Clinical Education Experiences: Perceptions of Student Registered Nurse Anesthetists

Sass Elisha, CRNA, EdD
Dana N. Rutledge, RN, PhD

The purpose of this study was to describe the experiences and attitudes of student registered nurse anesthetists (SRNAs) related to clinical instruction. This descriptive study used a cross-sectional survey method with a regionally stratified randomly selected sample of SRNA members from the American Association of Nurse Anesthetists data bank. A total of 2,673 SRNAs were invited by email to respond to an online, 54-item questionnaire; 696 SRNAs participated.

Verbal abuse was reported by almost 70% of SRNA participants, but fewer experienced sexual harassment (13%), physical abuse (14%), or racial discrimination (12%). However, SRNAs reported that their Certified Registered Nurse Anesthetist (CRNA) preceptors most often served as positive role models. These SRNAs found CRNA preceptors, unique cases, reading, and clinical lectures more helpful to their clinical learning compared with grand rounds, surgeons, and anesthesiology residents. The SRNAs' perceptions of the ideal behavioral characteristics for CRNA preceptors included calmness during stressful events, use of nonthreatening communication, clear communication, and encouraging independent decision making.

The educational process for nurse anesthetists is continually evolving and improving. Study findings offer insights that may assist in improvements in the clinical component of SRNA education.

Keywords: Clinical education, clinical educator development, clinical learning, graduate nursing education.

Clinical experiences during nurse anesthesia education have a direct impact on student development in areas such as self-awareness, critical thinking, psychomotor proficiency, and professionalism. As the main facilitators of clinical teaching, clinical educators (CEs) serve vital roles in the preparation of SRNAs.[1,2] Behaviors of CEs have been found to influence student perceptions, and ultimately, learning of appropriate clinical knowledge and skills.[1,2] Continual evaluation of all aspects of nurse anesthesia programs, including those during clinical learning, is necessary to help educate high-quality anesthesia practitioners.

Medical, nursing, and dentistry studies document learner perceptions of the quality of clinical education. Results show that students perceive various degrees of satisfaction stemming from their relationships with CEs.[3-5] Dissatisfying factors reported by students include inconsistent feedback and evaluation, lack of interest from the CE, poor preceptor teaching skills, limited access to preceptors, inadequate or unprofessional communication, and instances of intimidation or harassment. A landmark national study of 1,274 physicians conducted by Daugherty and colleagues[6] examined the quality of learning, intern satisfaction, and reported mistreatment that was experienced during medical internship. Table 1 summarizes their findings related to learner mistreatment. Researchers were surprised by the large numbers of students who experienced behaviors exhibited by their

Behavior	%
Learner belittled or humiliated	86
Assigned tasks as punishment	40
Physical abuse (slap, push, hit, kick)	39
Clinical educator threats to learner reputation or career	32
Sexual harassment	30
Racial/ethnic discrimination	25

Table 1. Mistreatment Reported During Medical Internship (N = 1,274)
Source: Daugherty et al.[6]

CEs that were not conducive to learning or were inappropriate. Daugherty et al[6] determined that inadequate communication was one root cause for most of the learners' perceived mistreatment and dissatisfaction; they suggest that decreasing the perception of mistreatment would enhance learner satisfaction.

Most CEs involved in anesthesia education have minimal exposure to adult learning principles along with little practical experience in educational theory.[7] Most CRNAs in the United States who serve as CEs have not received instruction related to their role as instructors.[7] However, CRNAs and anesthesiologists are responsible for clinical supervision provided for SRNAs.

Several studies document the CE characteristics that

are most valuable for learning by SRNAs. In an older study, Katz[1] describes the most important characteristics of CRNA CEs as exhibiting empathy and respect for SRNAs. Hartland and Londoner[8] found a CE's clinical competence, calmness during stress, self-assurance, and flexibility as highly important to learners, CEs, and program directors; communication skills and sensitivity were also valuable competencies. Ramsborg and Holloway[9] reported that negative instructional experiences from a student/graduate perspective included condescending comments by CEs, lack of positive feedback, insensitivity to student needs, and inadequate instructional methods. Other investigators report that students indicated that it was important for a CRNA CE to be knowledgeable, approachable, and encouraging.[10]

No recently published studies were found documenting the frequency of SRNA experiences of mistreatment during clinical learning, beliefs about ideal characteristics of CEs in SRNA education, and SRNA perceptions of various personnel or activities that may be perceived to enhance SRNA learning. This study aims to describe experiences and perceptions of SRNAs regarding clinical instruction. We hypothesized that SRNAs would describe similar clinical experiences related to their CEs and experiences as have other learners in healthcare-oriented fields.

