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**Perceptions of Nurse Anesthesia Post-Certification Fellowship Training: What have  
New Graduate Registered Nurse Fellowships Taught us?**

Leah M. Gordon

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**Abstract**

With the increased educational requirements for entry into practice for Advanced Practice Registered Nurse (APRN), post-graduate fellowship training interest and implementation is on the rise. Specialized experiences in all fields of healthcare help to expand the level of information that characterizes the specific discipline, and offers evidence to maintain the delivery of patient care. This has been evident with the new graduate registered nurse fellowships which have demonstrated that they will prepare nurses with advanced knowledge, skills, and experiences for the betterment of patient care. The purpose of this study was to evaluate what Student Registered Nurse Anesthetists (SRNA) perceive about additional post-certification training, and, to determine if they would have an interest in completing a critical pediatric fellowship. The findings of the study revealed that SRNAs had great interest in a fellowship opportunity following the completion of their anesthesia education.

Key words: nursing training, fellowship, fellowship training, graduation, post-graduation nursing, advanced nursing education.

**Introduction**

With the growing intricacy of patient healthcare requirements, the unparalleled dependence on technology, and the need to provide an environment of security for patients and families, healthcare providers are working overtime to meet the needs of the public. In addition, as the Affordable Care Act (ACA) places increasing demands on the healthcare workforce, Advanced Practice Registered Nurses (APRNs) offer a unique prospect to meet the healthcare requirements of the nation. As stated by Liao, Quraishi, and Jordan, “In particular, special attention to issues concerning the anesthesia workforce is critical because of the direct effect on access to surgical, anesthesia, and pain management services.”<sup>1</sup> It is with this in mind that the American Association of Nurse Anesthetists (AANA) took a major step forward in 2014 by releasing fellowship standards for the creation and implementation of post-certification fellowships.<sup>2</sup>

Limited data is available regarding APRN fellowship training. However, new graduate registered nurse fellowship programs have been extensively researched and implemented over the past decade. New graduate registered nurse fellowship programs are intended to give nurses with a research focused fellowship the opportunity to widen their research or scientific background, or to broaden their potential for clinical practice in nursing. Furthermore, there are benefits of financial status, increased autonomy and flexibility.<sup>3</sup> Most new graduate nurse Fellowships focus on preparing nurses to be future nurse researchers who will contribute to the body of nursing knowledge. This is accomplished by expanding, synthesizing, or testing theories relevant to nursing phenomena, or testing clinical interventions derived from these theories using diverse research methods and knowledge from other disciplines.<sup>4</sup> Expanding Fellowships into APRN education has several similar goals including increased autonomy, the development of individual research skills, and the integration of noteworthy knowledge and education into the clinical care of patients.<sup>5</sup>

When considering Fellowship training for APRNs, it is essential to consider new graduate nurse Fellowships and why they are so valuable in today's nursing education process. The bachelors nursing program comprises all of the content in the associate-degree and diploma programs; in addition it offers students with a more comprehensive study of the nursing research, clinical skills, social and physical sciences, nursing management and leadership, and the public and community nursing.<sup>6,7</sup> This wider and more thorough education improves the student's professional maturity and facilitates the baccalaureate students to better understand the various cultural, social, political and economic concerns that influence patients and impact healthcare.<sup>8</sup> But in today's world, particularly for the United States health care delivery, the conventional responsibility of the nurses as bedside healthcare providers no longer can help support a health system that requires prolonged delivery of primary and outpatient care, huge numbers of specialists to manage a range of acute and chronic diseases, and broader utilization of nurse practitioners to give inhabitants more reachable and reasonable care.<sup>9</sup> Nor will simply bachelor degrees be enough to fulfill the increasing need for nurses in areas, like case management, leadership, disease prevention and health promotion. The accelerating changes in health care delivery demands highly educated nurses, capable of making decisions independently and teaching and preparing patients how to meet the treatment regimens and maintain good health.<sup>10,11</sup> In fact, these days registered nurses not merely should converse well with patients and doctors, but also should have wide capability as a provider, manager, coordinator and planner of care.<sup>12,13</sup> These responsibilities incorporate dexterity at delegation and necessitate more scheduling and planning treatment for patients.<sup>14</sup>

