

THE CERTIFIED REGISTERED NURSE ANESTHETIST: OCCUPATIONAL
RESPONSIBILITIES, PERCEIVED STRESSORS, COPING STRATEGIES,
AND WORK RELATIONSHIPS

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By

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(ABSTRACT)

A qualitative inquiry was launched to explore occupational stress among Certified Registered Nurse Anesthetists (CRNAs). Four research questions were posed:

- 1) What are the roles and responsibilities of the CRNAs as they see them?
- 2) What are the CRNAs perceived stressors encountered on the job?
- 3) What are their coping strategies related to the perceived stressors?
- 4) What is the relationship between CRNA job stress and interpersonal work connections?

Twenty CRNAs, with varying anesthetic backgrounds, and 15 of their co-workers from North Carolina and Tennessee participated in the study. Semi-structured interviews, clinical observations, and artifact data (i.e., photographs) were employed to answer the research questions.

The perceived occupational-related stressors that were recognized by the CRNAs pertain specifically to patient care, anesthesia work in general, interpersonal job relationships, inadequate surgical preparation, the operating room environment, and physical stressors. Staying focused upon the task at hand (i.e., patient care), the use of humor, verbalization and internalization of concerns, along with adopting personal hobbies were identified by the anesthetists as coping mechanisms to combat work-related stress. The participants take their professional duties to their patients and devotion to their fellow colleagues seriously—so much so that they rarely take vacation time or sick leave.

After data analysis, six major themes surfaced: the role of being an attentive, reliable co-worker alleviates the antagonism found within OR relationships; maintaining open lines of communication is an effective way to address concerns and prevent staff conflict; among the CRNAs, occupational-related stressors create concern for patient safety; interpersonal work relations cause more stress than any of the other perceived job stressors; engaging in personal

hobbies assists the CRNA in coping with work-related stress; and the nurse anesthetists' work lives are not as stressful as their personal lives.

The answers to the research questions and the themes underscore the necessity that the shortage of Registered Nurses and anesthetists needs to be addressed in order to more effectively tackle the participants perceived stressors. In addition, employers can adopt concrete measures in assisting CRNAs with handling occupational stress, such as offering mandatory in-servicing and adequate time to attend in-servicing.

This dissertation is wholeheartedly dedicated to:

my mother, Nancy H. Roberts, CRNA

It was truly a privilege for me to seek your guidance
while researching this topic.

Your devotion to
Nurse Anesthesia and to your patients
is inspiring.

I admire you more than any other nurse--
past, present, or future.

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¹ Southeastern Pediatric Hospital is the pseudonym for the facility where observations of CRNAs were conducted. The name has been changed to protect the hospital and its participants.

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Chapter 1

INTRODUCTION

“Although some people think it’s not true nursing care, I think it’s the ultimate of nursing care because you’re one-on-one the entire time.”—Marilyn, CRNA

The red sign dangling in the rear-view mirror of the 1972 Oldsmobile read, “NURSE ANESTHETIST ON CALL.” That is the earliest memory I have as a child knowing my mother was a Certified Registered Nurse Anesthetist (CRNA). It took dedicated practice learning to say the word anesthetist adequately on my part. After learning that word, I felt a sense of pride--not only for myself but for my mother as well. Being raised by a mother who worked countless overtime, weekends, and on-call shifts (the red sign frequently adorned the rear-view mirror) educated my sister and I early about nurse anesthesia. People would ask, “What does your mother do?” I would proudly reply, “She is a nurse anesthetist. She puts people to sleep.” Then mother would instruct me that not only does she put people to sleep, she also monitors patients during surgery (i.e., intra-operatively), and wakes them up afterward (i.e., post-operatively). As the years passed, mother did not sugar coat the nursing profession. Consequently, when I decided to enter nursing school, mother stated that I would be attending two schools: Western Carolina University and the School of Hard Knocks. Was she right! The preconceived notion that nurses only specialize in obtaining vital signs, charting, and admiring the Medical Doctors (MDs) quickly dissipated into long hours of study and clinical preparation! The discovery that nursing is a way of life for those dedicated to providing compassionate continuity of care took root in nursing school and blossomed as I began practicing as a Registered Nurse (RN).

Working the evening shift for a long-term care facility in Virginia enlightened me to the fact about just how stressful nursing is. Providing care for 40 patients regarding medication administration, charting, wound treatment dressings, emergency care, as well as addressing family members’ concerns caused stress. Overtime and extra shifts were never in short supply, which lent to being overworked and burned out. It was at this time that I reflected on how my mother managed to cope within her specialty, especially when she worked at a hospital that routinely did challenging heart and lung cases. During this period of reflection, I had recollections that my mother often seemed stressed after returning home from work surfaced. However, working long hours was not the major variable that she identified as stressful.

Conflicts arose between the CRNAs themselves, or between the CRNAs and other professionals, such as MDs, and Operating Room (OR) personnel. In other words, the workload and dedication to the patients that anesthesia demanded of nurses presented less of an obstacle compared to the work politics and interactions. My mother is not alone.

A 1990 national “Human Factors Inventory Survey” of 5,955 Certified Registered Nurse Anesthetists (CRNAs) conducted by the American Association of Nurse Anesthetists revealed that the quality of their relations with coworkers was one of the greatest risk areas affecting health and performance. Sixty percent of the respondents reported bad feelings between coworkers, and 50% felt that working with people in general was stressful. (Kendrick, 2000, p. 116).

In a quantitative inquiry comparing and contrasting stress levels between practicing CRNAs and students in training, Kendrick (2000) reports that “CRNAs who practiced in groups with more than 20 CRNAs and doctors reported more stress and job dissatisfaction than those practicing in smaller groups . . . Additionally, CRNAs reporting the lowest stress levels were those who practiced alone” (p. 116). Cavagnaro (1983) parallels Kendrick’s findings after surveying 82 CRNAs using a questionnaire identifying the stress factors of the nurse anesthetist. Specifically, Cavagnaro’s (1983) respondents rated “job-related interpersonal conflicts as the number one stressor” (p. 290). Although the findings by Kendrick and Cavagnaro are revealing, further insight is needed into discovering why the participants responded the way they did to those surveys. The significance of this study will address those issues in Chapter Two.

What exactly is stress? Herman (2001), a Stress Management Educator with the University of South Carolina’s College of Nursing, states, “Stress is a perceptual event--not an external one” (p. 4). What one person may see as a stressful event or situation, another person may not. Cavagnaro (1983) writes that stress is identified as endogenous and exogenous--that both individuals and groups of individuals can feel it. Stress is a manifestation of the body experiencing an imbalance, as evidenced by behavioral, physical, and personal changes (Dugan, Lauer, Bouquot, Dutro, Smith, & Widmeyer, 1996). In other words, when encountering stress, the body is away from homeostasis, a dynamic equilibrium marked by processes of feedback and regulation (Davis, 1993). How stress affects the body physiologically can best be explained using an illustration. Suppose one day a hiker is in Glacier National Park in Montana, enjoying the Trail of the Cedars, where the air is fresh, clean, and cool—unlike any air ever smelled

before. All of a sudden, a grizzly bear appears. It is at this time the nervous system takes command. The nervous system is composed of two antagonistic forces: the parasympathetic and sympathetic nervous system. The parasympathetic system, called the “downer,” is the part of the body responsible for the relaxation mechanism while enjoying the clean, fresh mountain air. Incidentally, it also aids in digestion and has a calming effect due to its ability to block adrenalin. However, since a hungry bear weighing 700 pounds appears, the parasympathetic relinquishes its duties to the sympathetic nervous system. The sympathetic nervous system must make a choice in dealing with the bear threat: fight it or flee. The body responds via increased heart rate and breathing, sweaty palms, decreased digestion, and muscle contractions. “The adrenal medulla is stimulated by release of acetylcholine (ACH) from sympathetic nerve fibers” (McFarland & Thomas, 1991, p. 744). Norepinephrine and epinephrine (adrenalin) are then released, which assists the hiker in escaping the bear. After reaching safety, the hiker might take a nap from physical exhaustion.