Materials and Methods
With approval from the California State University at Fullerton institutional review board, this descriptive study used cross-sectional survey methods with SRNAs who were randomly selected from a regionally stratified sample of SRNA members from the American Association of Nurse Anesthetists (AANA) data bank. The goal was a regionally distributed sample of 50% of current SRNAs in the United States; during spring 2010, there were 5,346 SRNA members, leading to a potential sample size of 2,673. Thus, SRNAs were randomly selected by AANA region (50% of the students in each region) to receive an invitation to join the study. All email communication with the SRNAs was managed by AANA staff. In April 2010, 50% of the SRNA members (N = 2,673) received an informational email message that alerted them that they were going to receive an invitation to participate in a study and briefly explained the components and purpose of the study. The study was described as having its major focus to examine SRNA experiences during clinical education. The explanation noted that this information would potentially be used to develop educational modules for CRNA CEs. One week later, prospective SRNA participants received the email invitation; this message further explained the study, delineating SRNA participation requirements and risks and benefits, and noting that participation was voluntary. The invitational message instructed SRNAs to go to an embedded link

to the electronic questionnaire if they wished to participate. Two weeks later, all invited participants received a third email message asking for their participation if they had not previously completed the survey; this message also contained the link to the survey. All messages were signed by the first author, identifying him as the principal investigator of the study. Participants did not receive monetary incentives.

The questionnaire was posted by the AANA staff on the online survey Zoomerang. Zoomerang uses secure sockets layer (SSL) encryption, whereby the link and survey pages were secured during transmission from the AANA account to respondents and then back into the AANA account.

• *Questionnaire Development.* Few questionnaires were found that assess the effectiveness of CEs in clinical instruction.[11] Adapted from Daugherty et al,[6] the questionnaire used in this study examined student perceptions of their educational experiences. Some of the questions from the original tool were used, others were revised, and new ones were added based on investigator experience and literature review. The final result was a 54-item questionnaire; 52 questions required closed-ended responses and 2 were open-ended. Before the final version was adopted, CRNA faculty colleagues, including 3 who had graduated from anesthesia programs within the prior 5 years, provided feedback on the content, appropriateness, and wording of the items. Changes to the questionnaire were made based on this process. Sections of the survey included the following:

1. Basic demographic information (9 items).

2. Frequency of specific experiences during clinical education and persons involved in each experience (5 experiences for 10 items).

3. Level of helpfulness of activities or persons during clinical experience (10 items).

4. Level of importance of CRNA clinical preceptor characteristics (23 items).

5. Level of satisfaction with meeting learning objectives or personal expectations for clinical education (2 items).

Two open-ended items followed at the end of the survey (section 5): "What changes—if any—would you implement to improve the clinical learning environment for future nurse anesthesia students?" and "Additional comments."

In section 2, students were asked to record their perceptions based on their experiences during nurse anesthesia clinical education. Examples of the experiences were verbal abuse and sexual harassment. Responses were based on the following scale: *Never* = 0 incidents during clinical education; *Infrequently* =1 to 3 incidents; *Sometimes* = 4 to 6 incidents; *Frequently* = 7 to 9 incidents; *Very frequently* = 10 or more incidents. For each experience, students reported the person involved who primarily caused the perception: *anesthesiologist preceptor, CRNA*

Characteristic	No. (%)[a]	Characteristic	No. (%)[a]
Gender		**Area worked in before anesthesia school**	
Male	253 (36.4)	MICU	271 (38.9)
Female	440 (63.2)	SICU	341 (49.0)
Year in anesthesia program		CCU	178 (25.6)
1	410 (58.9)	CTICU	107 (15.4)
2	254 (36.5)	CVICU	199 (28.60)
3	27 (3.9)	ER	103 (14.8)
Ethnic background/race		PACU	68 (9.8)
White	563 (80.9)	OR	37 (5.3)
Hispanic	31 (4.5)	**Years in nursing before anesthesia school**	
African American (black)	31 (4.5)	1-3	291 (41.8)
Multiracial	13 (1.9)	4-6	195 (28.0)
Asian or Pacific Islander	35 (5.0)	7-9	109 (15.7)
American Indian or Alaska native	3 (0.4)	10-11	0 (0)
Other race	14 (2.0)	> 11 years	98 (14.1)
Academic instruction preceding clinical instruction			
Yes	284 (40.8)		
No	411 (59.1)		

