

**Designing a Formal Mentorship Program for New Graduate Certified Registered Nurse Anesthetists: A
Needs Assessment Project at Oregon Health and Science University**

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Problem Description

New graduate certified registered nurse anesthetists (CRNAs) leaving academia and entering clinical practice face unique challenges such as increased autonomy, separation from peers, isolation, and feelings of uncertainty in their new role (Scott-Herring & Singh, 2017). Lack of practical and emotional support when transitioning to a new role and facility can lead to burnout, job dissatisfaction, and turnover (Wakefield, 2018). A formal mentorship program is critical to successfully bridging the gap between the education process and the professional world (Scott-Herring & Singh, 2017). A mentor teaches, helps, and advises a less experienced practitioner; formal mentoring occurs when this relationship is assigned by an organization (Voss et al., 2022). Mentorship programs increase job satisfaction, productivity, and retention (Scott-Herring & Singh, 2017). Mentoring programs for new graduate CRNAs have not been studied extensively but have been successfully implemented in other advanced practice registered nursing (APRN) specialties. One study of 108 APRNs showed a turnover rate of less than 2% over two years when a fellowship program was implemented with a mentoring component (Scholtz et al., 2014). Expert mentoring and guidance are perceived as the second most important factor determining the successful transition to practice from a student registered nurse anesthetist (SRNA) to a CRNA (Tracy, 2017). This academic center lacks a formal mentorship program available to new graduate CRNAs. Creation and implementation of a mentorship program at this institution could positively impact the emotional health of newly hired graduate CRNAs, reduce turnover, and increase recruitment. This needs assessment project aims to identify the need for a formal mentorship program for Oregon Health and Science University (OHSU) new graduate CRNAs.

Available Knowledge

There are 49,000 CRNAs practicing in the US administering 49 million anesthetics per year. On average, 2,400 new graduate CRNAs enter the workforce each year with a high degree of autonomy, making independent decisions in all aspects of anesthesia care (American Association of Nurse Anesthesiology [AANA], 2022). This is a drastic contrast from the bedside nurse role that all CRNAs come from prior to being a provider, where most interventions are ordered by an advanced practitioner. The scope of practice for a CRNA includes conducting a history and physical, preoperative evaluation and care plan, administering medications and controlled substances, and inserting invasive monitoring devices (Merritt Hawkins, 2019).

The transition to practice can be difficult for many new graduate CRNAs and is best described by Benner's Novice to Expert Model and Duchscher's Stages of Transition Theory. Benner's Novice to Expert Model (Appendix B) describes stages in skill acquisition: novice, advanced beginner, competent, proficient, and expert, with the idea that knowledge and expertise are heavily rooted in experience. (Murray et al., 2019). Practitioners graduate as advanced beginners who are task oriented and require prompting and support from guidelines and mentors (Murray et al., 2019). Over time, practitioners develop competency through experience and move from advanced beginner to competent to proficient to expert.

Duchscher's Stages of Transition Theory (Appendix C) describes the stress of transition for new graduate nurses as a significant emotional toll experienced during the transition to practice occurring over a total of twelve months in three phases: doing, being, knowing (Wakefield, 2018). It is not until a few months into practice that the new graduate starts to feel more comfortable, accepts their limitations, asks questions of their colleagues, and moves to the next stage of being (Murray et al., 2019). During the being phase, the new graduate can look beyond their own abilities while beginning to

see the patient, and during the final phase, the practitioner begins to look at the whole of the patient and the system in which they work (Murray et al., 2019).

In successful formal mentorship programs, mentees and mentors are matched based on personality and professional proficiency; allowing mutual selection often leads to better mentor-mentee relationships and program success (Horton, 2003). In formal mentorship programs, mentors and mentees establish realistic goals, offer constructive feedback, and communicate regularly (Horton, 2003). There is a lack of evidence supporting mentorship programs for the student transitioning to new graduate CRNA; however, research on formal orientation and mentorship programs in other APRN specialties suggests that these programs foster one-on-one relationships between a mentor and mentee (Kidner, 2022). The mentee is encouraged to seek guidance from the mentor, ask questions, and share positive or negative experiences during role transition. This style of mentorship program allows new graduates to transition with ease and new APRNs reported feeling supported by a team with a higher sense of confidence and competence (Kidner, 2022).

Evidence suggests that implementation of a formal mentorship program to foster individual relationships can contribute to the success of new graduate CRNAs. Tracy (2017) interviewed 15 new graduate CRNAs and 12 participants identified mentorship as crucial in their transition to practice and noted a positive influence in their role transition. To implement a successful mentorship program, mentors should be educated about their role and expectations. CRNAs surveyed after completion of a preceptorship-mentorship workshop indicated that the education increased their comfort in the mentor role and overall satisfaction (Scott-Herring & Singh, 2017). The formal mentorship program for new graduate CRNAs at OHSU should use this literature as a model for success.

Rationale

This needs assessment project was based off of Benner's Novice to Expert Model and Duchscher's Stages of Transition Theory. These frameworks explain the role transition of new graduate CRNAs in terms of competency (Benner's), how to support the learner during transition, and role adaptation (Duchscher's). During the root cause analysis (Appendix A: Cause and Effect Diagram), two problems were identified: (1) lack of formal mentorship for new graduate CRNAs at OHSU and (2) lack of education for current staff about mentorship. To address these problems, this project engaged mentors in a formal mentorship needs assessment.

Specific Aim

The aim of this project is to conduct a needs assessment to understand the attitudes of current CRNA staff towards a formal mentorship program and to identify the benefits of and barriers to this program for new graduate CRNAs hired at OHSU; findings were presented to the CRNA leadership team in July 2023.

Methods

Context

OHSU is a 576-bed tertiary hospital and academic medical center located in Portland, Oregon. OHSU currently employs 69 CRNAs that work in various settings throughout the hospital, including 36 operating rooms separated into four areas for care of adult inpatients, outpatients, and obstetrics (OHSU, 2022). CRNAs also practice non-operating room anesthesia (NORA) in locations including interventional radiology, computerized tomography (CT) scan, magnetic resonance imaging (MRI), cardiac catheterization laboratory, electroconvulsive therapy, and egg retrieval.

Over the last 5 years, OHSU has hired a total of 26 CRNAs, 10 of which were new graduates. The current orientation for newly hired CRNAs consists of two weeks of training, including three days in each setting (inpatient, outpatient, and NORA), regardless of prior professional experience. In each setting, the new CRNA works with a preceptor and on the third day, they function independently with help available. This preceptor is another CRNA who works directly with the new hire for that day and is available to answer any questions. There is currently an informal mentorship program available to new graduate hires, which consists of one senior CRNA to serve as a resource as needed. This program was implemented with the two most recently hired new graduates and has been utilized to varying degrees.

Interventions

An anonymous, online survey (Appendix D) was sent to all CRNAs at OHSU and was the primary data collection method. The survey was a Likert scale and multiple-choice questions with free-text comments that allowed for quantitative and qualitative data. A Likert scale asks participants about their level of agreement or disagreement with certain questions and was chosen for its simple construction and its ability to produce a highly reliable scale while being easy for participants to read and complete (Taherdoost, 2019). Surveys were distributed via electronic mailing, were no more than 25 questions, and required no more than 30 minutes to complete to reduce survey fatigue (Sharma, 2022). This time frame was made known to the participants before they attempted the survey. Multiple choice questions were used to identify new graduates (< 2 years' experience) from new experienced (> 2 to < 10 years' experience), intermediate experienced (2 to 4 years' experience), and experienced (> 10 years' experience) providers as well as length of employment at OHSU. Because all OHSU CRNAs received the same survey questions, this division of experience and employment assisted in analysis of data.

The second method of data collection included individual interviews with CRNA leadership, 2 new graduate CRNAs, and an informal mentor; each group was asked questions tailored to their role and

experience (Appendix E: Interview Questions). These interviews served to gain qualitative data on the current state of mentorship at OHSU and identified receptiveness to a formal mentorship program. Interviews were conducted through phone calls, video conference, and email. All interview and survey data was collected from February 1, 2023 to March 31, 2023 (Appendix F).

Study of the Interventions

A survey was distributed to OHSU CRNAs to better understand the perceived benefits and barriers to a formal mentorship program at OHSU. The goal was a response rate of greater than 60% to reduce nonresponse bias, which would have decreased the validity and reliability of this needs assessment survey (Fincham, 2008).

Measures

The first outcome measure for this project was to identify whether a formal mentorship program is desirable at this institution. Data collection included percentages of current CRNA staff that agree and disagree with implementation of a formal mentorship program at OHSU. The second outcome measure was to identify benefits and barriers to a formal mentorship program at OHSU, this was demonstrated in the interviews and survey responses. The process measures for this needs assessment project included the total number of surveys distributed, number of surveys completed, and the number of reminders sent to participants to complete the survey. Balancing measures to consider with this project included burden on participants to complete the survey or interviews and the risk of the survey being ignored or overlooked due to volume of emails received daily by participants.

Analysis

Qualtrics software was utilized to gather survey responses. Respondents were divided into categories based on experience indicated through survey answers; less than 2 years, between 2-10

years, and greater than 10 years' experience. Quantitative data in the form of Likert scale responses and multiple-choice question answers were compiled in graphical form. Thematic analysis was done with qualitative data from interviews and written survey responses using manual coding. This data was organized into a table sorted into thematic responses.

Ethical Considerations

Ethical considerations for this needs assessment project included maintaining the anonymity of survey participants and safe handling of data. Participants were required to enter their password and complete two-step authentication prior to accessing the survey to ensure security of data. This project was submitted to the OHSU Investigational Review Board; OHSU gave consent for this needs assessment to be implemented by signing a letter of support.

Results

Surveys

Survey data can be found in Appendix G. A total of 60 surveys were distributed and 59 responses were recorded, yielding a survey response rate of 98.3%. Nine surveys were partially completed and were retained in the analysis, and 50 surveys were fully completed (83.3%). Of the respondents, 49.15% (n=29) have been a CRNA for greater than 10 years and 13.56% (n=8) had less than 2 years' experience, while 22.03% (n=13) had worked at OHSU for greater than 10 years and a total of 27.12% (n=16) had worked at OHSU for less than 2 years. The percentage of CRNAs that had clinical rotations at OHSU as students was 20.34% (n=12) and 36.36% (n=4) of those completed that rotation the final year of their program. Of all respondents, 12.28% (n=7) had a designated mentor when beginning employment at OHSU, 5 of which indicated their mentor was assigned to them.