Hans Selye coined the term stress as a nonspecific response of the body to any demand, producing the general adaptation syndrome (GAS) (Fox, 1993). There are three stages to the GAS response: “1) the alarm reaction, when the adrenal glands are activated; 2) the stage of resistance, in which readjustment occurs; and 3) if the readjustment is not complete, the stage of exhaustion may follow, leading to sickness and possible death” (Fox, 1993, p. 272). During Stage One, norepinephrine and epinephrine are released, which causes vasoconstriction (i.e., tightening of the arteries) and an increase in blood pressure and pulse. Hormone levels also rise. Psychosocial changes are also occurring, such as increased levels in alertness, anxiety, and task- and defense-oriented behaviors (McFarland & Thomas, 1991). Stage Two is when a person adapts optimally to the stress within his or her individual capabilities. This is indicative of the readjustment of hormone levels and a reduction in activity. During this time, a person increases his or her use of coping devices and may have an affinity to rely on defense-oriented behavior (McFarland & Thomas, 1991). The last stage of the stress response occurs when a person loses the “ability to resist stress because of depletion of body resources” (McFarland & Thomas, 1991, p. 745). He or she may have a decreased immune system and perhaps even experience weight loss. Prolonged exposure to the stressor may even lead to death. Psychosocial changes reflect the physical changes just mentioned. An individual who has reached this level of response may experience disorganized thinking, personality adjustment, hallucinations and delusions, as well

as exhibit violent tendencies (McFarland & Thomas, 1991). Selye estimated that the inability to adjust successfully to life situations and stress is at “the very root of the disease producing conflict (i.e., improper reactions to life situations)” (Wiley, 2000, on-line). Suffice to say, stage three is not a desirable level to reach when dealing with stressors. The general adaptation syndrome reflects Selye’s belief that an “ever increasing proportion of people die from the so-called wear and tear diseases, diseases of civilization, or degenerative diseases, which are primarily stress” (Wiley, 2000, on-line).

While stress has positive implications (in manageable doses), such as increasing one’s level of alertness and cognition, its negative implications are the main focus of attention in the literature. Motowidlo, Packard, and Manning (1986) define stress as an “unpleasant emotional experience associated with elements of fear, dread, anxiety, irritation, annoyance, anger, sadness, grief, and depression” (p. 618). Ullrich and Fitzgerald (1990) write, “stress is a result from an imbalance between the demands of the workplace and the individual’s ability to cope” (p. 1013).

Stress is usually associated with the environment or situation in which it is being experienced. For example, occupational stress is “the harmful physical and emotional responses that occur when the requirements of a job do not match the capabilities, resources, or needs of the workers” (National Institute for Occupational Stress and Health, 2001, on-line). A person can also undergo stress at home, in an interpersonal relationship, or in other situations. Thus, stress is associated with the environment in which it is originating. Moreover, stressors are agents or conditions capable of producing stress (Davis, 1993). “A stressor is a stimulus for change arising from events in the environment, from interpretations of experiences, or from self-talk” (McFarland & Thomas, 1991, p. 744). Individuals or groups of people can even experience an array of stressors from multiple sources. For instance, “inadequate staffing, work overload, awareness of tremendous responsibility, feelings of incompetence, lack of support from superiors, and interpersonal conflicts [are] some work stressors commonly found in nursing” (Boey, 1999, p. 33). Interestingly, Ansell (1981) unabashedly writes, “The greatest cause of your stress is you” (p. 138)! A propensity to over plan each day, a need to win, a compulsion to work with a chronic sense of urgency, being impatient with delays, having an inability to relax, polyphasic thinking (i.e., trying to process many ideas at the same time), and being involved with multiple projects and deadlines causes stress (Ansell, 1981). These qualities are the major contributors to stress among individuals. People are unreasonably trying to do too much. There

are many stressors one can experience. For instance, eustress, a positive stress, can increase one's creativity and thinking skills, as mentioned earlier. Interestingly, eustress is what motivates individuals to attain goals and do their best (*Stress Management*, 2002, on-line). Thus, stress is not entirely detrimental. On the other hand, distress results when stress overwhelms an individual, as discussed above. Distress is referred to as the negative stress (*Stress Management*). Therefore, recognizing the type of stress an individual is encountering is important.

Based upon stressful experiences in gerontology and a childhood fascination with anesthesia, an intense desire to research stress and nurse anesthetists is extant. Understanding the occupational roles and responsibilities of the CRNA, discovering nurse anesthetists perceived stressors on the job, and identifying coping mechanisms related to those perceived stressors is intriguing. In addition, the connection between stress and interpersonal job relations will also be explored. The purpose of this project was to examine how job-related stress manifests itself among CRNAs regarding their ability to relate to their peers. Moreover, the specific research questions are as follows:

- 1) What are the roles and responsibilities of the CRNAs as they see them?
- 2) What are the CRNAs perceived stressors encountered on the job?
- 3) What are their coping strategies related to the perceived stressors?
- 4) What is the relationship between CRNA job stress and interpersonal work connections?

Support for this study, as corroborated by the existing literature, is the concentration in Chapter Two.

Chapter 2

REVIEW OF THE RELATED LITERATURE

*“I truly love anesthesia. I love giving anesthesia. I love the patient contact.
I like being in control of what I do.”—Zsa Zsa, CRNA*

A nurse faces diverse stressors while caring for clients with complicated health issues. Examples of stressors include an increased workload, overtime and shift rotations, staffing issues, administrative policies, and problems related to supplies and equipment (Green, 1997). What does the literature indicate specifically about stress and nurses, especially CRNAs? How stress is associated with Registered Nurses (RNs), student CRNAs, and finally, nurse anesthetists will be addressed. Literature related to the RN is discussed because a nurse anesthetist cannot become certified in anesthesia without first possessing licensure to practice as a Registered Nurse. Thus, the two are interrelated. A description of the CRNA will be mentioned later. Review of the existing literature is warranted to justify this investigation; therefore, a discussion of this study’s significance concludes this chapter.

Registered Nurses

A plethora of data are available about RNs and job-related stress. RNs working in a variety of settings have been investigated. Stress among hospital nursing staff will be mentioned first. A study among a 1160-bed hospital found that nurses on the medical (non-surgical) unit had a total stress score significantly higher than nurses on the surgical, hospice, oncology, and cardiovascular-surgical wards (Toft & Anderson, 1981). When the Nursing Stress Scale (NSS) was administered, the major sources of stress experienced by the nurses in all five wards were similar. Sources included workload, death and dying issues, and feelings of inadequacy in meeting the emotional needs of clients and their families (Toft & Anderson). The Nursing Stress Scale results also revealed that conflict with physicians, nurses, and other co-workers were a concern. Those nurses working the medical floor especially conflicted with MDs and other nurses, while RNs on the surgical ward conflicted with co-workers overall (Toft & Anderson). Levels of stress reported by RNs affected their satisfaction with work, which directly related to higher staff turnover rates (Toft & Anderson).

Not only has stress among nurses been compared; stress experienced by nurses and doctors have also been contrasted. A research study examined occupational stress between 91

RNs and 57 physicians practicing in German cancer wards. “Nurses show greater stress levels” than physicians primarily due to interpersonal conflicts at work (Ullrich & Fitzgerald, 1990, p. 1014). In fact, nurses had higher stress scores than doctors concerning death and dying, identification and dealing with clients, and physical complaints (e.g., tiredness, pain, nausea) (Ullrich & Fitzgerald). The researchers also discovered that: “1) with age comes experience and the ability to cope, 2) with age comes seniority and a distancing from many stressors, and 3) the most dissatisfied leave when young” (Ullrich & Fitzgerald, 1990, p. 1019). These study results coincide with a quantitative inquiry conducted among 1,800 Intensive Care Unit (ICU) nurses. “Interpersonal conflict was identified as the greatest source of stress. Nurse-physician problems were reportedly the most intense and frequently cited stressors” (Green, 1997, p. 49).