Hours worked	**Mean ± SD**	**Range**
Clinical hours/wk as SRNA this semester/quarter[b]	31.4 ± 16.7	0-80
Analysis for responses > 0[c]	34.0 ± 14.7	1-80
Hours/wk on call as SRNA this semester/quarter[d]	4.2 ± 7.5	0-40
Analysis for responses > 0[c]	12.3 ± 8.2	0.5-40

Table 2. Demographic Characteristics of Student Registered Nurse Anesthetist Sample (N = 696)

Abbreviations: SRNA indicates student registered nurse anesthetist; MICU, medical intensive care unit; SICU, surgical intensive care unit; CCU, cardiac care unit; CTICU, cardiothoracic intensive care unit; CVICU, cardiovascular intensive care unit; ER, emergency room; PACU, postanesthesia care unit; OR, operating room.

[a] Percentages may not add to 100% because of missing data or, in the case of *Area worked*, because of allowance for multiple responses.
[b] Numbers > 100 were coded as missing.
[c] 0 indicates clinical education has not begun; 58 students indicated 0 hours of clinical instruction
[d] Numbers > 40 were coded as missing.

preceptor, surgeon, operating room nurse, SRNA, other.

In section 3, students recorded their responses to a series of learning activities/role descriptions. Examples included clinical conferences, specific preceptor types, readings, and simulation exercises. Section 3 items used a 5-point response set with 1 indicating *least helpful to your learning* and 5, *most helpful to your learning*. In section 4, students responded similarly to 23 descriptions of preceptor characteristic using a 5-point response set with 1 indicating *least important to your learning* and 5, *most important to your learning*. Two questions in section 5 asked SRNAs to rate their level of satisfaction in meeting learning goals such as objectives and expectations during clinical educational experience using a 5-point scale with 1 indicating *least satisfied* and 5, *most satisfied*.

Due to the nature of the survey, no internal reliability coefficients were calculated. It was not presumed that students would answer questions within a section similarly, as each section did not measure a single construct; that is, we did not expect homogeneity of responses, nor were we summing scores across items for a total score. Our interest was in responses to individual items.

• *Data Analysis*. Data were analyzed using descriptive statistics and statistical software (SPSS version 17.0, SPSS Inc, Chicago, Illinois). For the queries about clinical education, data were analyzed only from SRNAs who reported having clinical experience. For specific experiences in clinical education, χ^2 analyses were run to determine gender differences. The level of significance was set at .05.

Analysis of the open-ended responses consisted of thematic analysis of more than 300 typed comments. Thematic analysis began with listing statements made by SRNAs, then followed with classifying these into emerging patterns, and combining/cataloging these patterns into themes and subthemes.[12] This was done to make meaning of the responses given by the SRNAs.

Results

From the 2,673 SRNAs invited via email invitations

Experience	No. who responded	Never		Infrequently		Sometimes		Frequently		Very frequently	
		M	W	M	W	M	W	M	W	M	W
Verbal abuse	636	27	26	39	38	23	27	8	6	2	2
Sexual harassment	637	93	83	6	14	1	3	0.4	0	0	0
Physical abuse	636	84	86	13	12	4	2	0	0.5	0	0
Racial discrimination	633	89	87	7	8	4	3	0.4	2	0.4	2
Clinical educator as role model	636	0	1	3	2	16	18	49	49	32	30

Experience	If so, by whom?	MD		CRNA		Surgeon		OR nurse		SRNA		Other	
	No. who responded	M	W	M	W	M	W	M	W	M	W	M	W
Verbal abuse	482	27	30	49	50	14	12	4	4	0	0.3	6	4
Sexual harassment	134	8	22	8	22	0	13	16	2	3	2	62	32
Physical abuse	148	25	26	41	30	2	0	0	1	0	2	32	40
Racial discrimination	134	11	14	28	33	9	7	4	4	0	2	49	41
Clinical educator as role model	602	6	6	88	88	0.5	0	0	0	2	3	4	3

Table 3. Percentages of Men and Women Reporting Specific Experiences (Positive/Negative) in Clinical Education
Abbreviations: M indicates men; W, women; MD, anesthesiologist; CRNA, Certified Registered Nurse Anesthetist; OR, operating room; SRNA, student registered nurse anesthetist.