Regarding experience during their first year at OHSU (Appendix 2G), respondents strongly or somewhat agree as follows: 71.1% (n=38) felt emotionally supported, 84.91% (n=45) felt clinically

supported, and 67.93% (n=36) were satisfied with their orientation. Of the CRNAs that did not rotate through OHSU as a student registered nurse anesthetist (SRNA) (n=43), 69.77% felt emotionally supported, 83.72% felt clinically supported, and 66.44% were satisfied with their orientation. In comparison, of the CRNAs that rotated through OHSU as SRNAs (n=10), 80% felt emotionally supported, 90% felt clinically supported, and 50% were satisfied with their orientation. Of respondents that somewhat or strongly disagree with orientation being satisfactory (Appendix 3G), all have more than 4 years' experience as a CRNA, 55.56% have been employed at OHSU between 4-10 years, 77.78% did not have a rotation at OHSU as an SRNA, 77.78% had prior experience as a CRNA before starting at OHSU, and none had a designated mentor. The majority (55.56%) of CRNAs that somewhat or strongly disagree with feeling emotionally supported at OHSU also responded that it took them more than 6 months to feel comfortable working at OHSU.

The majority of respondents, 60.3% (n=35), indicated it took 5-6 months or greater than 6 months to feel comfortable working at OHSU, with free text comments alluding to the fact that it takes a while to feel comfortable due to the variety of clinical sites and diversity of providers and expectations at OHSU. Those with a mentor took less time to feel comfortable (42.89% indicated 3-4 months) than those without a mentor (43.48% indicated > 6 months), although the sample size was much smaller for those with a mentor (n=7) compared to those without (n=46).

A total of 51 respondents answered survey questions about their feelings toward a formal mentorship program (Appendix 4G) and strongly or somewhat agree as follows: 76.47% (n=39) believe this program would improve relationships among new and experienced CRNAs, 86.28% (n=44) agree this would be beneficial to new graduate CRNAs, and 70.59% (n=36) agree this would be beneficial to all newly hired CRNAs. The rate at which respondents strongly or somewhat disagreed with prior statements was 1.96% (n=1), 1.96% (n=1), and 5.88% (n=3), respectively.

Of those responding to the survey (n=57), 40.35% (n=23) indicated that they started at OHSU as new graduate CRNAs. These 23 respondents strongly or somewhat agreed as follows to statements about being a former new graduate at OHSU (Appendix 5G): 84.21% (n=16) agree a formal mentor to contact about cases would have been helpful and made the transition to practice less stressful, and 63.16% (n=12) felt a mentor would have improved efficiency at work, 78.95% felt they had the support they needed and 57.89% felt sure about asking for help.

Of the 50 respondents that answered questions about being a potential mentor (Appendix 6G), the majority strongly or somewhat agreed as follows: 62.74% (n=32) would be interested in taking a mentoring class, 66.67% (n=34) would use education material if provided, and 68.62% (n=35) agree being a mentor is rewarding. Although there were low levels of disagreement with these statements, there was a higher level of those who neither agree nor disagreed (25.49%, 27.45%, and 29.41% respectively). Only 20% (n=10) of respondents have experience with a mentorship program, but 60% (n=30) indicated they were interested in being a mentor. Some commented that they were worried about being new to OHSU themselves, and others commented that they would like to see the actual plan before they fully commit. Those that responded “no” to interest in being a mentor commented that it would not fit into life right now but maybe in the future. The ideal length chosen for a mentorship program was 3-6 months (78%, n=39). Most respondents indicated they would be willing to spend 1-2 hours a week on the mentorship program, but many specified they would be available for more if needed. Of those willing to be a mentor (n=30), 73.33% have greater than 4 years’ experience as a CRNA with a variety of time spent at OHSU and 90% did not have a mentor when they began employment at OHSU (Appendix 7G).

Interviews

A total of four individuals were interviewed, including two new graduate CRNAs, one faculty CRNA acting as an informal mentor, and one member of the CRNA leadership team. Interview responses

have been organized into ten primary themes (see Appendix H): (1) orientation; (2) informal mentorship; (3) transition to practice; (4) support systems; (5) job satisfaction; (6) culture; (7) mentor selection; (8) barriers to formal mentorship; (9) incentives for mentor; (10) formal mentorship implementation suggestions.

Interviewees described the current orientation process and informal mentorship process for new graduate CRNAs in a similar way. One problem identified with the current process was that the informal mentor felt intrusive by initiating communication and did not want to diminish the confidence of the new graduate CRNA in their transition to practice. New graduates were concerned that the informal mentor was assigned too late in the orientation process and that more resources (including a formal mentor) should be established prior to beginning orientation. Overall, having an informal mentor was perceived as beneficial during the transition to practice for both new graduates. Interviewees identified the size and complexity of the institution as difficult in their transition to practice.

Both new graduate interviewees indicated they are satisfied with their current job. All interviewees perceived the culture of the anesthesia group at the institution to be cohesive, respectful, and supportive. Mentor selection provided by the institution or selection by the individual was not agreed upon by any group. The informal mentor and new graduate interviewees commented that non-clinical time commitment to the mentorship by the mentor would likely be the largest barrier to implementing a formal mentorship program for new graduate CRNAs. Other barriers identified included coverage of the mentor roles when a mentor is on leave and mentor selection among the large anesthesia group. Incentives mentioned by CRNA leadership included Class B credits as well as increasing academic rank at the institution; no specific comments were made on monetary incentives. Suggestions for implementation of the formal mentorship program by the new graduate interviewees include formal meetings and a pamphlet or binder detailing specialty cases. The informal mentor

interviewee suggested a formal plan and checklist to ensure new graduate comfort level with transition to practice.

Discussion

Summary

Primary findings of this needs assessment regarding the attitudes of current CRNA staff towards the implementation of a formal mentorship program for new graduate CRNAs at OHSU include four main themes: the transition to practice, the role of the mentor, program length, and barriers to implementation.

Transition to Practice

The majority of respondents agreed a formal mentorship would reduce stress, improve efficiency, enhance relationships with colleagues and make the transition to practice easier. Of survey respondents, 60.3% (n=35) indicated it took 5-6 months or greater than 6 months to feel comfortable working at OHSU. Twenty-three respondents were new graduate CRNAs at OHSU, of these 84.21% (n=16) agreed a formal mentor to contact about cases would have been helpful and made the transition to practice less stressful, and 63.16% (n=12) felt a mentor would have improved efficiency at work. Of all CRNAs surveyed, 76.47% (n=39) believed a mentorship program would improve relationships among new and experienced CRNAs, 86.28% (n=44) agreed this would be beneficial to new graduate CRNAs, and 70.59% (n=36) agree this would be beneficial to all newly hired CRNAs.

The Role of the Mentor

Mentors desired formal training including a mentoring class and/or educational material. Most respondents 62.74% (n=32) would be interested in taking a mentoring class and 66.67% (n=34) would use education material about the mentor role if provided.

Program Length

Respondents indicated the ideal period for mentoring a mentee and the amount of time required per week. The ideal length for a mentorship program was indicated to be 3-6 months (78%, n=39). Most respondents indicated they would be willing to spend 1-2 hours a week being a mentor.

Barriers to Implementation

Barriers to implementation were identified as non-clinical time commitment of the mentor, coverage of the mentor role when a mentor is on leave, and mentor selection process among the large anesthesia group.

Interpretation

Formal mentorship programs for new graduate CRNAs have not been widely studied; however, survey and interview results from this QI project correspond with themes from other APRN specialties in which formal mentorship programs were established. Our findings suggest a formal mentorship program would make transition to practice less stressful, improve efficiency, and be beneficial to new-hire CRNAs at OHSU. This is echoed in the literature; new graduate APRNs felt a mentorship program made the transition to practice less stressful and were able to assume their new role with competence and confidence (Kinder, 2022).

Successful formal mentorship programs offer education to mentors about their role and expectations (Scott-Herring & Singh, 2017). Most survey respondents expressed interest in attending a class centered on mentorship and would be receptive to receiving educational materials about their role as a formal mentor. This role would include helping the mentee establish realistic goals for orientation and their transition to practice, offering constructive feedback, and communicating regularly with the mentee about their perceived progress and practice (Horton, 2003). The mentor should help foster a

relationship in which the mentee feels comfortable sharing both positive and negative experiences (Kinder, 2022).

In accordance with Duchscher's Stages of Transition Theory (Appendix C), most survey respondents (former new graduates) indicated not feeling comfortable at OHSU until 5-6 months or greater than 6 months. This corresponds with the time periods of transition shock and transition crisis in Duchscher's Theory which include adjusting, accommodating, doubting, and questioning (Murray et al., 2019). Most respondents indicated that the mentorship program should span 3-6 months. This would allow new graduate CRNAs to be supported through the transition shock and crisis phase.

The barriers to implementation of a formal mentorship program identified by this QI project's survey and interviews include non-clinical time commitment of the mentor, coverage for the mentor when on leave, and selection of the mentor among a large anesthesia group. There is no consensus in the literature regarding time spent between the mentee and mentor in a formal mentorship program per week. Most survey respondents who were willing to be a mentor indicated they would spend 1-2 hours of non-clinical time per week with a mentee. The new graduates expressed wanting a formal meeting each week to discuss their progress, transition, and experience. This seems to align with the time most future mentors were willing to commit to this program. Literature suggests that mentors and mentees should be matched based on personality and professional proficiency, this is often accomplished by mutual selection (Horton, 2003). Due to the large number of staff and potential mentors at OHSU, a mentee will not have the opportunity to meet every mentor prior to an appropriate time for mentor selection. The selection of the mentor may have to be facilitated by a leader who feels both the mentee and mentor share similar values.

Implementation of a formal mentorship program for new graduate CRNAs at OHSU would have a positive impact at this institution. New graduate CRNAs would likely report feeling more emotionally and clinically supported throughout the orientation process and an increase in overall satisfaction.

Strengths & Limitations

Strengths of this project include dual sources of data collection, including anonymous surveys and staff interviews. A major strength of this project is the electronic distribution of the anonymous survey yielding a 98.3% response rate. This high survey response rate indicates an accurate sampling of current CRNA attitudes towards the formal mentorship program implementation. The results are limited to the setting in which the project was conducted, therefore limiting the generalizability of the study at other institutions. Selection bias may be a limitation in this study. Interviewees were selected based on their current staff role, including a leadership position, informal mentorship role, and two CRNAs were selected solely because they were the most recent new graduates at the institution. This means there was no face-to-face interaction with most CRNA staff who responded to the survey. To overcome this, free-text comments were added throughout the survey to allow respondents to elaborate on their views and opinions. A limitation to the internal validity of the survey includes the inability to limit users from taking the survey more than one time while keeping the survey anonymous. It is doubtful that this occurred, but this imprecision of data collection may have contributed to the high response rate.