Another study was conducted related to job stress and coping of 499 nurses working in AIDS care. “The most frequently identified specific sources of stress . . . were staff conflicts (n=11%) and dealing with resistant patients (n=7%). Nurses who identified work place stressors as their most stressful experience reported using significantly more wishful thinking,” along with avoidance and rational problem solving as coping mechanisms (Kalichman, Chalvin, & Demi, 2000, p. 33). Notably, Kalichman et al. conclude that “interventions to help nurses identify appropriate fit between coping strategies and specific sources of stress will likely yield the most favorable results in assisting nurses in the management of occupational stress” (p. 35). Interestingly, Carson, Fagin, Brown, Leary, and Bartlett (1997) found after surveying 71 acute care surgical nurses that the higher-degree prepared nurses used social intimacy for coping with a corporate downsizing.

Of additional interest, a Japanese study (n=552) reports that 17.2%, 29.2%, and 46.0% of RNs voiced dissatisfaction with colleagues, superior officials, and physicians, respectively (Imai, 2001). Imai examined situations involving job displeasure and self-esteem to discover if there was a potential for burnout and early resignation in nurses. Occupational discontentment was equated mainly with income, self-evaluation of social standing, and workload. In fact, “many nurses expressed dissatisfaction with their . . . salary and workload” (Imai, 2001, p. 19). Imai (2001) refers to dissatisfaction with these issues as “stress related factors” (p. 19). Moreover, this quantitative inquiry suggests that additional research related to nursing roles and responsibilities and job stress need to be pursued further.

Nurse Anesthetists

A literature review about stress and Registered Nurses has been discussed, but what about CRNAs? A description of a CRNA is first warranted. A Certified Registered Nurse Anesthetist (CRNA) is a

Registered nurse who is educationally prepared for and competent to engage in the practice of nurse anesthesiology . . . Nurse anesthetists are capable of exercising independent professional judgment within their scope of competence and licensure. The practice of anesthesia is not exclusively the practice of medicine or the practice of nursing. (Hamric, Spross, & Hanson, 1996, p. 425).

Even though my mother regards herself as a nurse first, she says of nurse anesthetists, “We’re not totally considered physicians or nurses. Sometimes that can place us in a quandary.” It is now law that nurse anesthetists hold a Master’s Degree in Nurse Anesthesia. Those who have earned previous certification but not a Master’s Degree in the field are exempt from this law or “grand-fathered in.” The duties of a CRNA fall under four general categories: “1) pre-anesthetic evaluation and preparation, 2) anesthesia induction, maintenance, and emergence, 3) post-anesthesia care, and 4) peri-anesthetic and clinical support functions” (Hamric et al., 1996, p. 426). These duties, coupled with being legally liable for the quality of services they render, can cause nurse anesthetists to experience notable job related stress. A literature review of CRNAs and stress follows.

A comparison stress study of CRNAs and RNs was conducted. Cavagnaro (1983) found that both groups listed interpersonal job related conflicts as a stressor, but top priority of this stressor was more of a concern among nurse anesthetists (n=54%). In addition, the majority of stressors rated high by CRNAs may indicate communication problems among professionals who interact with each other. Since anesthetists endeavor to control their emotions and feelings, job burnout becomes more of a reality. This is especially the case because coping strategies are virtually nonexistent among this populace in dealing with the bombardment of work-related stress (Cavagnaro).

On the other hand, student-anesthetists have a different perspective versus the practicing anesthetists. Perez and Perez (1999) found in their work with first-year student-anesthetists (n=1504) that “the least stressful item was ongoing personal conflict with peers” (p. 84). The purpose of this study was to determine students’ perception of stress while in school. In fact,

ventilation of frustration to fellow class members was the most commonly voiced coping mechanism within this populace (Perez & Perez).

It is apparent from the literature review that coping strategies change when an individual emerges from the role of student CRNA to nurse anesthetist. It is imperative to refer back to the Kendrick (2000) study, who used an AANA survey to justify his study of anesthesia pupils.

A 1990 national “Human Factors Inventory Survey” of 5,955 CRNAs conducted by the American Association of Nurse Anesthetists revealed that the quality of their relations with co-workers was one of the greatest areas affecting health and performance. Sixty-percent of the respondents reported bad feelings between co-workers, and 50% felt that working with people in general was stressful. (Kendrick, 2000, p. 115).

Specifically, Kendrick (2000) conducted a quantitative study of student-anesthetists (n=66) and CRNAs (n=15) to address whether problems with interpersonal relations can cause stress on the job or be the result of job stress. First-year students and nurse anesthetists reported the least amount of stress and the greatest amount of coping resources. Second- and third-year students reported the greatest amount of stress due to worrying about taking the national certification test. Kendrick went on to explore the interpersonal styles of his CRNA participants. He found that most of the CRNAs were either self-reliant and independent (i.e., having an analytic/autonomizing personality style) or helpful, protective, and concerned about the welfare of others (i.e., having an altruistic/nurturing personality style). Those possessing the altruistic/nurturing personality reported the most stress. In turn, nurse anesthetists with high stress levels communicated less effectively than those CRNAs experiencing less stress (Kendrick).

Where do CRNAs proceed from here? Major gaps and limitations in the literature must be addressed in order to answer that question and hence, justify this investigation.

Gaps in the Literature and Study Significance

A literature review of the research addressing stress among RNs and student and practicing anesthetists has been presented. However, there are significant gaps in the literature as well as limitations to the studies previously discussed. These disparities and restrictions lend credence to this qualitative investigation of nurse anesthetists and occupational-related stress.

The quantitative studies mentioned above recruited an impressive number of subjects. For instance, the 1990 national “Human Factors Inventory Survey” performed by the AANA identified the opinions of 5,955 CRNAs about stress and the quality of their work relationships.

Obtaining such a fantastic sample is laudable and noteworthy. On the other hand, such a study prevents the researchers from discovering “insight, meaning, and understanding about a [particular] subject’s experience” (Massey, 1995, p. 55). What are the reasons behind the work-related stressors? What are the coping strategies related to the job stressors? There is superficiality where the quantitative research is concerned regarding this specific topic. In other words, individuals possess unique perspectives and experiences, and a qualitative inquiry seeks to understand real-life experiences (Massey). Cavagnaro (1983) refers to national surveys of CRNAs as “but a starting point. The results would accomplish nothing unless some preventive action is taken to relieve some of the stressful situations which occur in departments of anesthesia today” (p. 293). In order to take preventive action, CRNAs and job-related stress must be studied exhaustively. Qualitative inquiry, such as my own, extends beyond previous studies—taking results further and filling-in the holes that quantitative inquiry cannot satiate. Case in point: Evon (1985) studied the effects of biological stressors on 14 CRNAs while administering general anesthesia. Blood pressure, temperature, pulse, and serum cortisol levels were measured as the nurse anesthetists gave general anesthesia. Evon found that 12 participants had a measurable, detectable response to stress, such as an increase in blood pressure and pulse. Those particularly prone to experiencing higher amounts of stress were the CRNAs with less than 10 years experience. Evon (1985) writes:

During the last few years, the literature in and about the nurse anesthesia profession has reflected significant concern with the status of nurse anesthetists and the evolution of their profession into new and broadened areas of competence. Essentially, the nurse anesthetist’s role, responsibilities and scope of practice have been questioned. Such questions, while important, are also a significant source of stress. More pertinent . . . is the potential impact of *perceived stress* [italics added] among nurse anesthetists as they perform their routine duties. (p. 435).

This research fills the gap that Evon speaks about regarding nurse anesthetists and their perceived stressors. Even though Evon’s study had a small sample size (n=14), his inquiry looked at the physiological parameters of stress. Moreover, my research utilizes qualitative methods to explore the perceived stressors of CRNAs, as indicated by the second research question. In-depth data collection via lengthy interviews and observations is lacking in these quantitative inquiries. My study consists of interviews and observations and utilizes artifact data

to complete the triangulation process. I got to know my participants, the reasoning behind their responses, and witness the stressful hospital environment that they talked about in their interviews. Quantitative studies about CRNAs and stress open the doors for qualitative researchers to explore uncharted territory: the door was wide-open for me to do such exploration!