to participate in this study, 23 invalid email addresses were found. The final sample consisted of 696 SRNAs, a response rate of 26% (696 divided by 2,650). More participants responded to the first email invitation (61%) than the second (39%). Respondents were two-thirds female, predominately white, and younger than 38 years, as shown in Table 2. These mostly new nurses (70% with 6 or fewer years of experience) worked in multiple critical care or surgical care settings. Most participants were either in their first or second year of education (Table 2). The average number of hours of clinical experience varied from 31 to 34 hours each week; 58 respondents reported no clinical experience and therefore were not used to calculate findings related to clinical experiences. Of the SRNAs who responded, 62% reported not routinely being "on call," whereas the others averaged 12.3 hours weekly of being on call.

Verbal abuse was reported much more frequently than was sexual harassment, physical abuse, or racial discrimination by the SRNA participants (Table 3). In fact, sexual harassment (13%), physical abuse (14%), or racial discrimination (12%) was experienced by less than 15% of SRNAs in this sample. However, verbal abuse was reported by 69% of these students; the number of incidents was reported to be *frequent/very frequent* by 9% of SRNAs, and it was reported as *infrequent* or *sometimes* by 60%. Reported perpetrators of verbal abuse were predominately CRNA CEs and anesthesiologist CEs, with surgeons, operating room nurses, SRNAs, and others less likely to be

reported as verbal abusers. Those individuals more likely to be responsible for sexual harassment, physical abuse, or racial discrimination were classified as "other," categories for which were not captured in the survey.

There were no statistically significant differences in clinical education experiences between men and women (Table 3). However, sexual harassment was experienced more often by women (17%) than by men (7%), $\chi^2(9) = 16.82$, $P = .052$. Perpetrators of this harassment tended to be different for men and women SRNAs (n = 134). Female SRNAs were more likely to be sexually harassed by anesthesiologists (22%) and CRNA preceptors (22%) than were men (8%), and men were more likely to experience sexual harassment from "other" persons (unfortunately not identified in our survey).

The SRNAs reported having frequent to very frequent experiences with CEs who act as positive role models (Table 3). Most of these experiences involved CRNAs (88%) and anesthesiologists (6%).

Respondents reported varying levels of helpfulness to their clinical learning for different personnel that they might encounter during clinical instruction and for different learning activities. Table 4 shows personnel and learning activities, with those most helpful at the top of the table; ranking was based on the mean scores (response set 1 to 5, with 5 being *most helpful*). The SRNAs found their CRNA preceptors, unique cases, reading, and clinical lectures most helpful to their clinical learning. Least helpful were grand rounds, surgeons, and anesthe-

Personnel/Activities	Helpfulness[a]					
	1	2	3	4	5	Mean (SD)
CRNA preceptors	0.3	1.7	7.5	36.5	54.0	4.4 (0.7)
Unique cases	0.9	3.4	11.4	36.7	47.6	4.3 (0.8)
Reading	1.1	4.7	16.6	41.2	36.4	4.1 (0.9)
Clinical lectures	5.4	11.2	26.4	36.3	20.7	3.6 (1.1)
Senior SRNAs	8.7	15.0	24.9	31.1	20.4	3.4 (1.2)
Simulation	8.7	14.7	30.1	28.3	18.2	3.3 (1.2)
Anesthesiologist preceptors	3.4	11.5	35.3	37.4	12.5	3.4 (0.9)
Clinical conferences	9.6	21.1	41.4	22.2	5.7	2.9 (1.0)
Grand rounds	33.0	20.0	30.2	13.7	3.2	2.3 (1.2)
Surgeons	31.8	37.8	25.5	4.3	0.6	2.0 (0.9)
Anesthesiology residents	60.6	17.1	16.9	4.4	1.1	1.7 (1.0)

Table 4. Helpfulness for Clinical Learning of Personnel/Activities (N = 638)
Abbreviations: CRNA, Certified Registered Nurse Anesthetist; SRNA, student registered nurse anesthetist.
[a] 1 indicates *least helpful* to learning; 5, *most helpful* to learning.

siology residents. Two commonly used teaching strategies, simulation and clinical conferences, were ranked as moderately helpful.

When asked to rank behaviors and characteristics of their clinical preceptors in terms of importance to their learning, SRNAs ranked almost all options highly (Table 5). The top 4 behaviors were calmness during stressful events, use of nonthreatening communication, clear communication, and allows independent decision making. The least important characteristic was being humorous.