Conclusion

This needs assessment provides information on the current attitudes toward a formal mentorship program at OHSU. This project may provide a framework for similar assessments at other large academic facilities. Although research on CRNA-specific mentorship programs is limited, studies on mentorship in other APRN specialties have proven beneficial. The results of this survey indicate that the majority of OHSU CRNAs are in favor of a formal mentorship program at OHSU. As the transition to practice has proven stressful through the models discussed in this paper, exploring ways to reduce this stress is imperative. Future projects should focus on the formation and implementation of a formal mentorship program at OHSU for newly hired CRNAs.

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Appendix A

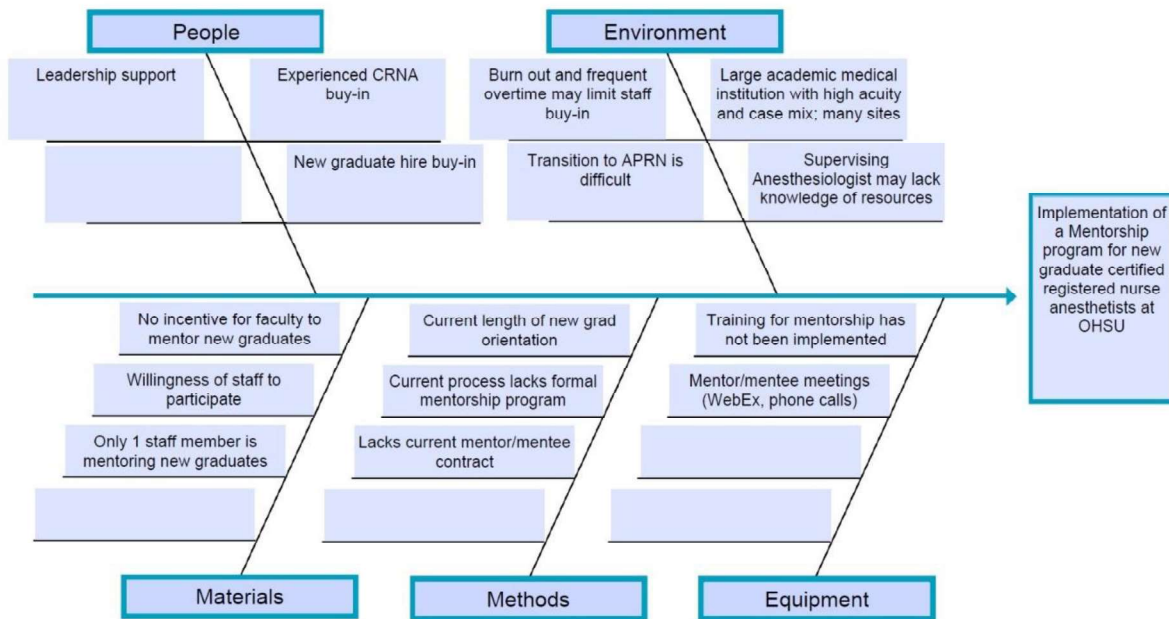
Cause and Effect Diagram

Template: Cause and Effect Diagram

Team: Loren Powell and Micah Ries

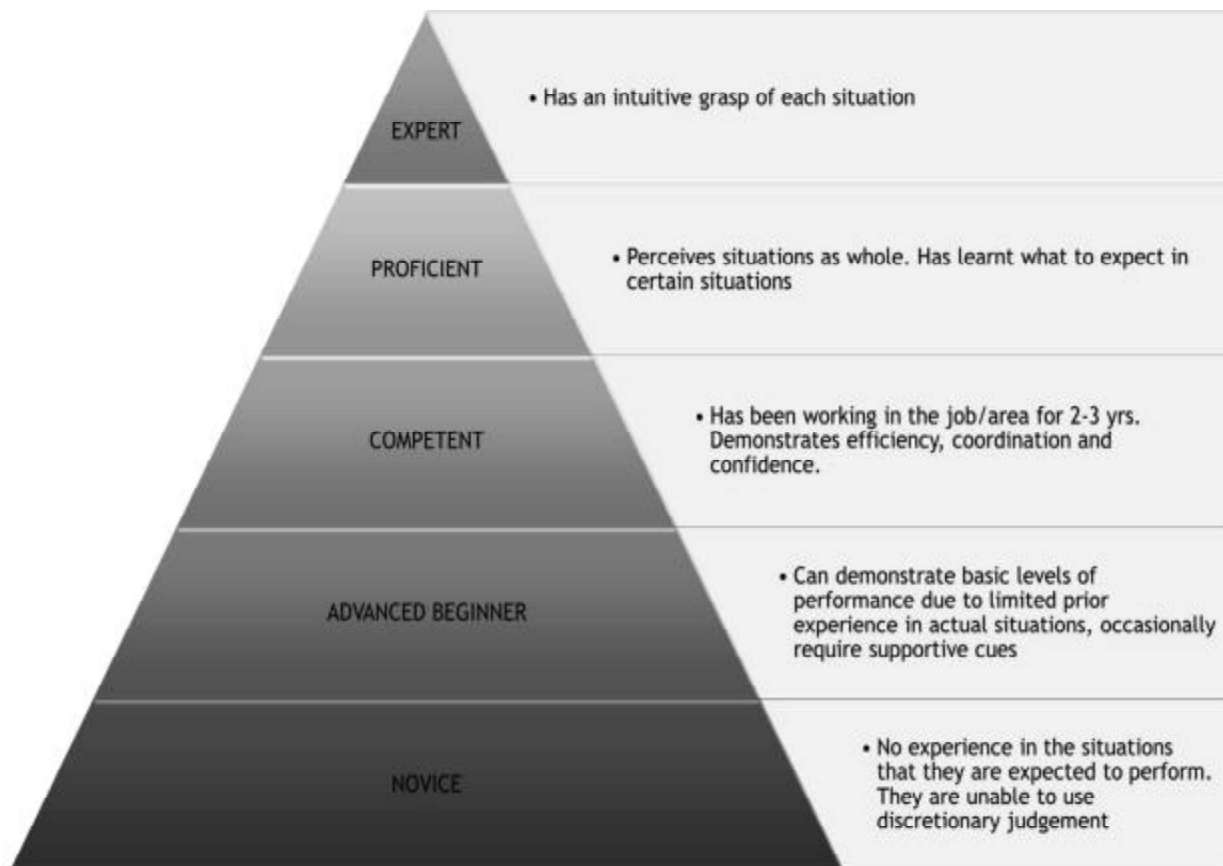
Project: New graduate mentorship program

- 1) Input the effect you'd like to influence.
- 2) Input categories of causes for the effect (or keep the classic five).
- 3) Input causes within each category.



Appendix B

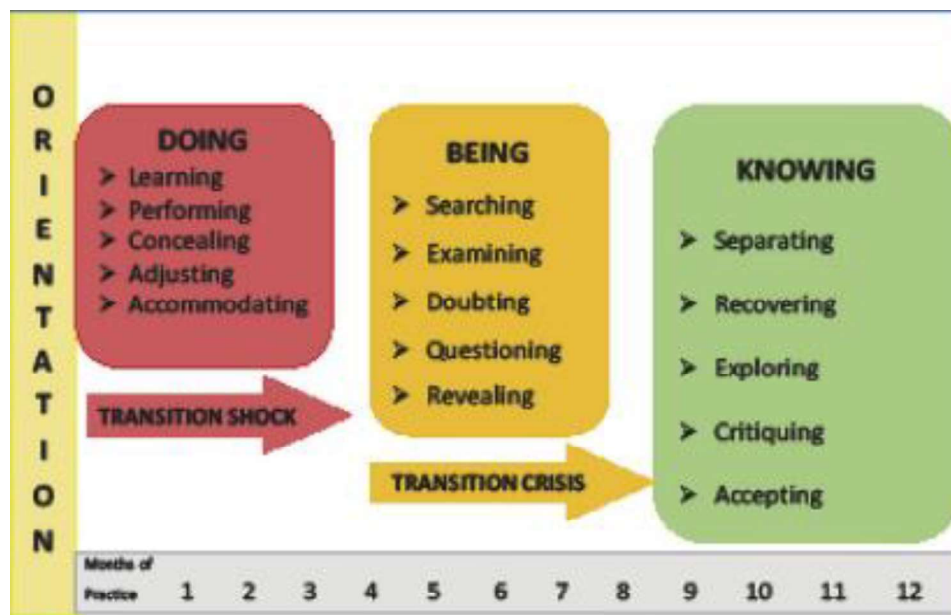
Benner's Novice to Expert Model



Murray M., Sundin D., Cope V. Benner's model and Duchscher's theory: Providing the framework for understanding new graduate nurses' transition to practice. *Nurse Education in Practice*. 2019;34:199-203. doi:10.1016/j.nepr.2018.12.003

Appendix C

Duchscher's Stages of Transition Theory



Murray M., Sundin D., Cope V. Benner's model and Duchscher's theory: Providing the framework for understanding new graduate nurses' transition to practice. *Nurse Education in Practice*. 2019;34:199-203. doi:10.1016/j.nepr.2018.12.003

Appendix D

Survey Questions

Q1

How many years have you been a CRNA?

- < 2 years
- 2-4 years
- 4-10 years
- > 10 years

Q2

How long have you been employed at OHSU?

- < 2 years
- 2-4 years
- 4-10 years
- > 10 years

Q3

Did you have a clinical rotation at OHSU as a Student Registered Nurse Anesthetist (SRNA)?

- Yes
- No

Q4

 [Display this question](#)

If Did you have a clinical rotation at OHSU as a Student Registered Nurse Anesthetist (SRNA)? Yes Is Selected

Was your SRNA rotation at OHSU the final year of your program?

- Yes
- No

Q5

Was OHSU your first employer after graduation from your CRNA education program?

- Yes
- No

Q6

I had a designated mentor when I began employment at OHSU as a CRNA.

- Yes
 No

Q7

 Display this question

If I had a designated mentor when I began employment at OHSU as a CRNA. Yes Is Selected

My mentor at OHSU was assigned to me.