Nurse anesthetists need to be studied more extensively. First, more research articles on student-anesthetists are extant than on the nurse anesthetists themselves with regards to stress. An example includes the Perez and Perez (1999) article where 1,504 students were surveyed for a quantitative study addressing stress while in anesthesia school. In addition, Kendrick (2000) studied 15 CRNAs compared to 66 student-anesthetists when evaluating stress levels between these two groups. Secondly, populations other than CRNAs are studied more extensively in the literature. Registered Nurses practicing in nursing homes, mental health facilities, hospice centers, operating rooms, medical-surgical floors, and emergency rooms have been investigated (Carson et al., 1997; Toft & Anderson, 1981; Motowildo et al., 1986; Ullrich & Fitzgerald, 1990; Dugan et al., 1996). For instance, Imai (2001) studied 552 RNs, 146 LPNs, and 352 unemployed Registered Nurses concerning job-related factors (e.g., workload, salary) leading to low self-esteem. Research emphasis on RNs seriously caused me to wonder about the CRNAs' perspective on the topic of job stress, especially since they are advanced practice nurses. There has been an obvious focus on the healthcare worker and occupational stress, except the nurse anesthetist. Thus, the logic behind conducting a study of CRNAs as a "target population" is justifiable. It is time for nurse anesthetists to assume the limelight.

Another limitation of the existing literature involves issues of communication. Cavagnaro (1983) states this subject can be addressed by recognizing how departments of anesthesia interact with other departments (e.g., surgery, nursing). Ultimately, the lines of communication might open between CRNAs and other health care providers (Cavagnaro). This gap is tackled in my research by investigating how CRNAs perceive their job roles and responsibilities, what their coping strategies are related to job stress, and then looking for a link between those factors and interpersonal job conflict. This refers to the first, third, and fourth research questions, respectively. If conflict is one of the main causes of stress in the work place as identified in the literature review, why is this topic not being studied more extensively? Quantitative inquiry can accomplish this feat. Why, not just what, questions need to be answered.

By identifying the gaps in the literature, a basis for the significance of the study can be presented. The foundation for this dissertation research revolves around the fact that nursing is a stressful job and because of that, a major shortage in the profession, at all levels, exists. However, attention needs to focus on the nurse anesthetists. Jobs that frequently encounter human contact in a frenzied milieu, such as dealing with emergencies and urgent deadlines, can be affected by stress and in turn, can influence job performance (Motowildo et al., 1986). Nurse anesthetists deal with patients daily and experience multiple demands and emergencies. Moore and Katz (1996) describe specifically which jobs should be considered in future stress studies: “Comparisons of different nurse work groups (specialties) along with these constructs [i.e., work-related stress, self-esteem, social intimacy, and job satisfaction], . . . would help the nursing profession to validate the effect healthcare’s direction has on nurses” (p. 968). As mentioned earlier, nurse anesthesia is a specialty, and the construct of work-related stress is the focus of this research.

Qualitative inquiry is superlative when: clarifying and comprehending a phenomena and situation when operative variables cannot be previously recognized; finding resourceful approaches to investigate over-familiar dilemmas; considering how participants identify their responsibilities or duties in an organization; determining the historical context of a circumstance; and spawning hypotheses, generalizations, or theories (Merriam, 1995). This research study addresses two of these facets. It is evident my research looks at stress (an overly-familiar issue) in a fresh, new light, as is revealed in Chapter Three. First, the CRNAs, who are nurse specialists, are the focus of the investigation, and secondly, it is their perspectives that are central to the research. The perspectives regarding work stress and a connection between interpersonal job relations will be addressed. In addition, comprehending how the nurse anesthetists’ roles and responsibilities figure into the equation of stress and interpersonal relations is pivotal to the research. By incorporating engaging interviews with the CRNAs and their co-workers, along with artifact and observational data, the research methodology transforms the overly familiar topic of stress into an issue that has taken on new meaning and importance.

Chapter 3

METHODOLOGY

“I’ve seen and done things that other people will never see and do—no matter how many years they’ve practiced anesthesia.” —Hilda, CRNA (on practicing anesthesia in Vietnam)

Before delving into the research methods and justifying this investigation, I feel a personal introduction is warranted so that you, the reader, know where I stand. A discussion of my epistemological stance, roles in the research process, and personal biases and assumptions will be revealed. “Reflexivity is a hallmark of excellent qualitative research and it entails the ability and willingness of researchers to acknowledge and take account of the many ways they themselves influence research findings” (Sandelowski & Barroso, 2002, p. 216).

Roles of the Researcher

In order to consider what part I played in this research, it is necessary to examine what ideas and experiences were brought to the study. An epistemological discussion is fitting because it involves the means by which we comprehend and justify how and what we know (Crotty, 1998). Constructionism is the epistemology in which I locate myself. Constructionists believe “meanings are constructed by human beings as they engage with the world they are interpreting . . . Meaning (or truth) cannot be described simply as ‘objective’. By the same token, it cannot be described simply as ‘subjective’” (Crotty, 1998, p. 43). In other words, the subjective side of humanness interacts with the world’s objectivity, and the two are interconnected.

A nursing illustration: A few years ago I was working an evening shift as a Student Nurse Aide at a Veterans Administration Medical Center. A particular male patient diagnosed with Alzheimer’s disease was frequently under my care. The client had a bed next to the window, and every time he was served dinner, he would say, “Look out that window there, lady [pointing toward the window]. There’s a storm a brewing! I gotta’ get the cows in before the storm hits” [attempting to get out of bed]. This scenario went on for several evenings, with me trying to alleviate the patient’s fears by doing what the nursing textbooks and professors had instructed. Repeatedly orienting the patient to time, place, and person did not work: “Mr. Smith [name changed], you are not on a farm. You are in a hospital in North Carolina. There is not a storm coming.” This was futile. Against the better judgment of what *I* had learned, *I* decided to

step out of *my* world, into *his*, crossing over from *my* reality into what *he* knew and believed to be real. One evening he said a storm was coming and that he must rescue the cows. I replied, “Mr. Smith, you can bring the cows in after you finish eating supper. I don’t think the storm is going to hit for a little while yet.” The patient immediately quieted down, ate every morsel on his plate, and went to sleep. Therefore, “meaning [was] not discovered but constructed” (Crotty, 1998, p. 42). Mr. Smith constructed the meaning in his own life--probably visiting experiences from his past as a farmer or growing-up as a child on a farm. The experience of caring for Mr. Smith definitely ignited in me a constructionist point-of-view.

Roles

The role of the researcher that takes precedence above all other roles is ensuring the ethical considerations of the participants. The concept of beneficence adopted in nursing school comes to mind: Above All, Do No Harm. Rossman and Rallis (1998) write that moral and ethical principles include privacy and confidentiality regarding what information is shared with the researcher. Consequently, when the participants offered their insights, there was and still is an obligation to tell their stories accurately. I view my participants as I do my patients--their interests must be protected. “The reason an interviewer spends so much time talking to participants is to find out what their experience is and meaning they make of it, and then to make connections among the experiences of people who share the same structure” (Seidman, 1998, p. 110). It is utterly inappropriate to force fit words to participants. This concept was especially applicable during the creation of the profiles or vignettes. In addition, all identifiable perspectives of the participants are delineated in the research—not just the ones that substantiate the research questions.

I consider myself, first, a nurse. Did the role of nurse overshadow that of researcher? Moch writes: “Many researchers have taken the stance that the nurse researcher is first a nurse and then a researcher” (2000, p. 8). Ah-ha! I am not alone! Based upon clinical nursing experience, I have discovered that co-workers, patients, and family members all possess unique perspectives. The nurse must learn to adjust to and work with those different outlooks, while maintaining professionalism and individuality. This is not an insurmountable task, and it does come with time and life experience. Thus, the solution when going about the dissertation research was to mentally note and intently focus on (at every interview or observation) answering: What did I learn from this person or environment? What was this participant

saying? Furthermore, the roles of nurse and researcher amalgamated to allow for movement from an etic (i.e., outsider) to emic (i.e., insider) perspective as the research progressed.

Another researcher role was to obtain written permission from potential participants. Informed consent was crucial, as well as being open and honest about the research (Rossman & Rallis, 1998). These considerations kept deception to a minimum, showed respect for the efforts of the participants, and maintained the integrity of the researcher role.

Biases

I became aware of one bias during this research process. Probably resulting from media influences and societal stereotypes, a bias towards surgeons became apparent. The following passage from my field notes briefly outlines this point:

7-8-02 Day 5 of Observations

0615: On duty

0635: Introduced self to Irene—will observe her today. She's setting up supplies for the day.