This sample of SRNAs reported being more than moderately satisfied that their learning objectives and personal expectations during clinical education were being met (Table 6). Only a minority of students indicated dissatisfaction (scores < 3).

Respondents were given the option to document their opinions and suggestions for improving the clinical educational environment in the future. Table 7 presents a list of 6 themes and subthemes ranked in order from the most frequent responses to the least frequent responses. Constructive comments include the need for improved professional communication, need for role commitment on the part of CEs, increased understanding by CEs that the clinical educational experience should focus on student learning, need to match the complexity of CE expectations and cases in accordance with students' level of experience, need for timely and constructive feedback to students, and the need for educational instruction for CEs.

Discussion

Study findings offer new information for CRNA CEs related to the clinical education of SRNAs in the United States. This survey allows for generalizations about SRNA experiences across the country, but also highlights the wide variability in those experiences. Overall, the SRNAs in this sample appear satisfied with their clinical experiences. They identified learning strategies that they consider helpful as well as characteristics and behaviors of CEs that can be effectively taught and that have been linked to positive student outcomes in prior studies.[2,13,14]

The processes and CE behaviors that govern students during clinical education have been found to have a significant influence on the quality of students' learning experiences.[15,16] It is of concern that more than 69% of the sample had experienced verbal abuse and that more than 10% were subjected to incidents of sexual abuse, physical abuse, and racial discrimination. That we found gender differences related to sexual harassment is consistent with prior study findings in medical education.[6,17,18]

We believe our study findings support the requirement by the Council on Accreditation of Nurse Anesthesia Educational Programs that SRNAs must be supported in effectively communicating with all members of the surgical and anesthesia team, as this influences the quality of patient care.[19] As suggested by needs identified by student participants in our study, it is important that CRNA faculty who manage clinical experiences develop standard procedures related to reporting of any abuse or inappropriate behavior on the part of CEs; these procedures need to be clearly explained to students and CEs.

Instilling confidence during clinical learning requires an appropriate learning environment that enhances SRNA ability to acquire new knowledge, comprehend and integrate information, and apply learned principles to practice.[20,21] Clinical educators' capacity and willingness to be effective teachers play a vital role in this learning.[3] In this study, respondents ranked the activities and personnel that were the most important to their learning (Table 5). These could be shared with new and experienced CEs to help them understand how valuable these strategies and CE traits are considered by SRNA learners; any educational programs for CEs should incorporate

Behavior/characteristic	Degree of importance[a]					Mean (SD)
	1	2	3	4	5	
Calmness during stressful events	0.3	1.1	4.3	28.4	66.9	4.6 (0.7)
Offers nonthreatening communication	0.6	1.1	5.5	26.5	66.4	4.6 (0.7)
Communicates clearly	0.2	1.5	5.4	27.1	65.8	4.6 (0.7)
Allows independent decision making	0.8	1.2	6.1	29.5	62.4	4.5 (0.7)
Encourages clinical independence	0.6	1.4	6.2	29.6	62.2	4.5 (0.7)
Helps student integrate academic knowledge into clinical practice	0.3	1.4	5.4	30.8	62.1	4.5(0.7)
Provides constructive feedback	0.6	1.1	6.2	31.0	61.2	4.5 (0.7)
Shows respect for students	0.9	1.5	6.4	30.4	60.8	4.5 (0.8)
Has realistic expectations	0.6	1.1	7.4	31.8	59.1	4.5 (0.7)
Trustworthiness	1.4	2.3	7.2	31.8	57.4	4.4 (0.8)
Superior clinical competence	0.3	0.8	7.6	37.6	53.8	4.4 (0.7)
Offers support	0.5	2.1	9.1	34.5	53.8	4.4 (0.8)
High professional standards	0.3	0.9	10.1	35.8	52.9	4.4 (0.7)
Superior clinical skills	0.2	0.9	7.3	41.6	50.1	4.4 (0.7)
Good rapport with students	0.8	1.5	11.5	37.5	48.8	4.3 (0.8)
Provides objective evaluations	0.6	2.0	13.5	39.0	44.9	4.2 (0.8)
Evaluates fairly	0.6	3.5	12.4	40.8	42.7	4.2 (0.8)
Flexibility	1.2	3.2	16.6	39.1	39.9	4.1 (0.9)
Encourages reflection	1.4	4.9	17.8	38.4	37.6	4.1 (0.9)
Superior academic knowledge	0.6	1.2	17.1	45.5	35.5	4.1 (0.8)
Pleasant disposition	0.8	2.7	17.8	43.4	35.3	4.1 (0.8)
Enthusiasm	0.5	3.2	17.5	45.2	33.6	4.1 (0.8)
Humorous	5.1	12.9	33.4	31.9	16.6	3.4 (1.1)

Table 5. Importance to Learning of Behaviors/Characteristics of Clinical Preceptors (N = 638)
[a] 1 indicates *least important* to learning; 5, *most important* to learning.