Also, it is commonly thought that the education which the health care professions receive following graduation is of fundamental importance in their future career. This is in part because during the nursing undergraduate phase, students are understandably focused on

what is in front of them in terms of content and the need for passing the RN Board exam. One could argue that content in any educational program is rife with information that will ultimately play an inconsequential and minor part in their general worth to the community.<sup>15</sup> At the bachelor level registered nurses may have limited professional practice, and thus Fellowship training is ideal to fill this gap. For this reason more nurses recognize the need for training and increased support. Likewise, Government health strategies, American Organization of Nurse Executives, American Association of Critical-Care Nurses (AACN), Nursing Organizations Alliance, American Nurses' Credentialing Center, American Association of Colleges of Nursing and numerous other professional organizations have also identified a need for advanced knowledge and skills for nurses by means of specialty new nursing graduate education.<sup>16,17,18</sup>

As fellowships expand in the APRN arena, it is expected that there will be uncertainty, conflict, and unclear expectations regarding the value of post-certification specialty Fellowships. This paper will explain, compare and explore what surveyed student nurse anesthetists think regarding post-certification fellowship training.

## **Methods**

An observational cross-sectional study was carried out during the month of June 2015. This study design was used as it utilizes different groups of individuals who differ in the variable of interest, but may share characteristics like educational background, ethnicity or socioeconomic status.<sup>19</sup> This design was also ideal because it allows selection of people who are extremely alike in most areas excluding age.<sup>20</sup> An observational cross-sectional study makes inferences concerning probable associations and perceptions and also collects preliminary data with the purpose of supporting experimentation and further research.<sup>21</sup> Using this same research method, this study made inferences from the perceptions and

expectations of student nurse anesthetists, and data was gathered for future research and implementation.

An online question based survey tool was used to rate whether or not SRNAs would have an interest in a post-certification pediatric fellowship. Surveys were distributed to 156 SRNAs from accredited programs in Minnesota. The participants (SRNAs) were from three different schools of nurse anesthesia including one doctoral program and two master's degree programs. The SRNAs were at various stages of nurse anesthesia and pediatric anesthesia experience. The participants were presented with seven questions that were rated using a five point Likert scale. An informed consent was also taken before the presentation of survey. The data was collected and stored in the computer system. Anonymity was guaranteed, and all results were kept confidential. Data collection and analysis were congruent and took place concurrently.

## **Results**

A total of 156 students received the link for the survey. Of these, 74 SRNAs (47%) completed the survey. The results obtained from the survey are presented in detail below.

### **Previous Working Experience in Pediatric Healthcare**

A large number of student nurse anesthetists (78.38%) responding to the survey had prior working experience in pediatrics. About 48.65% had previous working experience but only in the nursing school while 29.73% worked with pediatrics on a more routine employed basis. The remaining (21.62%) did not have any prior healthcare experience working with pediatrics before going to the anesthesia school as shown in figure 1.

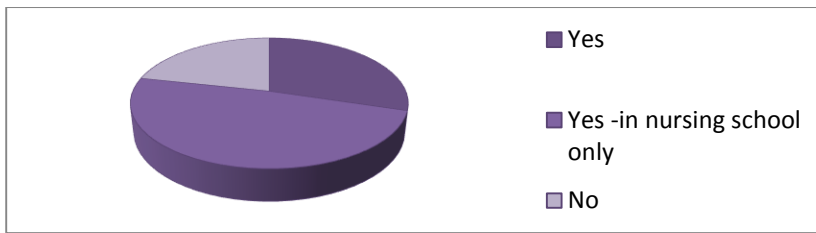


Figure 1: Previous Working Experience in Pediatrics Healthcare

### Cumulative Months in Anesthesia School

When asked about cumulative months since SRNAs had been attending the anesthesia school, 58.11% SRNAs reported attending the anesthesia school (at the time of taking this survey) for a period of 12 months or less. About 39% had been in the anesthesia school for a period between 13 to 24 months. Only 2.70% had been in the school for a longer duration of 25 months or above. Figure 2 demonstrates cumulative months in the anesthesia school.