0645: Several co-workers chatting at the supply room, laughing, and making jokes. The supply room is the place for passing chitchat before patients arrive. The break room is the place for socializing all day but especially before patients arrive. Food is always abundant. Food equals good feelings. The staff appreciates anyone who brings food (like I did last week with donuts).

0655: In OR #5, the computer acts up and the RN gets mad. She has to go get Darcy to fix it. RN is still irritated.

0703: The patient is late. So, the tech, RN, CRNA, and surgeon talking about whatever and laughing at times. Jane comes in to up-date Irene about her late patient.

0712: Surgeon is still chatting. I'm surprised he's so patient! Not bad for a surgeon.

The last comment made about the surgeon illustrates a preconceived notion about them. At the time of this observation, the surgeon was leaning back in a chair, legs crossed, chatting with the staff. Considering the heavy, fast-paced surgical schedule, I thought the surgeon would be cracking the whip at the operating room staff. Acknowledging this bias allowed for internal reflection, which occurred throughout the research process. Fortunately, I was still able to re-

focus on the research. Monitoring personal emotions as they arose kept me tuned to the researcher role, thus, allowing necessary adjustment to the circumstances; maintaining copious field notes and observer comments were tangible means to accomplish this feat. Observer comments “include your emotional reactions to events, analytic insights, questions about meaning, and thoughts . . . The observer comments are the data about process and yourself” (Rossman & Rallis, 1998, p. 137). Moreover, sharing any preconceived notions gives the reader a more complete, candid view about myself.

Assumptions

Perhaps I desired to see the good in humankind, but one assumption I had is that participants would be completely open and honest when being interviewed. The idea that *all* respondents would be up-front about their perspectives and feelings regarding stress causes me to chuckle. Still, I want to believe that the participants were truly honest! Wishful thinking? No matter, it is not up to the researcher to determine what is honesty or not. Rossman and Rallis (1998) offer the best advice:

Qualitative researchers pursue multiple perspectives about some phenomenon; they search for truths, not Truth. They typically assume that reality is an interpretive phenomenon, and that meaning is constructed by participants as they go about their everyday lives. The qualitative researcher’s task is to render an account of participants’ worldviews as honestly and fully as possible. (p. 45).

Consequently, the chapters to follow are not meant to iron out right from wrong, truth from fiction. Rather, the remaining chapters serve as a forum to communicate the nurse anesthetists’ perceptions about work-related stress.

I hoped that potential participants would make time for me because of connections with various family members. Instead, I had to work hard and prove to the participants that this research required their consideration. First, being personable helped boost my status among the participants. For instance, accommodating their schedules became crucial when planning interviews. Re-scheduling interviews and being able to go at a moment’s notice became part of the job description. Incidentally, having a bag packed with equipment (e.g., tape recorder, pens) and papers (e.g., interview guide, informed consent) proved invaluable when conducting last-minute meetings. Even the location of the interviews made a difference: I went to the participants in order to make the process as convenient for them as possible. Reminder postcards

and letters were mailed before the scheduled interviews. Follow-up thank-you notes were also distributed to every participant not only out of gratitude but to remind them that their perspectives were worth the time and effort to share. In the end, a couple of anesthetists thanked me for being flexible. It was the least I could do. Secondly, conducting observations provided the perfect opportunity to demonstrate the seriousness of my research. Arriving at the hospital on time (usually by 6:15 a.m.) with pen and notebook in hand communicated to the staff that I was intent upon data collection. Specifically, asking the CRNAs appropriate questions while observing in surgery indicated interest in their roles and responsibilities. Thus, conducting observations, rather than just relying on interview data alone, provided additional credence regarding this inquiry among the anesthesia community.

Communicating to the nursing profession (and disciplines beyond it) what the CRNAs perspectives and experiences are related to occupational stress was a major driving force behind the research. Then again, I had to accept the fact that some did not want to be interviewed or observed. This was all a part of the research experience.

The last assumption to discuss refers to organization. Early on, I believed and hoped that it was feasible for data collection and analysis to follow an orderly, progressive pattern. Taking to heart what Merriam (1998) says cushioned some of the surprises this aspect of the research process dealt:

The qualitative researcher must have an enormous tolerance for ambiguity . . . there are no set procedures or protocols that can be followed step by step, . . . but the researcher must be able to recognize that the best way to proceed will not always be obvious, . . . for it allows the researcher to adapt to unforeseen events and change direction in pursuit of meaning. (p. 20-21).

Familiarity with any biases, recognition of the researcher's role, and awareness of nursing influences all conditioned me for the research adventure that awaited--albeit, there were a few jack-in-the-box surprises along the way. Throughout this report, I will continue to weave these peculiarities into the research discussion. "I believe our inner resources—our beliefs, philosophies, senses of care and responsibility—guide and support our research as well as any set of specific skills. Part of the rigor, part of the responsibility is to know one's self" (Meloy, 2002, p. 117).

Justification

The dissertation research employed a generic qualitative approach. A basic or generic qualitative study was apropos because

Many qualitative studies in education do not focus on culture or build a grounded theory; nor are they intensive case studies of a single unit or bounded system. Rather, researchers who conduct these studies, which are probably the most common form of qualitative research in education, simply seek to discover and understand a phenomenon, a process, or the perspectives and worldviews of the people involved. (Merriam, 1998, p. 11).

The research questions sought to explore the relationship between CRNA job stress and interpersonal work connections. Interpersonal job conflict and work related stress are concepts described and explored from a participant's point of view. Studying the perspectives of individual CRNAs via a qualitative inquiry was necessary because "stress is a perceptual event . . . Each of us perceives events, people, places and relationships in different ways, sometimes as stressful and sometimes not" (Herman, 2001, p. 4). What one person may consider a stressful event or situation, another person may not. Consequently, these issues are addressed by use of a qualitative approach.

Participant Selection

The research described herein utilized a qualitative approach via nonprobability sampling because this is the "method of choice for most qualitative research" (Merriam, 1998, p. 61). The type of nonprobability sampling used was purposive. Merriam (1998) writes that purposive sampling is the most common form of sampling strategy extant in qualitative research. More specifically, two types of purposive sampling were used: convenience and networking. A convenience sample was selected because of time, money, and location, along with availability of sites or respondents (Merriam). Since anesthesia is a highly specialized field, I had to go where the population was readily accessible (e.g., cities, hospitals). Participants practiced anesthesia in urban and rural areas of Tennessee (TN) and North Carolina (NC). These states were chosen for location purposes relevant to traveling convenience. Urban areas were chosen in order to recruit as many participants as possible in one locale. After all, Massey (1995) writes that feasibility is a criterion researchers need to consider. Secondly, networking, where participants refer the researcher to other participants, was a viable option. Networking is the

most widely used method of purposeful sampling. “This strategy involves identifying participants or ‘cases of interest from people who know people who know people who know what cases are information-rich, that is, good examples for study, good interview subjects”” (Merriam, 1998, p. 63). Thus, locations were also chosen based on the ability of family and friends to assist me in recruiting participants.

Criteria

Two populations assisted in answering the research questions: CRNAs and their co-workers. First, the anesthesia participants either currently practiced as CRNAs or left the profession. Both of these groups deserved consideration--while one offered current experiences and perspectives about job-related stress and coping mechanisms, the other offered insight into why they left the profession related to the topic of stress and interpersonal work relations. Practically speaking, the majority of the CRNAs interviewed (n=17) are active in their field since most nurse anesthetists do not leave the field after working so arduously on their degree. A 2001 survey from American Association of Nurse Anesthetists reveals that 83.1% (n =11,531) of CRNAs did not change jobs in the past 12 months. Seven-percent (n = 966) simply decided to change jobs, and 2.9% (n = 403) changed jobs because their facility made employment adjustments. Another 7% left the profession for other reasons. Too much time, effort, and money have been sacrificed for CRNAs to just casually walk away from their practice. For instance, “CRNAs are one of the best paid nursing specialties. The reported average annual salary in 1998 was approximately \$94,000” (American Association of Nurse Anesthetists, 2002, on-line). Moreover, those who have left the discipline (n=3) have an interesting story to tell about why they left. Their experiences will be mentioned in Chapter Four when the profiles of each nurse anesthetist are presented. These advanced practice nurses need not be overlooked nor neglected.