Learning	Satisfaction[a]					Mean (SD)
	1	2	3	4	5	
Learning objectives during clinical education met	0.9	4.4	20.1	53.0	21.6	3.9 (0.8)
Personal expectations during clinical education met	1.5	6.3	24.7	49.4	18.1	3.8 (0.9)

Table 6. Satisfaction With Learning (N = 638)
[a] 1 = *least satisfied*; 5, *most satisfied*.

strategies to assist development of desirable characteristics in CEs.

Effective and professional communication is an essential component during anesthesia practice. As found in other healthcare education studies, problems with communication between SRNAs and their CEs—who are predominately CRNAs—was a recurring theme.[4,6] Not only did nearly 70% of respondents report that they had experienced some degree of verbal abuse, SRNAs ranked effective communication as a highly desirable characteristic of a CE that could promote effective learning. Furthermore, when asked for suggestions that they believed would enhance their clinical learning experiences, SRNAs often stated that professional and constructive communication was sometimes lacking during instruction and would be

essential for future improvement (Table 7). These findings are similar to the results published by Daugherty et al[6] and Ramsborg and Holloway.[9] A prior survey of the opinions of dental students suggested that many CEs could enhance their ability for providing feedback with emphasis on improved *delivery* of messages.[4] In an earlier study, Elisha[13] reported that CRNA CEs believed that their communication with students was highly effective, that they often created an environment that promotes learning, and that they frequently provide constructive feedback. However, this perception was contrary to some student reports in the current study. So, the situation may exist in which a CE believes that he or she is modeling effective communication and student perception may contradict this. These inconsistencies should be investigated

1. Need for constructive and professional communication

2. Need for clinical anesthesia educators to be committed to the educator role

3. Clinical instruction not seen as "staffing" an operating room

4. Need for well-developed and incrementally staged clinical education experiences that include:

   a. Clear and realistic expectations

   b. Consistency in preceptors

   c. Desire for increasing clinical independence

   d. Individualized learning based on learning goals and student experience

   e. Flexibility related to anesthetic technique

5. Need for appropriate feedback to student learners from CRNA CEs and other faculty that include:

   a. Accurate, timely, and honest evaluation

   b. Patience by CEs with student learners

   c. Constructive comments

6. Need for educational preparation for CRNA CEs that results from:

   a. Student desire for increased (more careful) clinical supervision

   b. Concern that student discussions with clinical or academic educators may lead to retaliation

   c. Need for integration of academic principles and clinical decision making

Table 7. Themes From SRNA Comments Related to Clinical Education Experiences[a]
Abbreviations: SRNA indicates student registered nurse anesthetist; CRNA, Certified Registered Nurse Anesthetist; CE, clinical educator.
[a] Comments are listed in order from most frequently reported to least frequently reported.

by program administrators because a breakdown in communication between CEs and students may inhibit learning, leading to anxiety and stress for both teacher and learner. In these situations, human error would be more likely to occur, and patient safety may suffer.[22-24] Similar beliefs related to inadequate communication between learners and CEs were also found in medical residents; this led to the addition of communication skills training as a part of medical school curricula.[6,25,26]

Most SRNA respondents reported that their clinical learning objectives and personal expectations were being met (Table 6) despite the large number who also noted experiencing verbal abuse. Also, approximately 80% of the SRNAs believed that their CRNA CEs were positive role models. This same contradiction—satisfaction with the learning despite mistreatment—was found among dental students and medical residents.[4,6] Despite existence of patronizing and abusive feedback from clinical faculty, overall, North American dental students perceived the strongest aspect of their clinical education was the relationship with their CEs.[4] It is possible that novice learners have high opinions of the clinical abilities of their CEs, allowing them to *forgive* some episodes of mistreatment when learning is occurring. This topic deserves further attention by educators and researchers, as such respect for authority could lead to ineffectiveness in other facets of education.