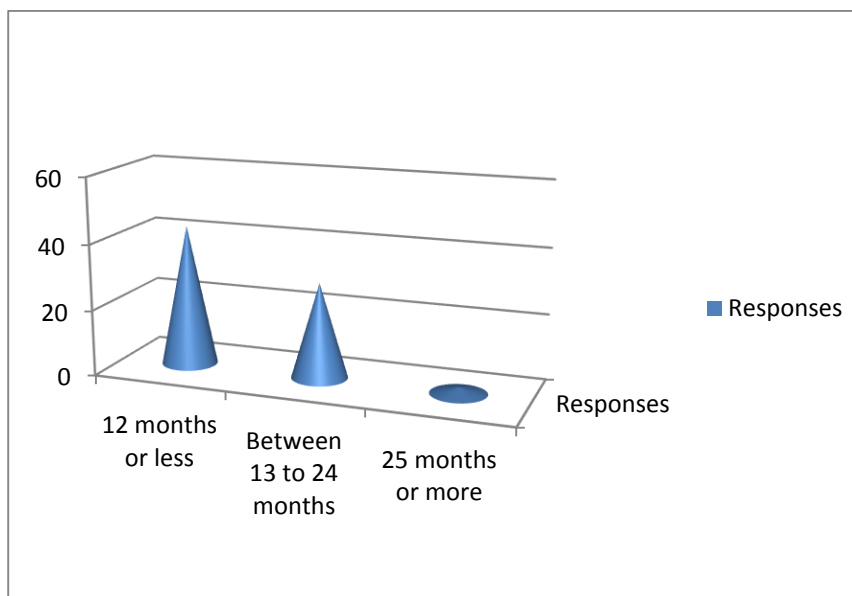


Figure 2: Cumulative Months in Anesthesia School

### Exposure to Pediatric Patients during Clinical Anesthesia Rotations

In response to this question, 72 SRNAs replied and 2 skipped it. The majority of the SRNAs (41.67%) had no exposure to pediatric patients (between 0-17 years of age) in their



clinical anesthesia rotations as shown in figure 3, and they had not completed any pediatric cases to date. However, the majority of students completing the survey were only in their first year of school and likely had not encountered a pediatric anesthesia rotation at the time of the survey. Nevertheless, 18.06% did complete 50 or more pediatric cases during their clinical anesthesia rotations, 15.28% had completed 25 to 49 pediatric cases, while just 10 to 24 cases were completed by 1.39% SRNAs. About 23.61% reported completing up to 9 cases so far.