- Yes
 No

Q8



What is your level of agreement with the following statements about your experience at OHSU.

	Strongly Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
I felt emotionally supported during my first year of employment at OHSU. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt clinically supported during my first year at OHSU. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was satisfied with my orientation at OHSU. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q9

It took me ____ months to feel comfortable working at OHSU.

- < 1 month
 1-2 months
 3-4 months
 5-6 months
 > 6 months

Comments:

Q10



A formal mentorship program would match a new graduate CRNA with a current CRNA mentor to help establish regular communication, realistic goals, and provide constructive feedback to the mentee. The goal of this program is to facilitate a successful transition to practice for the new graduate CRNA.

What is your level of agreement with the following statements about a formal mentorship program at OHSU.

	Strongly Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
A formal mentorship program at OHSU would improve relationships among new and experienced CRNAs. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A formal mentorship program at OHSU would be beneficial to new graduate CRNAs. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A formal mentorship program at OHSU would be beneficial to all newly hired CRNAs. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q11



Display this question

If Was OHSU your first employer after graduation from your CRNA education program? Yes Is Selected

What is your level of agreement with the following statements about being a former new graduate at OHSU.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
As a former new graduate, having a formal mentor to contact about cases would have been helpful. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As former new graduate, having formal mentor would have made transition to practice less stressful. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a former new graduate, I often felt like I did not have the support I needed. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a former new graduate, I felt a mentor would have improved my efficiency in my work. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a former new graduate, I often felt unsure about asking for help. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q12



What is your level of agreement with the following statements about being a potential mentor.

	Strongly Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
As a potential mentor, I would be interested in taking a class on mentoring. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a potential mentor, I would use education materials on mentoring if provided. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Being a mentor is rewarding. Comments: <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q13



I have experience with a formal mentorship program outside of OHSU for CRNAs being either a mentee or mentor.

- Yes
- No

Q14

I am interested in being a mentor.

- Yes
- No

Q15

An ideal mentorship program length would be:

- 3 weeks
- 3 months
- 6 months
- 1 year
- Indefinitely

Q16

As a mentor, how much time per week would you be willing to dedicate to the mentee?

- Comment:

Appendix E

Interview questions

Leadership (Jared Fairchild and Kristen Bowden)

- What are the current barriers to a formal mentorship program at OHSU?
- What incentives would be available for mentors in a formal mentorship program?
- Describe the anesthesia care team model at OHSU.
- How often do you work with new anesthesiologists in the care team model?
 - o Do new/inexperienced anesthesiologists and new/inexperienced CRNAs get paired together? How often? What kinds of problems do you see when this happens?

Informal Mentor (Tim Gerke)

- Describe current informal mentorship process.
- What problems have you identified with the informal mentorship program?
- Describe barriers to a formal mentorship program.
- What would be beneficial for potential mentors to be successful.

New Graduates (Two informal mentorship participants)

- How long have you been employed at OHSU?
- Did you attend OHSU's Nurse Anesthesia program?
 - o Did you do any rotations at OHSU while in the program?
- Describe your experience with the informal mentorship program.
- What could have made your transition to practice better?
- What have you experienced that made your transition to practice easier?
- Would it be helpful to be able to select a mentor from a pool of mentors at OHSU?
- What support systems are in place at OHSU and what could improve this?
- Are you satisfied with your current job at OHSU? Please explain.

Appendix F

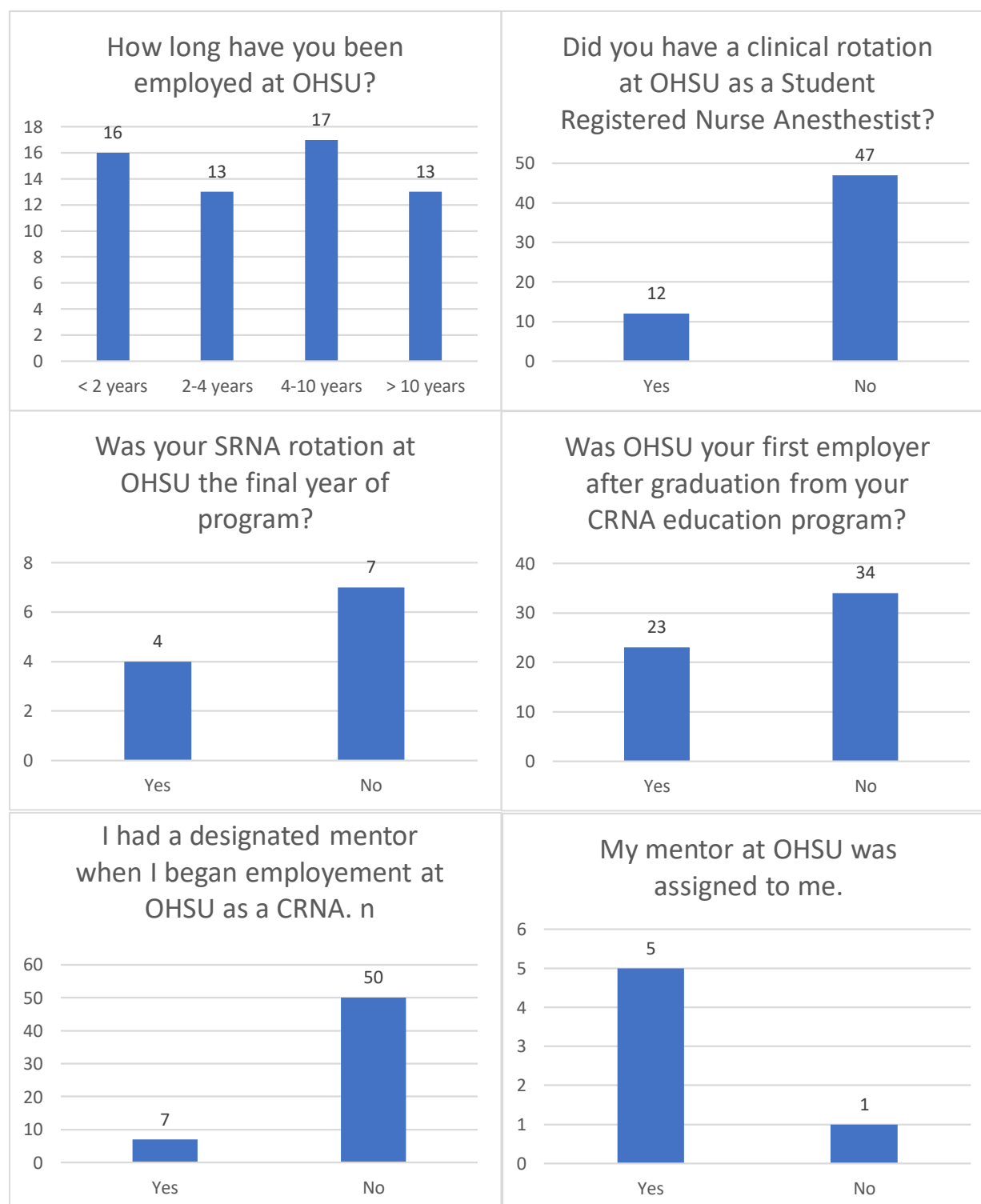
Project Timeline

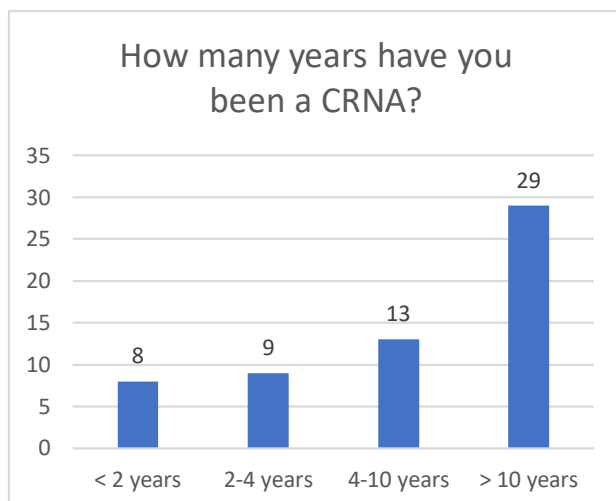
Needs Assessment of Formal Mentorship Program at OHSU

	Dec- Jan	Feb	March	April	May	June	July- September
Finalize project design and approach (703A)	X						
Complete IRB determination or approval (703A)	X						
Finalize Survey and Proposal		X					
Survey Collection and Interviews		X	X				
Data analysis				X			
Write sections 13-17 of final paper (703B)					X	X	
Prepare for project dissemination (703B)							X

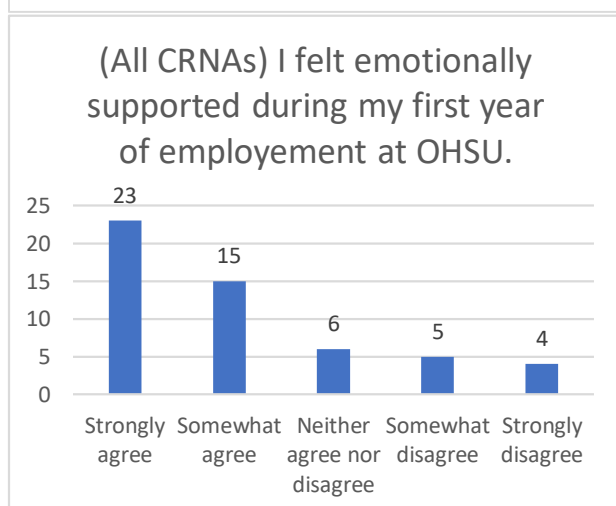
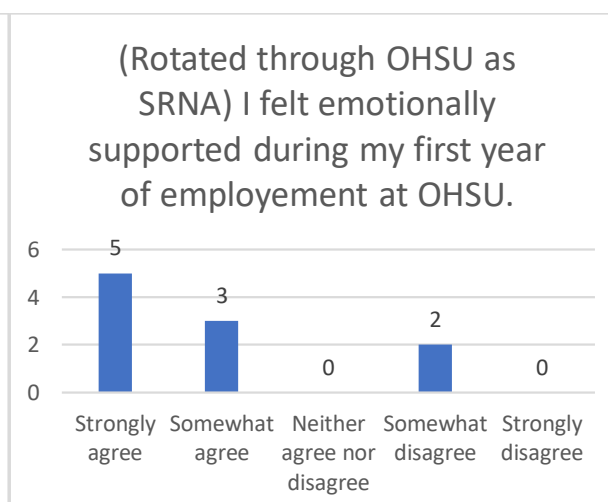
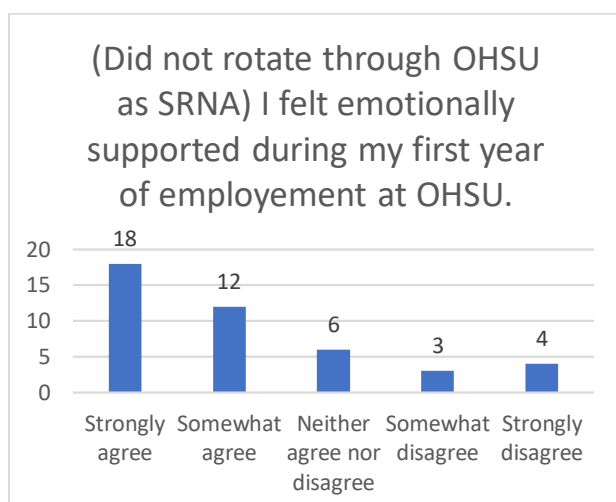
Appendix G