Few healthcare CEs have received education in meeting the needs of adult learners.[7] Frequently, CRNA CEs are expected to help educate SRNAs without training in the CE role, with minimal time for preparation, and with inadequate support from administrators. Clinical educators who are CRNAs may experience stress while teaching because of the nature of their work environment, increased workload when working with students, unfamiliarity with students' skill level, inadequate support from academic faculty, lack of confidence, and lack of reward and acknowledgment.[27] Thus, CE perception of clinical teaching may be the primary reason for communication problems, such as those found in this study; this perception may also be linked to other nonproductive teaching behaviors. Further research is necessary in this area to determine actual CE perceptions and their effect on student perceptions and learning outcomes.

The themes identified by SRNA respondents point to the potential need for additional or different training for clinical preceptors. Such training would require coordination between the academic and clinical faculty so that all educators were aware of learning objectives and expectations for learners. This planning would improve student learning experiences by emphasizing integration of material learned in didactic and simulation settings during patient care situations.[28] If expectations for SRNA clinical performance were clearly stated, agreed on by all anesthesia faculty members, and explained to students, this uniformity could improve the quality of CE constructive criticism and evaluation. Then CEs would have a better sense of "what to evaluate students on," touching on student suggestions for improvement from our study. Indeed, formal CE orientation and educational programs have been found to improve student outcomes, as well as enhance teaching behaviors in CRNA and physician educators.[9,28-30]

The primary limitation of this study is use of a self-

report survey and no validation of reported experiences. Participants, while selected randomly to be invited to participate, self-selected to complete the survey. It is possible that SRNAs who did not participate are in some way different from participants. The questionnaire was developed for this study and did not undergo rigorous pretesting; however, we found few missing data on most items, indicating that SRNAs did not have difficulty responding to the items. A limitation of our survey is that it was not tested for stability (test-retest reliability).

A major strength of the study was the random selection process for our sample, which reflects regional representation of the AANA and indicates that our findings can be generalized to the entire country. Another strength of this study was the fact that SRNAs were allowed to respond anonymously to questions of a sensitive nature, such as those related to sexual abuse and racial discrimination. The truthfulness of responses is assumed.

Conclusion

Satisfaction of SRNA learners can be enhanced by either a perceived increase in learning or a reduction in perceived mistreatment of all types. To improve satisfaction among SRNAs, CRNA educators who coordinate clinical experiences for nurse anesthesia students should consider efforts to maximize learning by doing the following: (1) promoting learning experiences valued by students, (2) sharing specific student learning expectations among CEs and students, and (3) training CEs in adult learning strategies that would enhance professional communication and maximize constructive feedback. Additionally, CRNA educators must clarify the standards of conduct for all personnel, review SRNAs evaluations of CEs, and intervene when conduct falls short of these standards. These changes will improve the clinical learning environment for SRNAs and serve as a model for future generations of clinical teachers.