The CRNAs’ peers were also interviewed to illuminate further the first, third, and fourth research questions. They offered insight into the roles and responsibilities of the CRNA, as well as contributed ideas about their coping mechanisms and interpersonal job relations. After all, Medical Doctors (i.e., surgeons and anesthesiologists) and OR personnel (i.e., nurses, technicians) frequently work with the nurse anesthetists. However, since the co-workers were not the focus of the study, they offered a limited and bounded view of nurse anesthetists and occupational stress. Even though the co-workers were considered for participation in this study

due to their special experiences with CRNAs, the nurse anesthetists were the main context of this research (Merriam, 1998).

Two essential criteria were selected related to participant selection: 1) The CRNAs were either active in their field (i.e., working part- or full-time) or had left nurse anesthesia (causes were later determined at the time of the interview); and 2) Peers worked daily or weekly with the CRNAs. By considering the co-workers, I was “confidant that the ‘reality’ of the situation, as perceived by those in it, is being conveyed as [accurately] as possible,” thus offering a rich, thick description of the phenomena under investigation (Merriam, 1995, p. 54). Selecting peers buttressed research efforts.

Sample Size

Merriam (1998) reflects: “How many in the sample? . . . There is no answer” (p. 64). Ambiguity certainly presented itself in this qualitative research, which was personally challenging. Instead of determining a specific sample size beforehand, data redundancy became the primary criterion (Merriam). Nurse anesthetists from different hospital sites were interviewed. For example, CRNAs practicing at Veterans Administration Medical Centers (VAMC) and community-based hospitals were considered. I believed it would be premature and unwise to set exact numbers where CRNAs and co-workers were concerned. I did not wish to constrain the data. Seidman (1998) supports this notion: “Some researchers argue for an emerging research design in which the number of participants in a study is not established ahead of time. New participants are added as new dimensions of the issues become apparent through earlier interviews” (p. 47). During the data collection process, it was determined that if fresh insight was not forthcoming from newly selected participants, the sampling would be extirpated (Merriam, 1998). In the meanwhile, every endeavor to include as many parties as feasible was made in order to account for data saturation and redundancy. In the end, 20 nurse anesthetists and 15 co-workers participated. Table 3.1 represents all the co-worker participants listed alphabetically by pseudonym. Three anesthesiologists (MDAs) (20%), one surgeon (7%), four Surgical Technicians (27%), and seven RNs (47%) were interviewed. The peers have a wide range of experience when working with nurse anesthetists—anywhere from two to 29 years. The mean number of years they have worked with CRNAs is 16.7.

Table 3.1. Peer Description

<u>Participant</u>	<u>Job Title</u>	<u>Number of Years Working With CRNAs</u>
Barbara	RN	6
Bret	MDA	6
Constance	RN	23
Darcy	RN Educator	26
Forrest	MDA	11.5
GL	RN	28
Gloria	Surgical Technician	29
Jim	Surgeon	10
John	Surgical Technician	2
Julie	Surgical Technician	25
Lindsay	RN	27
Molly	Surgical Technician	9.5
Pete	RN	25
Susan	RN	14
Zack	MDA	9

Data Collection

Three facets created data collection: interviews, observations, and artifacts (i.e., photographs and researcher journal). Institutional Review Board (IRB) approval from Virginia Tech was obtained before collecting any data. In addition, contacting the Head of Anesthesiology and Education Director of the Southeastern Pediatric Hospital before interviewing and observing their nurse anesthetists was appropriate. “A researcher studying the experience of people at a particular site . . . must gain access through the person who has responsibility for the operation of that site” (Seidman, 1998, p. 37-38). Health care facilities have research protocols they must adhere to, and so paperwork and verification of my credentials were provided. Example of such verification included: a copy of my RN license, up-dated immunization records, Virginia Tech IRB approval, and a confirmation letter from the committee chair about this research. In order to gain entry into the facility for observations, a presentation about my research was made to the hospital’s Institutional Review Board in April 2002. Collaboration was essential so that access to the participants was allowed. From the time I began networking with the Southeastern Pediatric Hospital until the time the observations were completed (i.e., January to July, 2002), roughly six months had transpired.

Before conducting the actual interviews, I also collaborated with the nurse anesthetists by introducing myself via letter or telephone, explaining the study in simple terms, and scheduling interview times with the participants. Being open and honest with them established immediate rapport. More importantly, scheduling a week or two to conduct the interviews at each location allowed the participants time to prepare for the experience ahead of time and also allowed for rescheduling of interviews, if needed. For instance, the Southeastern Pediatric Hospital was scheduled for observations and interviews July 1st through 12th of this year. The summer season happens to be one of their busiest times of the year—an apropos time to collect rich data! Even though I had two weeks to observe and interview, I had to be very flexible with the participants' schedules. For instance, if I was in the operating room (OR) observing and another nurse anesthetist (other than the one I was observing) informed me that he or she finally had the time to be interviewed, I immediately conformed to their schedule. I would exit the OR and conduct the interview elsewhere, usually in an empty office.

Before interviewing anyone, informed consent was obtained from each person (See Appendices A and B for a copy of the Informed Consent Sheets). The Southeastern Pediatric Hospital had a separate informed consent sheet from Virginia Tech.² Approval to use only Southeastern's informed consent was obtained from Virginia Tech since the hospital's informed consent sheet was much more detailed than the University's. Assuring participant confidentiality was of utmost importance. Confidentiality was also maintained through the use of pseudonyms, as well as maintaining in confidence the nature of conversations (Rossman & Rallis, 1998).

Interviews

The chief method for data collection in this research project was through the use of interviews. "Interviewing is probably the most common form of data collection in qualitative studies in education" (Merriam, 1998). The interview guide approach was used in this research since that is what is typically employed in qualitative studies (Rossman & Rallis). Each CRNA participant was interviewed once, face-to-face, and for about 90 minutes. While co-workers were also interviewed face-to-face, their interviews did not last as long as the CRNA interviews. This is because they were not the "population of focus" in the research. If the first interviews with either the CRNAs or the co-workers could not be completed within the appropriate time

² Note that in the informed consent, the pseudonym for the hospital has replaced the facility's true name throughout the document. This is to protect the identity of the organization and its participants.

frame, a second interview was scheduled. After all, the participants' comfort was important (See Appendices C and D for the interview guides). However, most interviews were completed within the first attempt. All interviews were conducted at a convenient time and location for the participants and at a safe place for myself—mainly at personal residences but also at the facilities' where some of them worked. Quiet areas, where the participant and researcher would not be disturbed, were preferable (e.g., a private office, church, home).

Semi-structured interviews were used to allow for an organized yet flexible interview process. Open-ended questions entailed the majority of interview questions because “the researcher develops categories or topics to explore but remains open to pursuing topics that the participant brings up” (Rossman & Rallis, 1998, p. 124). Thus, the interview questions provided guidance yet remained flexible enough to explore new ideas and issues that a participant might mention. Demographic or background-type questions mainly consisted of close-ended type inquiries. All interviews but one (a CRNA declined to be recorded) were tape recorded, with permission, so that the participants' words would be preserved for the data analysis process (Merriam, 1998). During the interviews, notations were made regarding location, date, time, and participant dress and nonverbal cues. The interview process took three full months to complete: from May to July of 2002.

Two specific sources proved useful in the creation of both the CRNA and co-worker interview guides. The main source was the literature; I discovered interview questions asked in previous research that were applicable to my study. The Cameron (1998), Boey, (1999), Cavagnaro (1983), Kendrick (2000), Booth (1998), and Kalichman et al. (2000) articles were useful in deriving some of the interview questions related to coping mechanisms and interpersonal work connections.