G I: Demographics

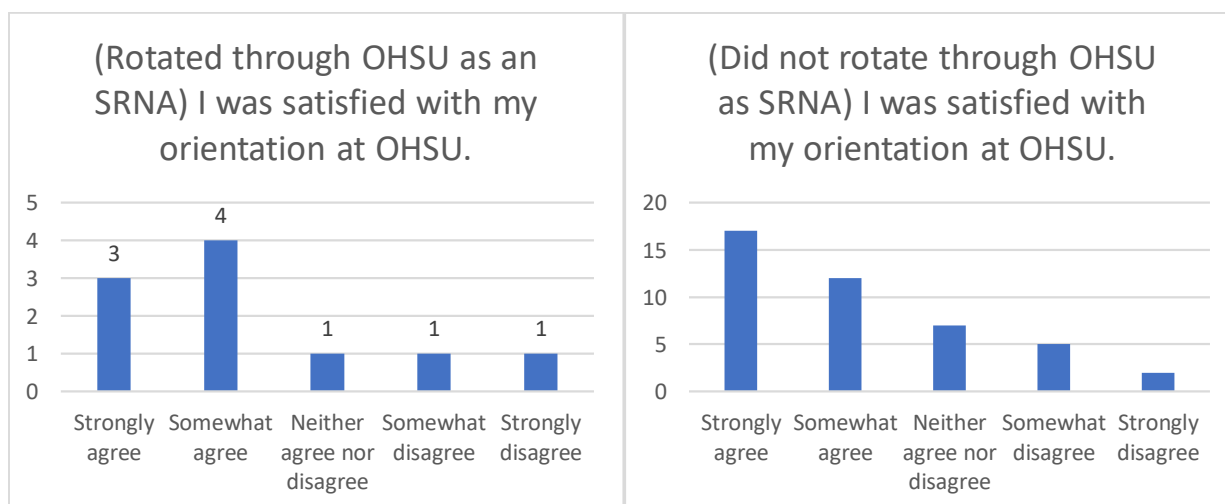
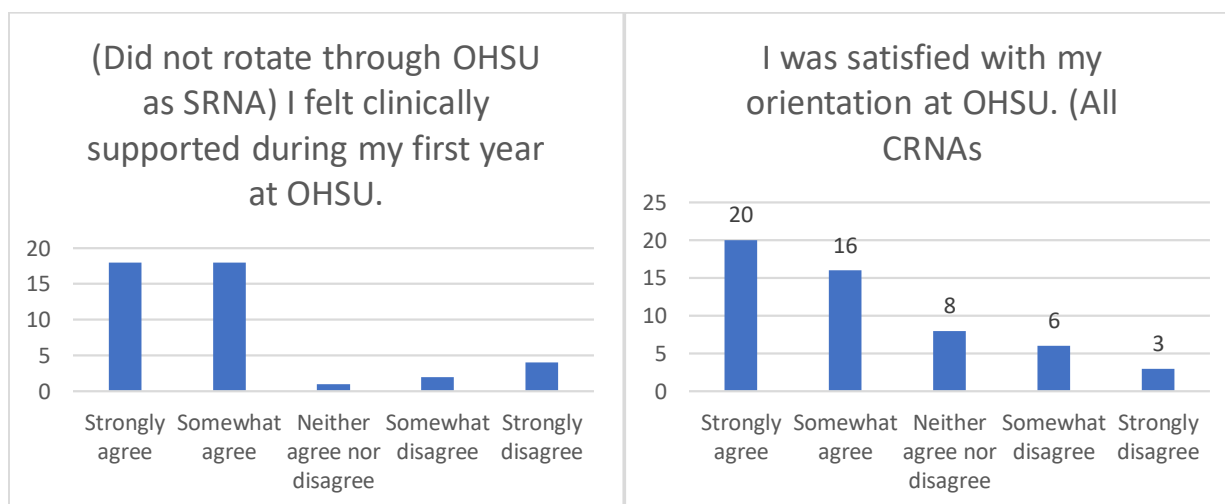
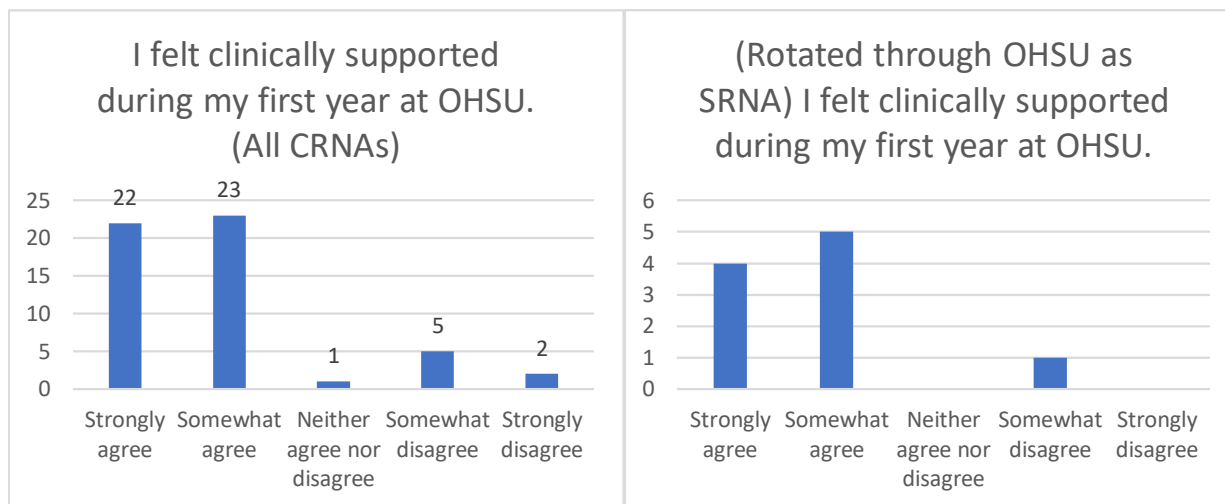




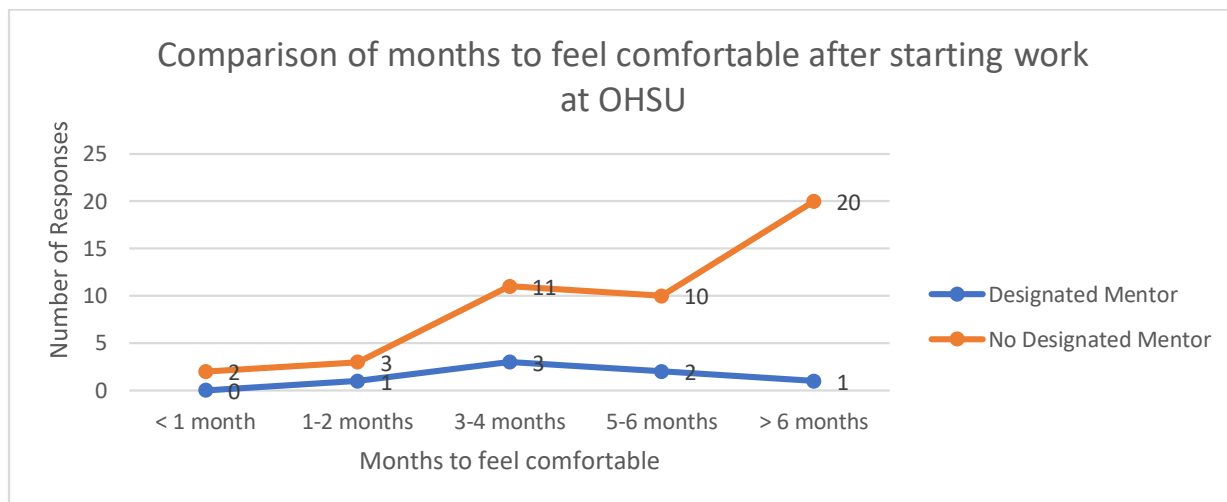
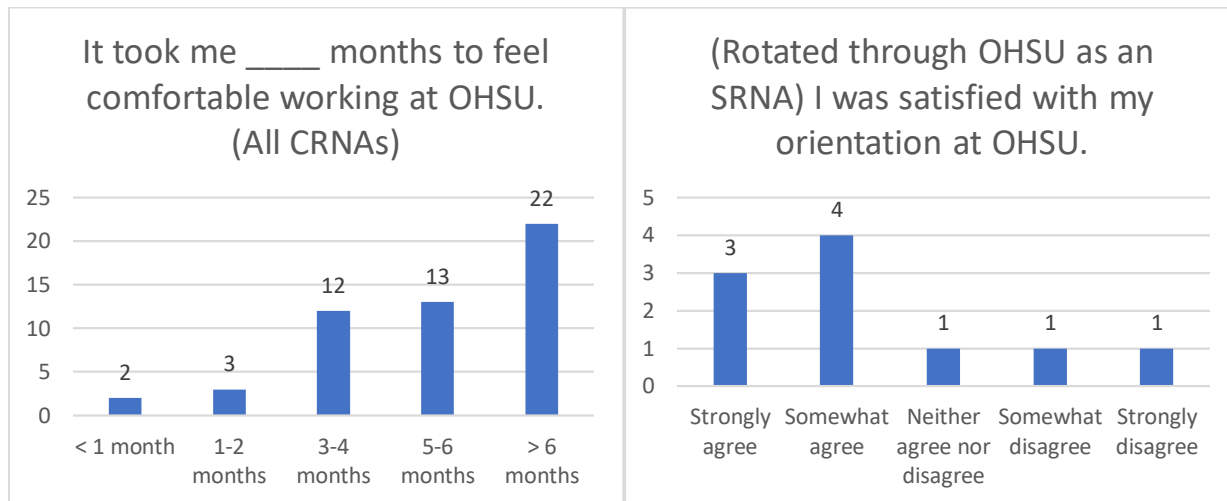
G II: What is your level of agreement with the following statements about your experience at OHSU?