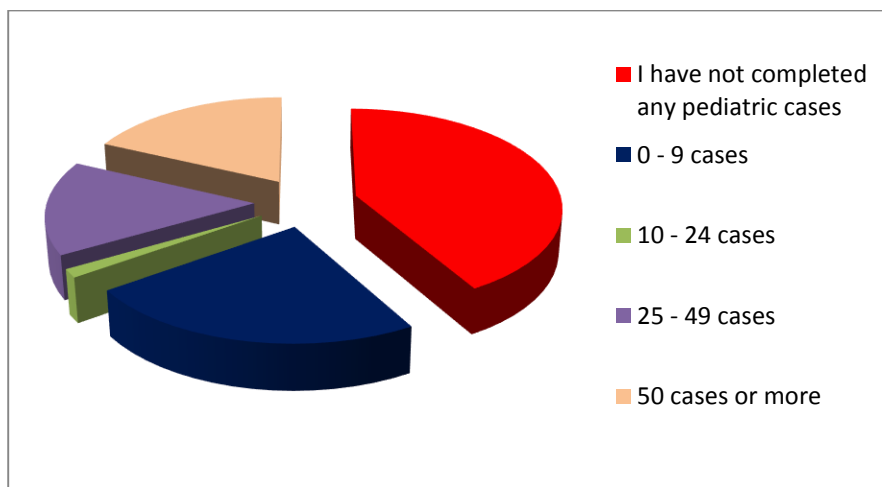


Figure 3: Exposure to Pediatric Patients during Clinical Anesthesia Rotations

### Completed Pediatric Anesthesia Rotations

Regarding the completion of a pediatric anesthesia rotation, out of 73 students 68.49% reported incompleteness of a rotation, with 27.40% having completed their pediatric anesthesia rotation, and 2.74% were currently completing their rotation (figure 4). There were students (1.37%) who stated that their school did not offer a pediatric rotation despite the fact that the three schools surveyed do offer formal pediatric training.

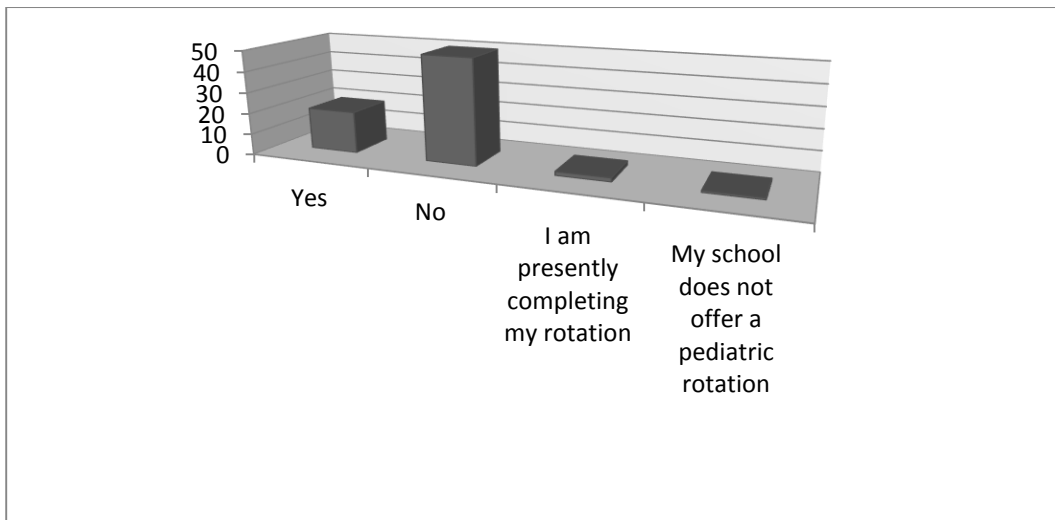


Figure 4: Completed Pediatric Anesthesia Rotations

### **Preparation of SRNAs to Practice Anesthesia on Healthy Pediatric Patients**

SRNAs were asked about their preparation (based upon their clinical experiences at the time of the survey) for the practice of anesthesia on healthy pediatric patients at some point in their life; out of 73 respondents, 65.76 % did not feel prepared whereas 34.25% SRNAs declared being ready to practice anesthesia on healthy pediatric patients in the future. Those who were not prepared also provided reasons behind it. About 40% stated that they were not ready because they had not received “any” clinical pediatric anesthesia training while 26.03% stated that they had not received “enough” clinical pediatric anesthesia training to date. Figure 5 depicts the number of students who gave their respective opinions.