Second, the Nursing Stress Scale (NSS) helped me to create open-ended interview questions. As indicated earlier, the second research question is: What are the CRNAs perceived job-related stressors? Rewording most of the questions found in the NSS into open-ended inquiries provided data about specific stress that might be found at work. A brief description of and justification for the NSS warrants explanation. The NSS was created more than 20 years ago because there was a lack of instrumentation specifically measuring stress among nurses then. It was originally designed for nurses employed in the hospital setting. This 34-item, self-reported instrument addresses the factors of death and dying, conflict with physicians and other nurses,

inadequate preparation, lack of support, and workload. Nurses rank each item on a scale from zero (never) to three (very frequently). The NSS has been utilized among nurses practicing in a variety of settings, like surgery, oncology, hospice, and home health care. It has been used among nurses holding varying degrees, such as RNs (with two- and four-year degrees) and Licensed Practical Nurses (LPNs)--even Nursing Assistants (Toft & Anderson, 1981; Moore, Lindquist, Katz, 1997). Toft and Anderson suggest that the Nursing Stress Scale be further utilized in other studies and “other hospital settings with other types of hospital units” that might help demonstrate the connection between stress, job satisfaction, and turnover (p. 646). Importantly, the NSS has gained increasing recognition among nurse-researchers by being tested and retested as a theoretically valid and reliable instrument (Toft & Anderson). The NSS was tailored for the CRNA for the purposes of this research using a qualitative flare. This scale was reviewed by an expert CRNA who suggested some test items be discarded due to their irrelevance, such as: a physician not being present when a patient dies, feeling inadequately prepared to help with the emotional needs of a patient’s family, floating to other units that are short-staffed, too many non-nursing tasks required (such as clerical work), and a physician not being present in a medical emergency. Thus, the original 34-item scale was reduced to 29 items relevant to the nurse anesthetist’s line of work. (Refer to Appendix E, the Nursing Stress Scale). For instance, the NSS might ask the nurse to rank on a scale from one to three how often he or she finds the death of a patient to be stressful. Instead, I asked the nurse anesthetists to tell me what their thoughts and feelings were regarding the death or dying of a patient.

Thirdly, my own creativity contributed to the interview guide’s inception. What questions did I feel needed to be asked in order to answer the research questions? After several initial brainstorming sessions, questions were created for each participant group. Some questions were even derived from personal nursing experiences. Incidentally, the interview guide underwent several stages of the drafting process with the qualitative expert on my committee providing guidance.

“Interviewing is a way to get rich, detailed data about how people view their worlds” (Rossman & Rallis, 1998, p. 125). Emphasizing interviews in this research especially assisted in examining the CRNAs perspectives about stress and their individual coping idiosyncrasies. The data collection process of interviewing has been discussed. The focus of this chapter now shifts to observations.

Observations

Observation is another way of collecting data when conducting a qualitative inquiry. Although interviews are often a primary source of information, “observational data represent a firsthand encounter with the phenomenon of interest rather than a secondhand account of the world obtained in an interview” because it takes place in a real world setting (Merriam, 1998, p. 94). Observing nurse anesthetists on the job helped to answer the research questions posed earlier, especially the first, third, and fourth. But one question loomed in the forefront of this research: Would access be allowed into a facility to observe the nurse anesthetists in action? After utilizing existing family connections to Southeastern Pediatric Hospital and striving to meet their IRB protocols, access into the CRNAs natural work environment was granted!

Observer as participant was the observational stance employed. “Using this method, the researcher may have access to many people and a wide range of information” (Merriam, 1998, p. 101). Observer as participant gleaned insight into the anesthetists’ perceptions because I was able to watch carefully and interact closely with the CRNAs to establish an insider’s identity and emic understanding without having to practice anesthesia myself (Merriam). I can remember my first day on-site:

7-1-02 (After Day One of Observations)

Today I focused on CRNA roles, responsibilities, and environment. I’m using the qualitative descriptive matrix that Dr. Uttech reminded me about. Today also served as an icebreaker--meeting people, etc. Networking is just as crucial as anything else. It helps to smooth things over if you’re friendly yet not nosy. After all, I’m a stranger—an outsider—although everyone here has been nice . . . The hospital didn’t smell like a hospital to me. I donned the hat (and the mask when needed) and looked the part.

Most of the time, the role of participant took a back seat to that of observer and data gatherer. Nevertheless, there were a few times when the employees called upon my assistance with minor tasks once they discovered I was an RN. It was relatively easy for me to switch from observer-participant to participant-observer. After all, I wanted to show my gratitude to those who had invited me into their world. My willingness to occasionally switch from observer-participant to participant-observer garnered a degree of appreciation from the staff. This, in turn, made the observation process much more fruitful and probably earned a few extra participants in the

process. Establishing rapport with the participants by finding common ground with them, being friendly, and showing interest in activities was relevant (Merriam, 1998). Thus, my nursing background established rapport and a common ground with the participants.

The observations occurred mainly in the OR; although, I did observe in the staff lounge, recovery room, and MRI room. Ordinary activities, such as eating and filing paperwork did not go unnoticed. I also observed the CRNAs as they made pre-op (i.e., pre-operative or before surgery) rounds. A nurse anesthetist's work is not confined to OR walls.

As observations were being carried out, occurrences were discretely noted using a small notebook and pen. If observations were taking place in OR, sitting in the back of the room, out of the way, was my intention; however, I was frequently invited to sit next to the nurse anesthetist to gain the best view of them in action. Their invitations were readily accepted. On the other hand, if the focus of the observations on any particular day required an overall, general perspective instead of a focused, detailed one, I would situate myself toward the back of the room. For instance, if space or "turf" was the concentration for that day, I would sit farther away from the actors (i.e., CRNA, RN, MD, technician, patient). How I was located in the operating room totally depended on the focus of observation for that time period. Incidentally, if a CRNA was being observed preparing a client for surgery, notes were not taken in plain view of the patient. Rather, I refrained from jotting down any observations until after the patient was induced (i.e., anesthetized). Patient comfort was a priority.

No matter where observations occurred, there were basic elements to note in any setting. First was the physical setting. CRNAs work with very expensive, high-tech machinery that can run into the millions of dollars. Noting the anesthesia equipment and tools afforded me a glimpse into the CRNAs occupational roles and responsibilities, along with any stressors they encountered. For instance, how do the CRNAs interact with the equipment? How do they react to equipment that requires trouble-shooting, if applicable? Secondly, the participants or key players were noteworthy. Who was present in OR? What were their roles? What personality and professional characteristics were existent in the participants? Thirdly, activities and interactions were noticed. For instance, what happened during surgery? Were they "organized" events? What procedures took place and how long did they last? During this time, interactions between peers were noted from the researcher's perspective. Another dimension noted was conversation. What was the content of conversations in OR? Who speaks, and who listens?

Due to patient confidentiality, conversations in OR were not tape-recorded. Rossman and Rallis (1998) write “raw field notes are typically taken by hand in the setting” (p. 138). Subtle factors were also noted, such as unplanned occurrences, and nonverbal communication (e.g., dress, physical space and cues). Lastly, monitoring my own judgments and behavior was imperative. What were my thoughts as events were taking place? These qualified as observer comments--an essential part of field notes (Merriam). As the field notes are provided throughout Chapter Five, the reader may note that I did include observer comments from time to time.

There are several factors I had to keep in mind while observing. “There is no ideal amount of time to spend observing, nor is there a preferred pattern of observation . . . The overall time spent on the site, the number of visits, and the number of observations made per visit cannot be precisely determined ahead of time” (Merriam, 1998, p. 98, 100). Furthermore, I did not stipulate how many nurse anesthetists would be observed on the job. However, five of the 20 CRNAs that I interviewed were observed at work. Thus, 25% of my research participants were observed on the job. Overall, 65 hours of clinical observation were accumulated within a nine-day period.

My nursing background and familiarity with an operating room mentally prepared me for the observations, and in turn, helped me ask appropriate questions. Adequately representing the nursing profession and the university was important.

Artifact Data

The final means of collecting data was through photographs and a personal research journal. Documents refer to “written, visual, and physical material relevant to the study at hand,” and public records, personal documents, and physical material serve as examples (Merriam, 1998, p. 112).