REFERENCES

1. Katz LE. Characteristics of clinical teachers in nurse anesthesia. *AANA J.* 1984;52(2):192-197.
2. Levett-Jones T, Lathlean J, Higgins I, McMillian M. Staff-student relationships and their impact on nursing students' belongingness and learning. *J Adv Nurs.* 2009;65(2):316-324.
3. Rika T, Denham SA. Clinical instruction and student outcomes. *Teaching Learning Nurs.* 2009;4(4):139-147.
4. Henzi D, Davis E, Jasinevicius R, Hendricson W. North American dental students' perspectives about their clinical education. *J Dent Educ.* 2006;70(4):361-377.
5. Godefrooij MB, Diemers AD, Scherpbier AJ. Student's perceptions about the transition to the clinical phase of a medical curriculum with preclinical patient contacts: a focus group study. *BMC Med Educ.* 2010;10:28. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2864282/pdf/1472-6920-10-28.pdf. Accessed March 18, 2011.
6. Daugherty SR, Baldwin DC Jr, Rowley BD. Learning, satisfaction and mistreatment during medical internship: a national survey of working conditions. *JAMA.* 1998;279(15):1194-1199.
7. Schwartz AJ. Teaching anesthesia. In: Miller RD, ed. *Miller's Anesthesia.* 7th ed. Vol 1. Philadelphia, PA: Churchill Livingstone; 2010:193-207.
8. Hartland W Jr, Londoner CA. Perceived importance of clinical teaching characteristics for nurse anesthesia clinical faculty. *AANA J.* 1997; 65(6):547-551.
9. Ramsborg GC, Holloway R. Congruence of student, faculty and graduate perceptions of positive and negative learning experiences. *AANA J.* 1987;55(2):135-139.
10. Meno KM, Keaveny BM, O'Donnell JM. Mentoring in the operating room: a student perspective. *AANA J.* 2003;71(5):337-341.
11. Lombarts KM, Bucx MJ, Arah OA. Development of a system for the evaluation of the teaching qualities of anesthesiology faculty. *Anesthesiology.* 2009;111(4):709-716.
12. Aronson J. A pragmatic view of thematic analysis. *Qual Rep.* 1994;2(1). http://www.nova.edu/ssss/QR/BackIssues/QR2-1/aronson.html. Accessed March 15, 2011.
13. Elisha S. An educational curriculum used to improve the knowledge and perceptions of certified registered nurse anesthetist clinical educators. *AANA J.* 2008;76(4):287-292.
14. Warren AL, Denham SA. Relationships between formalized preceptor orientation and student outcomes. *Teaching Learning Nurs.* 2010;5(1): 4-11.
15. Smedley A, Penney D. A partnership approach to the preparation of preceptors. *Nurs Educ Perspect.* 2009;30(1):31-36.
16. Kolanko KM, Clark C, Heinrich KT, Olive D, Serembus JF, Sifford KS. Academic dishonesty, bullying, incivility, and violence: difficult challenges facing nurse educators. *Nurs Educ Perspect.* 2006;27(1):34-43.
17. Li SF, Grant K, Bhog T, et al. Resident experiences of abuse and harassment in emergency medicine: ten years later. *J Emerg Med.* 2010;38(2):248-252.
18. Nagata-Kobayashi S, Maeno T, Yoshizu M, Shimbo T. Universal problems during residency: abuse and harassment. *Med Educ.* 2009;43(7): 628-636.
19. Council on Accreditation of Nurse Anesthesia Educational Programs. *Standards for Accreditation of Nurse Anesthesia Educational Programs.* 2004.
20. Lundberg KM. Promoting self-confidence in clinical nursing students. *Nurse Educ.* 2008;33(2):86-89.
21. Hegge M, Bunkers S, Letcher D, et al. Clinical academic partnership: mutual ownership for clinical learning. *Nurse Educ.* 2010;35(2):61-65.
22. Gibbons C, Dempster M, Moutray M. Stress and eustress in nursing students. *J Adv Nurs.* 2008;61(3):282-290.
23. Tendulkar AP, Victorino GP, Chong TJ, Bullard MK, Liu TH, Harken AH. Quantification of surgical resident stress 'on call.' *J Am Coll Surg.* 2005;201(4):560-564.
24. Bowie BH. Clinical performance expectations: using the 'you attitude' communication approach. *Nurse Educ.* 2010;35(2):66-68.
25. Luthy C, Perrier A, Perrin E, Cedraschi C, Allaz AF. Exploring the major difficulties perceived by residents in training: a pilot study. *Swiss Med Wkly.* 2004;134(41-42):612-617.
26. Hargie O, Boohan M, McCoy M, Murphy P. Current trends in communication skills training in UK schools of medicine. *Med Teacher.* 2010;32(5):385-391.
27. Hautala KT, Saylor CR, O'Leary-Kelley C. Nurses' perceptions of stress and support in the preceptor role. *J Nurses Staff Dev.* 2007;23(2):64-70.
28. Maskey CL. The coordination of clinical and didactic learning experiences to improve critical-thinking skills and academic performance. *Teaching Learning Nurs.* 2008;3(1):11-15.
29. Wilkerson L, Irby DM. Strategies for improving teaching practices: a comprehensive approach to faculty development. *Acad Med.* 1998; 73(4):387-396.
30. Burns C, Beauchesne M, Ryan-Krause P, Sawin K. Mastering the preceptor role: challenges of clinical teaching. *J Pediatr Health Care.* 2006;20(3):172-183.

AUTHORS

Sass Elisha, CRNA, EdD, is assistant director, Kaiser Permanente School of Anesthesia/California State University-Fullerton, Pasadena, California. Email: sass.m.elisha@kp.org.

Dana N. Rutledge, RN, PhD, is professor, Nursing, California State University-Fullerton, Fullerton, California.