 n = 9	Murrell 2019 n=9
Amount of Time Studying	42% (n=8)	67% (n=6)	88.9% (n=8)
Stress Level of the Student	37% (n=7)	22% (n=2)	0.0% (n=0)
Time Away from Home for Clinical	0% (n=0)	0.0% (n=0)	0.0% (n=0)
Cost of the Program	5% (n=1)	0.0% (n=0)	11.1% (n=1)
Other	10.5% (n=2)	11% (n=1) “I anticipated all of the above, however it is still stressful to deal with. Student has not done clinical away from home yet so not sure how that is going to go.”	0.0% (n=0)

Table 9Open Ended Question Responses from Support Person Stress Survey

What do you find most stressful about the SRNA being in school?
“Financial stress”
“Lack of time together”
“The student's stress or emotional complaints about: difficulty to study/learn, not being better, not being the best, or not being confident”
“When they are really frustrated and stressed that stresses me. Which isn't very often.”
“I'm a nurse and work night shift. We both used to work nights and now he is on a day shift schedule and I'm still on nights which has been hard”
“Having time to spend together and also balancing him studying at home.”
“Really only taking on the loans but that is slightly offset by knowing we will be entering into a well paid job.”
“Not being able to help around the house and with the kids. Dealing with them being moody from stress about tests, studying etc.”
*One question left unanswered

Table 10Open Ended Question Responses from Support Person Stress Survey

What do you think could have prepared you better before the student started school?
“We had to move to Lincoln later than originally planned. Moving earlier would have helped.”
“All is well. It could be worse if the student had planned it differently.”
“Saving more money”
“Understood how much time they spend on school and studying”
“Nothing. We have been preparing for it for a couple years prior.”
*4 questions left unanswered

Table 11Open Ended Question Responses from Support Person Stress Survey

What do you suggest for improvement in the seminar?
“It was great. Very informative. Helped having other people from the program there to talk to and other support people”
“To go into more detail about the clinical rotations and to explain more about how student loans work (interest rates accumulating, etc.)”
“Slightly later class start times. More resources given to the support person in addition to the student (such as list of important dates or holidays so we can help with reminders etc).”
“Point out that time between semesters, or even weekends, aren't necessarily free time. I understand that is when clinicals are scheduled.”
“I thought it was good to meet others who have a spouse in the program and to have a connection with how they are feeling about their spouse going back to school”
“I don't have any suggestions that I can think of. It was very well done.”
*3 questions left unanswered

Table 12Open Ended Question Responses from Support Person Stress Survey

Additional Comments
“I haven't been stressed. It probably helps that I have a tendency to not worry a long time about things. If it is something that I can change, I consider changing it. If I can't change it, worrying won't solve it. The primary thing that disturbs me, is the amount of money we will pay each month in loan interest at the end.”

1ST Year Graduates Survey Results from Levic (2017), Ferguson (2018), & Murrell (2019)

Table 13

Average SRNA Daily Stress

	2015/17 N=32	2018 N=14	2019 N=18
Mean	5.6	5.8	5.22
1	3	0	0
2	1	0	3
3	2	0	1
4	2	1	2
5	5	5	5
6	6	5	2
7	8	2	3
8	3	1	0
9	1	0	1
10	1	0	1

Table 14

How much of your stress is from school? (SRNA)

	2015/17 N=32	2018 N=14	2019 N=18
Mean	6.8 68%	7.9 79%	7.33 73%

Table 15SRNA Rating of Sources of Stress

2015/17 N=32	Mea n	2018 N=14	Mea n	2019 N=18	Mea n
Academic Performance	6.3	Time Management/Workload	7.1	Time Management/Workload	6.0
Time Management/Workload	6.0	Academic Performance	5.9	Academic Performance	5.17
Financial Resources	5.5	Financial Resources	4.6	Financial resources	3.56
Family Relationships	3.9	Family Relationships	3.6	Peer (classmate) relationships	2.94
Peer Relationships	3.3	Peer Relationships	1.9	Family relationships	2.11
Faculty Relationships	2.8	Faculty Relationships	1.6	Passing of the certification exam	1.06
Passing Certification Exam	1.8	Passing Certification Exam	0.9	Faculty relationships	0.83
Clinical Performance	1.6	Obtaining a job after graduation	0.8	Obtaining a job after graduation	0.78
Sr Project/Capstone	1.6	Sr Project/Capstone	0.6	Completion of the Sr research project	0.50
Obtaining a Job after Graduation	1.5	Clinical Performance	0.07	Clinical Performance	0.50
Clinical Preceptor Relationships	1.0	Clinical Preceptor Relationships	0.0	Clinical preceptor relationships	0.33

Comparison of 1st year graduates of 2021 to 2nd year graduates of 2021 - Student Survey Results
from Ferguson (2018) & Murrell (2019)

Table 16

Average SRNA Daily Stress

	2018 N=14	2019 N=11
Mean	5.8	6.55
1	0	0
2	0	0
3	0	0
4	1	0
5	5	5
6	5	1
7	2	1
8	1	2
9	0	2
10	0	0

Table 17

How much of your stress is from school? (SRNA)

	2018 N=14	2019 N=11
Mean	7.9 79%	8.45 84.5%

Table 18SRNA Rating of Sources of Stress

2018	Mean N=14	2019	Mean N=11
Time Management/Workload	7.1	Clinical Performance	7.45
Academic Performance	5.9	Time Management/Workload	7.36
Financial Resources	4.6	Clinical Preceptor Relationships	6.36
Family Relationships	3.6	Academic Performance	5.27
Peer Relationships	1.9	Financial resources	5.00
Faculty Relationships	1.6	Family relationships	4.64
Passing Certification Exam	0.9	Passing Certification Exam	4.55
Obtaining a job after graduation	0.8	Obtaining a job after graduation	2.27
Sr Project/Capstone	0.6	Completion of the Sr research project	2.09
Clinical Performance	0.07	Peer (classmate) relationships	1.73
Clinical Preceptor Relationships	0.0	Faculty relationships	1.64