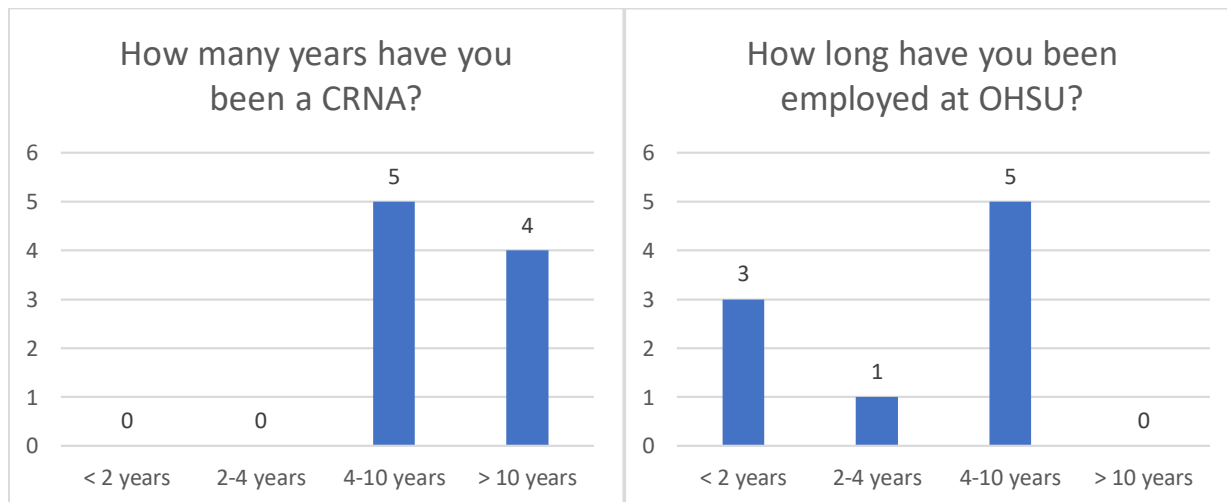
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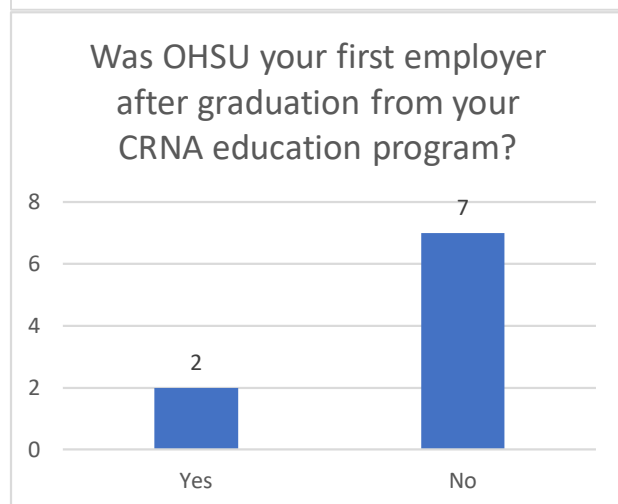
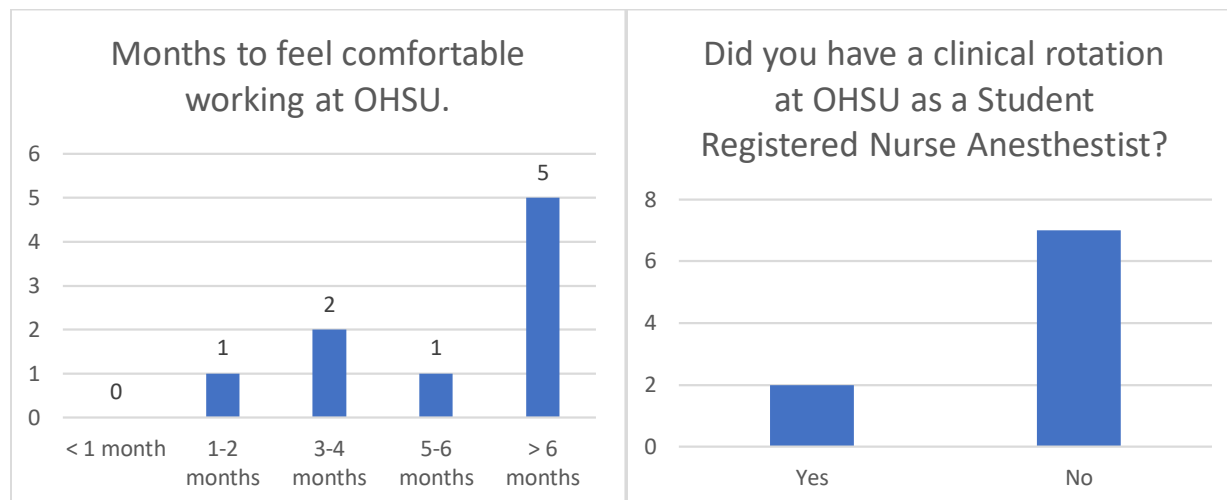
OREGON HEALTH & SCIENCE UNIVERSITY'S NEW GRADUATE CRNA MENTOR PROGRAM



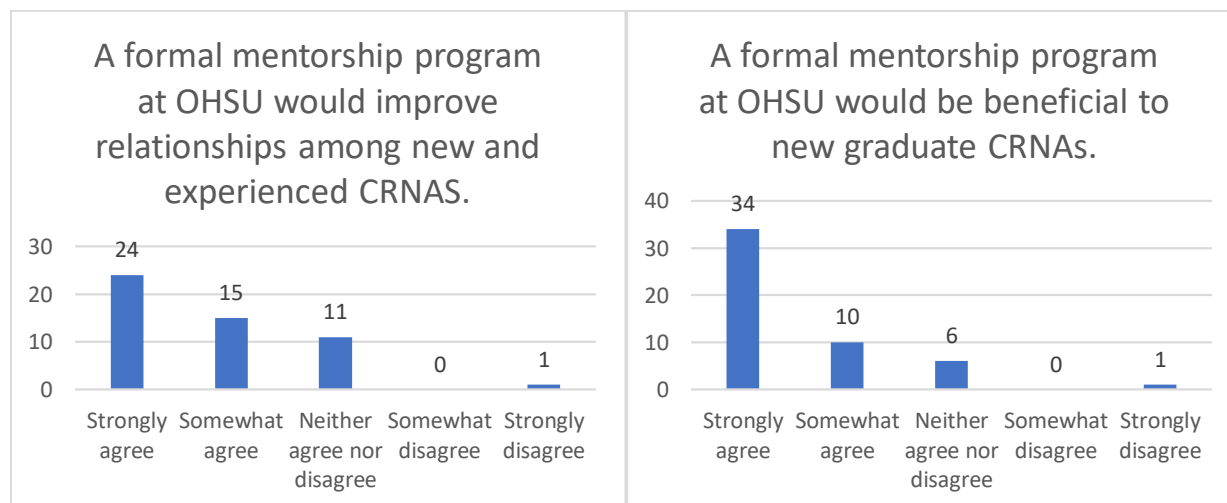
Appendix G III: Demographics of those that disagree (somewhat or strongly) with the orientation being satisfactory.



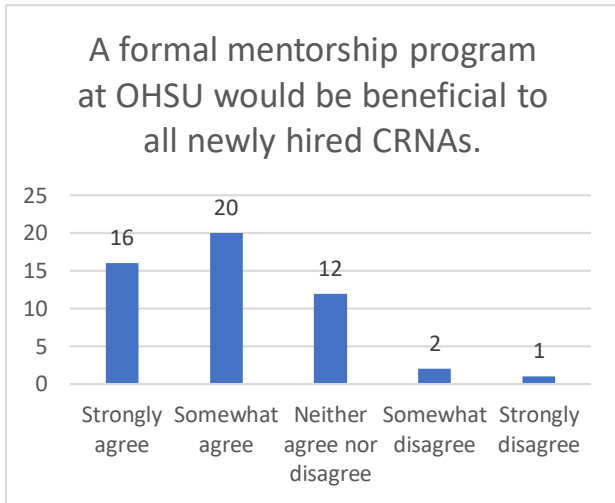
OREGON HEALTH & SCIENCE UNIVERSITY'S NEW GRADUATE CRNA MENTOR PROGRAM



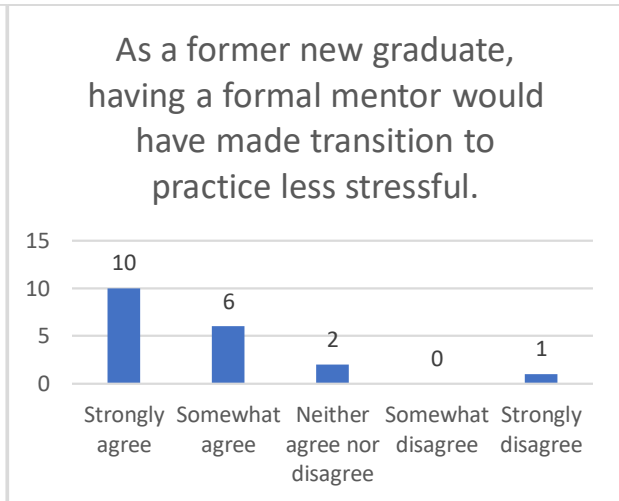
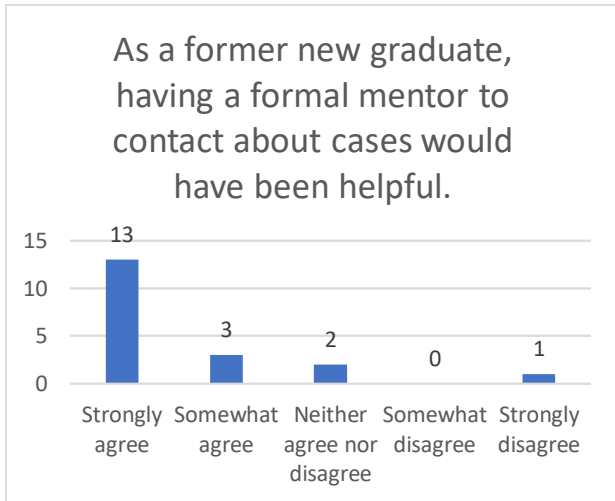
G IV: What is your level of agreement with the following statements about a formal mentorship program at OHSU.