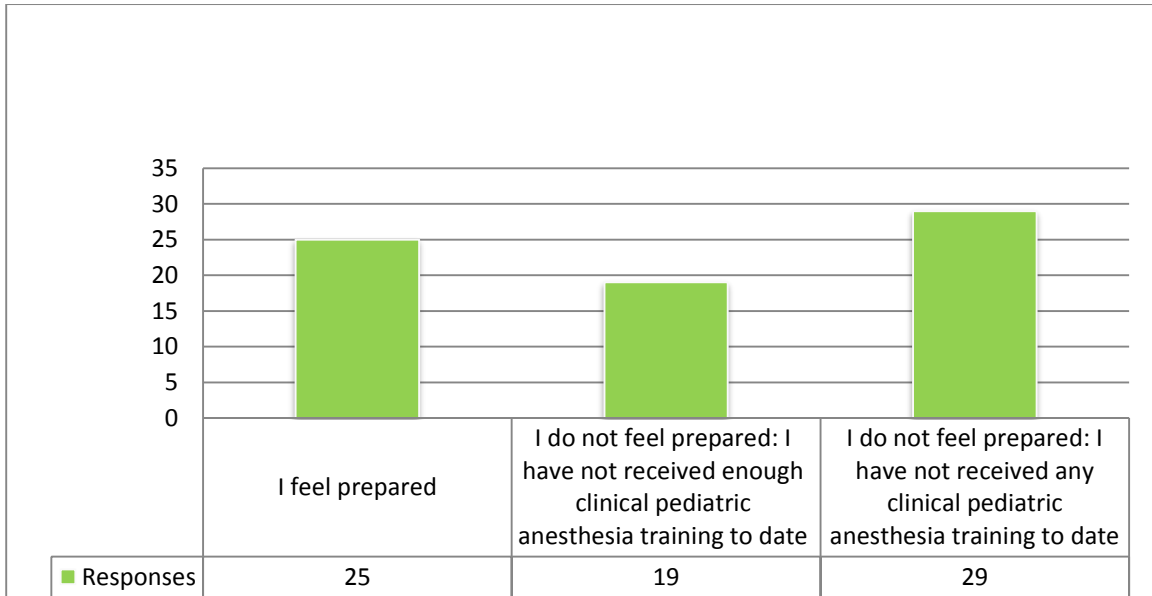


Figure5: Future Preparation of SRNAs to Practice Anesthesia On Healthy Pediatric Patients

### Advantage of a Post-Certification Fellowship Experience

Over half of the student nurse anesthetists (65.75%) responded that they believe they would benefit substantially from additional pediatric training in the form of a post-certification fellowship experience if they were to take a position in a facility that cared for critical pediatric patients. Approximately 25% were of the opinion that they would somewhat get a benefit from additional critical pediatric training, while 9.59% were uncertain about it (figure 5).

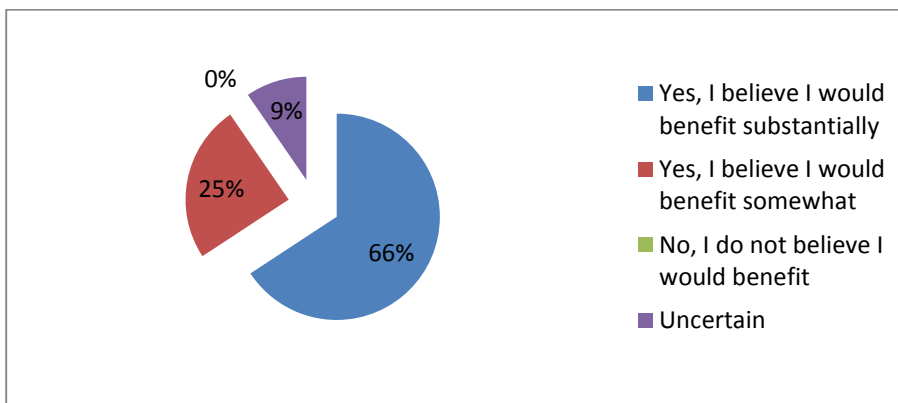


Figure 6: Advantage of a Post-Certification Fellowship Experience

### Time SRNAs Will Dedicate For a Post-Certification Fellowship in Pediatrics

SRNAs were asked about the maximum amount of time that they would commit to fellowship training if they completed a fellowship after their certification in pediatrics. Relatively few (19.44%) of the SRNAs felt that they would want to commit 10 months to one additional year for this educational process, 23.61% expressed a willingness to complete a 7-9 month post-certification fellowship in pediatrics, and over half (54.17%) of the respondents indicated that they would commit to 3 to 6 months of additional training. There were also students (2.78%) who clearly stated that they would not want to dedicate any post-certification time to a pediatric anesthesia fellowship.