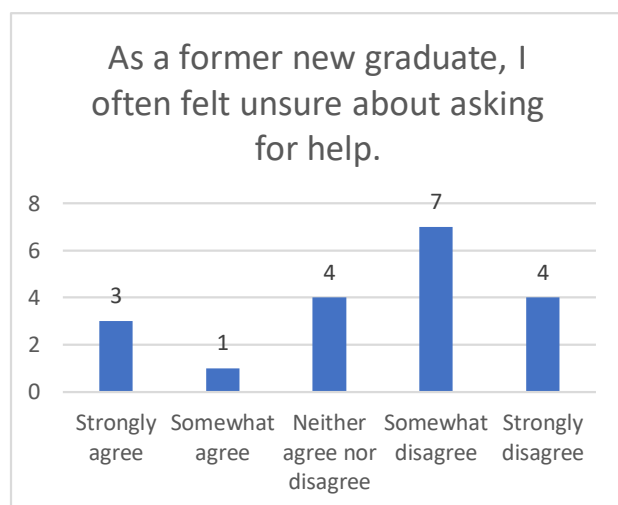
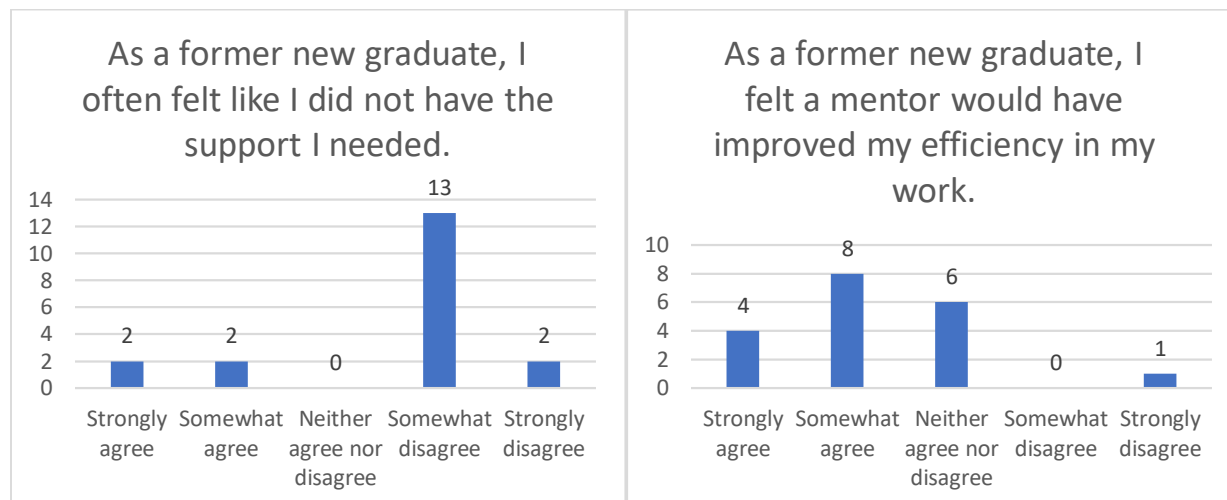
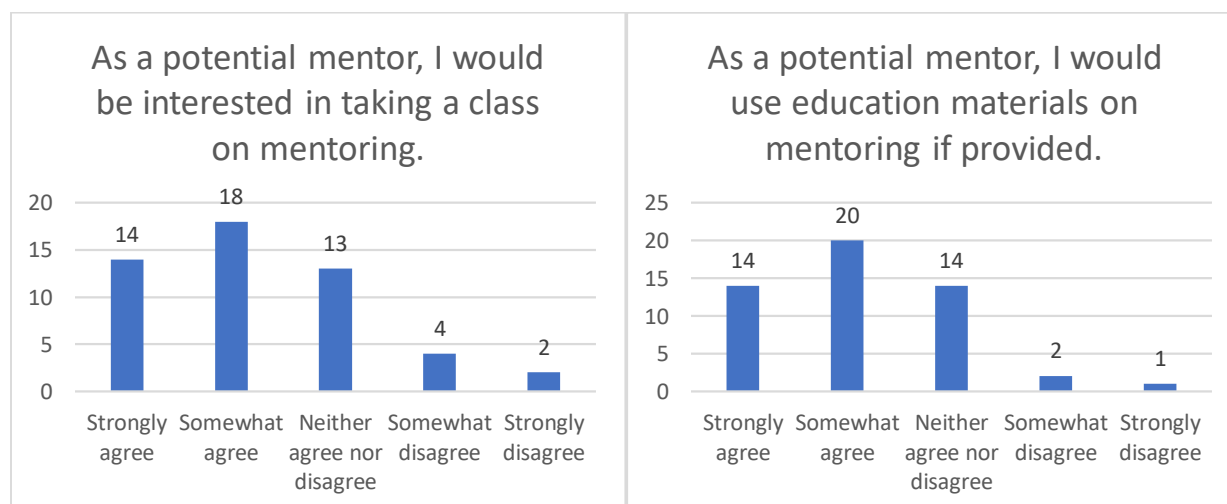
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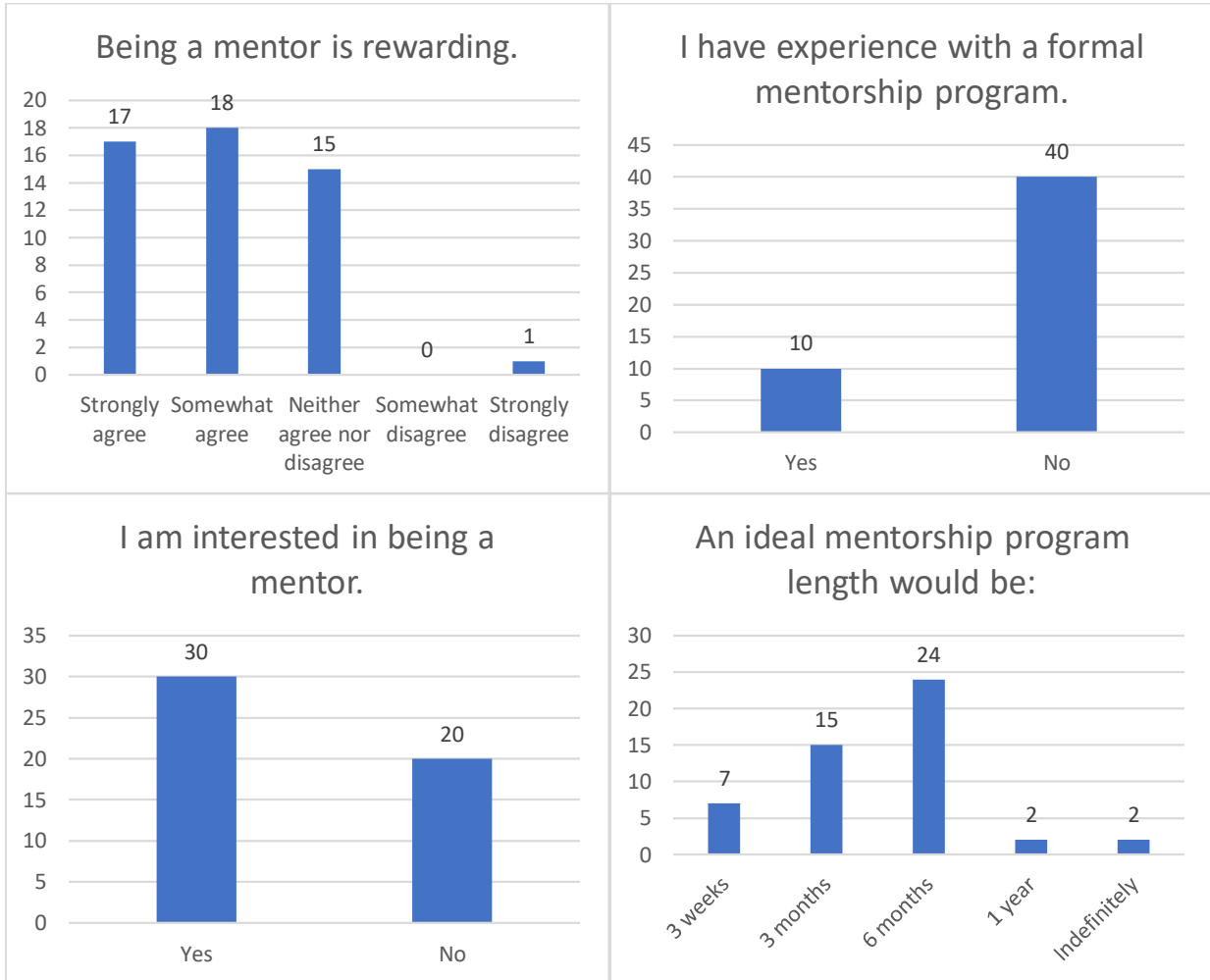
G V: What is your level of agreement with the following statements about being a former new graduate at OHSU.



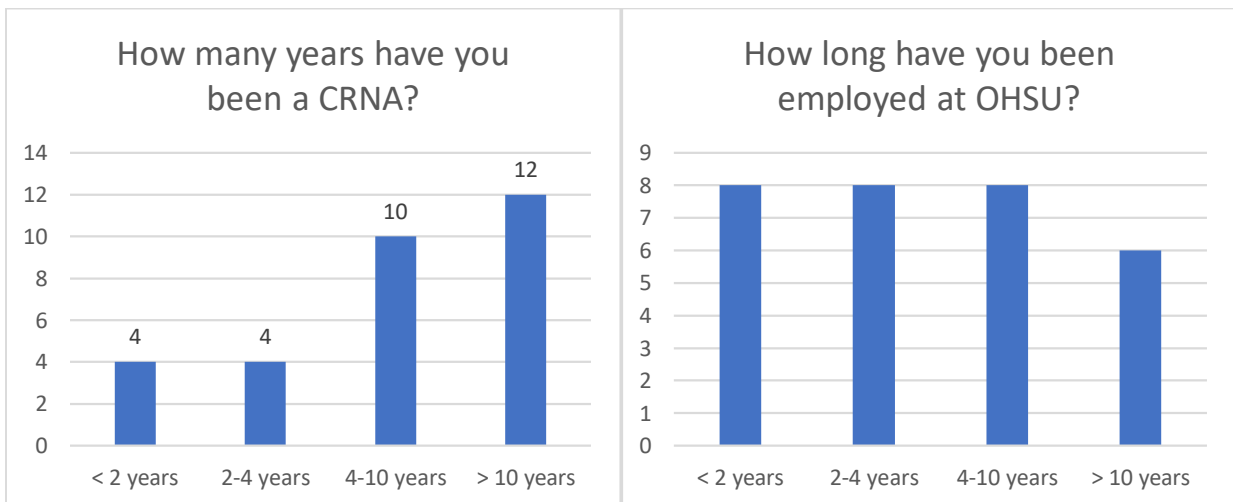
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**G VI: What is your level of agreement with the following statements about being a potential mentor.**

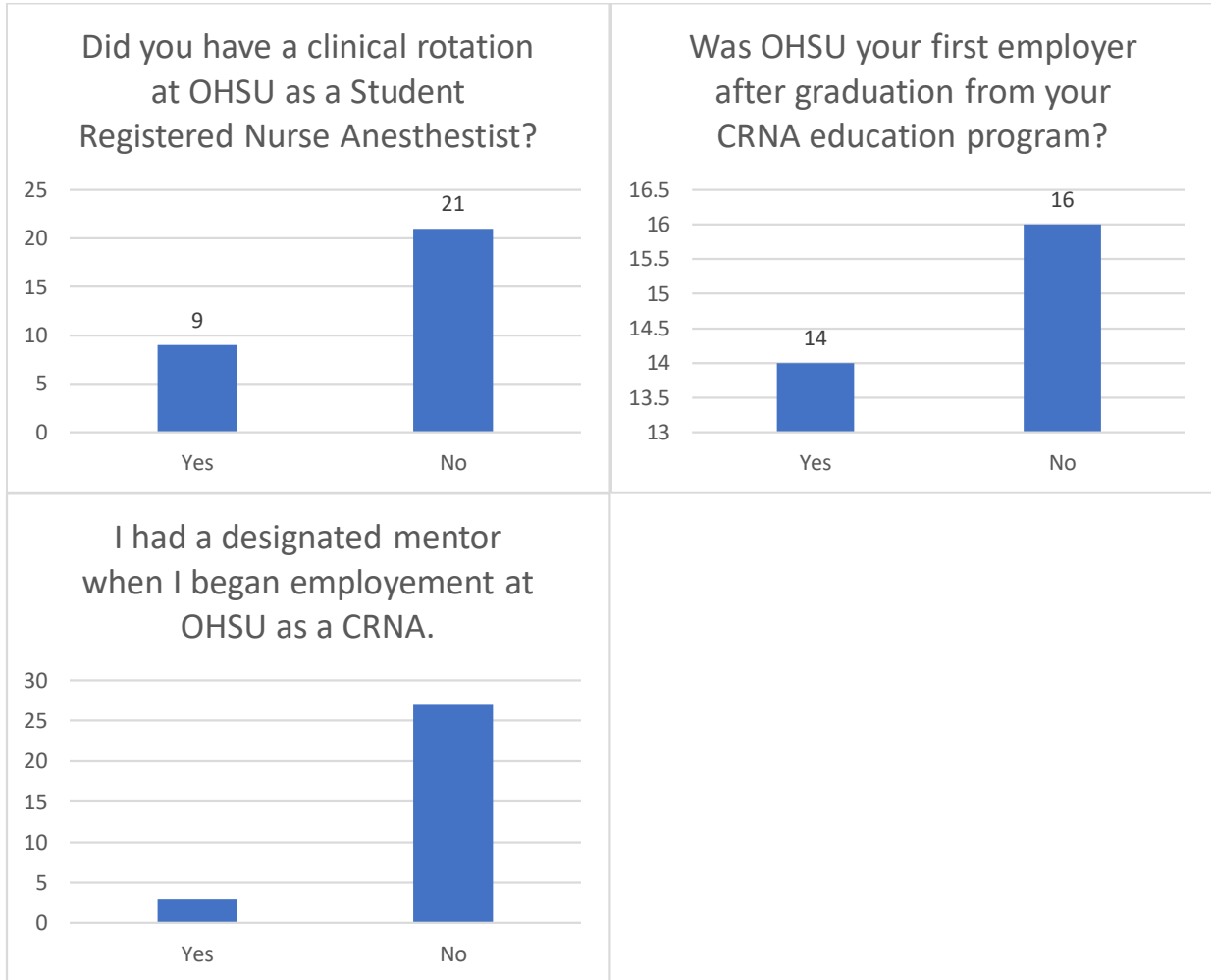
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Appendix G VII: Demographics of those interested in being a mentor.



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Appendix H

Interview Themes

Themes Derived from Targeted Interview

Themes	Coding Phrases	Responses by Interviewee by Type
Orientation	Current Process	<ul style="list-style-type: none"> • Leadership: The new-hire CRNA orientation involves a robust exposure to all anesthesia locations. This is to develop location comfort and help highlight resource availability. • Mentor: New hires work 1:1 with a CRNA for one week at each site and then work independently for one to two weeks at that site before moving to the next. • New Graduate 1: Orientation consisted of two to three days paired with a CRNA and then independently practicing in that area spending about one week in each anesthesia site- NORA, South OR, and CHH.
Informal Mentorship	Current Process	<ul style="list-style-type: none"> • Mentor: No formal mentorship process. Volunteered to mentor both new graduates as a main point of contact for any questions. For their first four weeks the mentor independently reviewed the new graduates' cases and then communicated expectations via text or email. • New Graduate 1: The informal mentor reached out towards the end of orientation. The mentor would look up cases and text tips or tricks needed. The mentor reiterated their availability for answering questions. • New Graduate 2: Very informal process. Communication with the informal mentor about cases the night prior for tips and tricks.

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	Problems with Process	<ul style="list-style-type: none"> • Mentor: Concern expressed that initiating communication every case for four weeks may be intrusive and diminish their confidence. After four weeks, allowed new graduates to reach out when needed. Additionally, without a formal mentorship program people get lost in the cracks at this large institution, people assume someone is communicating with them, when in reality no one is helping the new graduate. • New Graduate 2: Concern that the informal mentor was established at the end of the orientation process, felt lost at the beginning of orientation, and needed more resources.
Transition to Practice	Ease the Transition	<ul style="list-style-type: none"> • New Graduate 1: Having an informal mentor reach out consistently helped with the transition to practice. • New Graduate 2: More resources available to ease the transition at such a large institution. Suggested a summary pamphlet of different anesthesia sites and surgeries.
	Difficulties with Transition	<ul style="list-style-type: none"> • New Graduate 1: Communicated feeling well prepared by their education but going from student to provider there is an extra weight and burden, knowing "you are it." • New Graduate 2: It is a large institution, and the layout is difficult to learn; there are also many complex cases and different surgeons.
Support Systems	Informal	<ul style="list-style-type: none"> • New Graduate 1: Support systems utilized were all informal, the new graduates communicated and shared experiences and experienced CRNAs also helped with the transition.

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		<ul style="list-style-type: none"> New Graduate 2: Communicated frequently with another CRNA, this was an informal support system.
	Formal	<ul style="list-style-type: none"> New Graduate 1: Revealed they knew OHSU had them available but was not sure on accessibility details.
Job Satisfaction	Current Satisfaction	<ul style="list-style-type: none"> New Graduate 1 & 2: Overall, each new graduate suggested they were satisfied with their current job.
Culture	Culture of the Group	<ul style="list-style-type: none"> Leadership: There is a collegial and mutually respected relationship between CRNAs and physicians. New Graduate 1: There is no animosity between the CRNAs and physicians, appreciates being viewed as a colleague. New Graduate 2: The staff, anesthesiologists and CRNAs, are supportive when asked questions. The anesthesia group is cohesive.
Mentor Selection	Individual Selection	<ul style="list-style-type: none"> New Graduate 1: Maybe if the new graduate has completed a clinical rotation at OHSU, it would be beneficial to select their own. If the new graduate is coming from out of state, selection would not be helpful until after orientation. Mentor: There could be a benefit to assigning a mentor after orientation so the new graduate can have input in the selection process.
	Provided	<ul style="list-style-type: none"> Mentor: Assigning the mentor early or even prior to orientation has the benefit of the mentor being available throughout their time when practicing independently at each site. New Graduate 2: Communicated the need for the mentor to be assigned before orientation.
Barriers to Formal Mentorship	Large Anesthesia Group	<ul style="list-style-type: none"> New Graduate 2: The barrier to selecting a mentor is the size of

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		the anesthesia group. It is difficult to meet everyone and then figure out who you work well with quickly.
	Time	<ul style="list-style-type: none"> • Leadership: The largest barrier is non-clinical time among CRNAs to establish this formal program. • Mentor: Establishing how long the mentorship will be and time required from each mentor. Also considering mentors may take vacation and who will cover for them if this occurs. • New Graduate 1: Finding faculty that is amenable to taking the extra time to meet and establish goals.
	Participation	<ul style="list-style-type: none"> • Mentor: Staff willingness to participate due to staff burn out
	Education	<ul style="list-style-type: none"> • Mentor: Faculty will likely need education on mentorship and establishing goals with the mentor.
Incentives for Mentors	Credits	<ul style="list-style-type: none"> • Leadership: AANA Class B credits are awarded to mentors.
	Rank	<ul style="list-style-type: none"> • Leadership: Mentorship is included in the educational SOM portfolio as part of academic rank.
Formal Mentorship Implementation Suggestions	Formal Meetings	<ul style="list-style-type: none"> • New Graduate 1: The new graduate suggested formal meetings once a month or once a week to talk through things. This may allow more time to discuss the transition to practice and not just discuss tips for cases the night before.
	Pamphlets/Resources	<ul style="list-style-type: none"> • New Graduate 2: Due to the high number of specialty cases in different anesthesia areas, having a pamphlet or book that summarizes the cases and surgeon preferences would be helpful.
	Skills Checklist	<ul style="list-style-type: none"> • Mentor: Implementing a formal plan and a checklist of skills to ensure comfort with all cases.