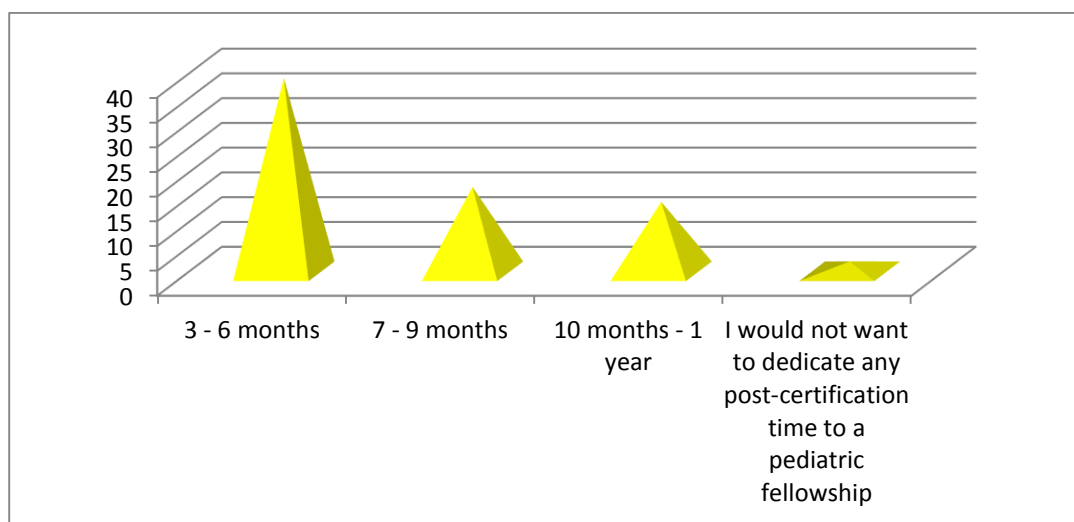


Figure 6: Time SRNAs Will Dedicate for a Post-Certification Fellowship In Pediatrics

### Discussion

The results of this survey indicated the majority of student nurse anesthetists were in favor of post-certification critical pediatric Fellowship training. Many of the SRNAs were prepared to dedicate several months for this training. The overall findings showed an enthusiastic and encouraging attitude of student nurse anesthetists for this additional training not only for their own betterment, but also for the betterment of their patients. It is important

to note that many of the SRNAs had minimal exposure to pediatric patients at the time of this survey in their education, and this survey does not delineate between first, second, or third year students.

Certainly, graduate education in nursing takes place within the framework of societal needs and demands in addition to the interprofessional work setting. It prepares the student for practice with quality betterment, interdisciplinary, patient safety and information systems expertise.<sup>22</sup> In typical reports, the IOM<sup>23</sup> has paid consideration on the situation of health care delivery, education of health professions, leadership for nursing practice and patient safety concerns. These reports underline the human mistakes and economic burden resulting from disintegration and failure of the current healthcare system. The IOM report proposes vivid restructuring of education of all health professionals including baccalaureate prepared and advanced practice nurses.<sup>23,24</sup> Plus, it has been demonstrated that new nurse graduates (baccalaureate prepared) struggle during the transition from nursing school to independent practice, with resultant high rates of turnover, which is expensive to hospitals.<sup>25</sup> However, studies suggest that residency programs for nursing offer a cost-effective pioneering approach that can be appreciated as an investment rather than an expense.<sup>26,27,28</sup> Although there isn't specific data looking at APRN transition and turnover, it seems appropriate to consider that educational opportunities such as specialty cultivated Fellowships would make the transition to independent practice for APRNs inherently more positive.

The profession of advanced practice nursing necessitates both practice-proficient and nurse scientists to augment the scientific root for patient care. Among the suggestions arising from a number of reports are that nurses must be well-informed, knowledgeable and trained to provide patient-centered care, highlighting evidence-based practice, nursing informatics, and quality enhancement. The literature also calls for doctorate prepared nurses to be ready to take up the leadership positions and carry out executive decisions.<sup>29,30</sup> Fellowship training in

nursing is designed to train nurses for the uppermost level of scientific inquiry and knowledge, skills and leadership in practice. It is a way of preparing them for specialized nursing practice that is comprehensive and dynamic.<sup>31,32</sup> Advanced practice nurses can provide organizational leadership to improve healthcare systems and patient outcomes.<sup>33</sup> The leadership skills and knowledge obtained by Fellowship trained advanced practice nurses will only help to seek and eradicate health inequalities, and to endorse patient safety and quality in practice.<sup>34</sup>

Fellowship training for advanced practice nurses includes direct care and education, as well as attention to the demands of a set of patients, populations, or a wide community.<sup>35</sup> APRNs need to recognize standards of practice management, including convenient and theoretical strategies for facilitating productivity with excellence of care.<sup>36</sup> They have to be able to consider the influence of practice policies and processes on meeting the health requirements of the patient populations. APRNs must also be capable in quality development strategies and in crafting and maintaining alterations at the policy and organizational stages.<sup>37</sup> All of these qualities can be enhanced when the new graduate APRN obtains post-certification Fellowship training.

Enhancements in practice are neither resilient nor quantifiable without parallel changes in organizational planning, professional and organizational traditions, and the financial arrangements to support practice Fellowship training enables participants to become better able to organize care to tackle rising practice difficulties and the moral impasses that appear as novel diagnostic and remedial technologies advance.<sup>38</sup> Fellowship trained participants are also more prepared to evaluate risk and team up with others to handle risks ethically, rooted in professional benchmarks. A final benefit that Fellowship participants enjoy is the research work and an experience of working with experienced researchers to carry out a study to search practice issues.<sup>39</sup> It is possible that not all Fellowships may offer

this benefit, but the potential to expand nursing research in a Fellowship setting and explore the appropriate concepts/questions allows Fellowship participants to tailor health and awareness to improve patient care. As a result of this research experience, APRNs with a Fellowship training may be better able to understand more about study design, ways of conducting a study, and data analysis.<sup>39</sup>

### **Limitations**

The small size of the sample restricts the generalizability of the findings. A larger size sample may offer more data and produce more generalizable inferences.

### **Conclusion**

Advanced practice nursing is an active and continually changing area within healthcare, with several reported and expected challenges to preparing and retaining an expert workforce to meet the demands and requirements of the community it serves.<sup>40</sup> Nursing education fulfils the compulsory minimum requirements for certified registration, yet there is always room for improved practical and clinical knowledge in all areas of healthcare. In order to fill these gaps, Fellowship nursing education is important. This study demonstrated that student nurse anesthetists had a keen interest in a post-certification pediatric specialty Fellowship. Based on the findings from this survey, it can be concluded that Fellowship training could hold significant importance in the future of APRN training.

As the current health care system grows to be more multifarious, it will become more crucial for all healthcare providers to have advanced knowledge and continuous educational experiences in order to implement skills that may assist patients and delivery of care. The evidence in the literature asserts that Fellowship training in the realm of nursing can bridge the gap between advancement in healthcare and more diverse patients needs by enhancing

and improving clinical skills, critical thinking and communication skills.<sup>41</sup> Nurse Fellowship training also increases the confidence of the participants to work independently and effectively and boosts comfort level in all situations. In short, Fellowship training for nurses is beneficial not only for better health outcomes but also for growth and success of the field of professional nursing overall.

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