Artifact data used were the physical materials that nurse anesthetists work with. Merriam (1998) advises that instruments of everyday living or work life, such as tools, implements, or utensils be considered. Studying or becoming familiar with the instruments that CRNAs work with every day offered insight into answering the first research question. How do anesthetists use their work tools to accomplish job roles and responsibilities? Examples of instruments examined include: anesthesia equipment, medication and anesthetic gases, and anesthesia carts (e.g., where various types of medication and equipment are stored), to name a few. A good time

to examine these materials was during the observation phase when access to the materials was already convenient.

From the beginning, I knew that keeping a researcher journal was important, but that importance was not thoroughly appreciated by myself until writing this chapter. Incorporating the use of my own personal researcher notes was a novel route to take when trying to enhance the artifact data. Throughout the summer, I was attentive to up-dating the journal, which was beneficial. Now, I can refer back to those notes where feelings, thoughts, and observations were recorded and share them with the audience, when appropriate.

Perhaps it is suitable to close this section of data collection with a note from my journal: “It’s tiring to observe and interview at the same time. I’ve got to constantly re-focus mentally, and that’s hard in a strange place with strange faces.” Three types of data collection methods (i.e., interviews, observations, and artifact) have been thoroughly reviewed. Consequently, a discussion of data analysis will be mentioned.

Data Analysis

Types of Analyses Used

Blending artifacts, observations, and interviews into the research utilized multiple sources of data and methods to confirm emerging findings (Merriam, 1998). A plethora of data presented itself and as it emerged, I conducted the data analysis. “The right way to analyze data in a qualitative study is to do it simultaneously with data collection” (Merriam, 1998, p. 162). The type of analysis used was the constant comparative method of analysis, which consists of these main steps: data organization and familiarization; generating categories, themes, and patterns, and data coding; and searching for alternative explanations of the data (Glaser & Strauss, 1965). Nevertheless, if simultaneous data analysis and collection were to be done with relative ease, I had to first get organized.

Managing data—get organized! Getting organized early with coding and storing the data was a must and saved hours of frustration. Tapes and transcriptions of those tapes were labeled using pseudonyms to ensure anonymity and easy access. My dissertation committee and I were the only parties privy to the tapes and transcriptions, unless a participant had requested a copy of his or her interview. Transcriptions were typed onto the word processing system Word. During the transcription phase, nonverbal cues were included, such as laughs, sighs, and coughs. As the interviews were completed, so was the transcription of that interview. I did not want to get

behind and have a pile of interviews waiting for me at the end of July; however, it was not always easy-going! After the transcribing was complete, the information was coded by category or theme.

Become intimate with the data. The second step in data analysis was to familiarize myself with the information. To do this, I “read, reread, and once more read through the data” (Rossman & Rallis, 1998, p. 178). In order to peruse the interview data, the interviews first had to be transcribed, as mentioned above. Becoming intimate with the data stimulated critical thinking and analytic skills, as well as provoked insight (Rossman & Rallis).

Generating categories, themes, patterns and coding. Analyzing the data occurred using a constant comparative analysis. Looking for insight into situations, settings, styles, images, meanings and nuances was key to unlocking the data analysis process. Coding raw information and constructing data into categories or themes by analyzing information in relation to the research questions were important. Individual passages were marked and grouped into categories and then studied for thematic connections within and among them (Seidman, 1998). These themes helped to “capture some recurring pattern that cuts across the preponderance of the data,” which in turn, responded to the research questions (Merriam, 1998, p. 179). Definitions or descriptions for each category as they relate to the research questions are given to provide clarity. However, a “researcher typically [does] not state how something became a pattern or theme [because there are] generally no ‘procedural or rule-governed rational’” when stating something as a theme or pattern (Sandelowski & Barroso, 2002, p. 217).

Besides generating themes and categories, crafting of profiles and vignettes of participant experiences was also an option. A profile presents a particular scenario using the words of a participant in-depth, while a vignette is a shortened version of a person’s story. “It is an effective way of sharing interview data and opening up one’s interview materials to analysis and interpretation” (Seidman, 1998, p. 102). Since a profile is just a slice of an interview, being faithful to the words and identity of the participant is required. The most compelling interview passages will be portrayed later in Chapter Four. After the process of generating themes was complete, a concept map was constructed, connecting the categories and subcategories together and bringing abstractions to life (Refer to Appendix I). A concept map then helped in coding the data and generating categories, themes, and patterns (Rossman & Rallis, 1998).

Searching for other explanations. As data analysis was occurring, it became easy to feel inundated with the technical aspects of the information. It was at this time that I stepped back from the data and let it “speak to me” by challenging the patterns that seemed so apparent while seeking those that were not as visible (Rossman & Rallis, 1998). What other explanations existed related to the research questions? “This entails a search through the data during which you challenge your interpretations, search for negative instances of the patterns, and incorporate these into your interpretation” (Rossman & Rallis, 1998, p. 182). Besides the obvious, it was imperative to examine sublayers of information.

To summarize, several analytical techniques were used. It took the summer to transcribe and organize the data, and well into September to code and disseminate the information further. Data analysis was best achieved in conjunction with data gathering and attention to organizational detail.

Trustworthiness, Credibility, and Transferability

Qualitative research has its own standards when judging the integrity of a project: trustworthiness, credibility, and transferability (Merriam, 1995).

Trustworthiness. This term refers to the use of dependability, credibility and transferability in qualitative inquiry (Polit & Hungler, 1995). Trustworthiness is a means to evaluate the quality of a researcher’s data and their findings. Two major criteria judge the trustworthiness of a qualitative inquiry: “First, does the study conform to standards of acceptable and competent practice? Second, has it been ethically conducted with sensitivity to the politics of the topic and setting” (Rossman & Rallis, 1998, p. 43)? Standards of practice with this research were ensured by data triangulation. Research robustness was amplified by drawing upon several data methods, sources, theories, and examinations. First, interviews, observations, and artifacts were used to collect data. Secondly, multiple sources were incorporated into the research by interviewing CRNAs practicing at various hospital sites. Therefore, these steps strengthened the reliability and internal validity of the research (Merriam, 1998).

Trustworthiness was guaranteed after data triangulation. In addition, these methods were used to “render an account of participants’ worldviews as . . . fully as possible” (Rossman & Rallis, 1998, p. 45). Communicating individual perspectives and truths related to CRNAs and job stress was the ultimate goal. Before, during, and after the research, trustworthiness became augmented if I was honest about my own biases, strengths, and interests (Rossman & Rallis). However,

maintaining a log or journal kept me mindful of the data gathering, analyzing, and interpreting stages. In fact, a journal “documents the intellectual odyssey of your study and helps you establish its rigor to readers and potential users” (Rossman & Rallis, 1998, p. 47). A standard subject notebook served as my journal. Accordingly, reflection of my own biases, interests, and strengths increased trustworthiness.

The methodology of this research promoted trustworthiness by its ethical considerations towards the participants and sensitivity to facility politics. The rights of the participants were protected via informed consent, only after IRB approval was granted. Appendices A and B clearly delineate and support the participants’ interests. As was my intention, making contact phone calls before the actual face-to-face interviews demonstrated consideration for the participants. Secondly, working closely with Southeastern Pediatric Hospital, who employed five of the CRNAs, showed respect for them and honored their standards of practice. Submitting the appropriate paperwork established that the research was genuine and above board. Also, making contact with the directors of relevant departments acknowledged the power dynamic. “Gatekeepers—those in positions of power in organizations—can support or squash a project” (Rossman & Rallis, 1998, p. 54).

Credibility. Credibility addresses the idea of internal validity. Are my findings congruent with reality? Credibility involves the researcher accurately interpreting and conveying the participants constructed realities and truths. I am not searching for a single Truth. Since people have different interpretations of reality, it became my responsibility to present all interpretations. “Internal validity is a strength of qualitative research” because there are steps that can be taken to ensure that “findings are valid according to that paradigm’s notion of reality” (Merriam, 1998, p. 54-55). The methods used to improve the internal validity were triangulation, peer examination, colleague checks, and acknowledgement of biases. Each of these techniques will now be mentioned.

One way to address credibility in the research is through triangulation of data. Specifically, multiple methods to confirm emerging findings (i.e., interviews, observations, artifacts) and multiple sources (i.e., interview CRNAs, peers) within those methods account for credibility. In other words, employing a variety of modes and sources to address the research questions reflect a more comprehensive view of the assortment of realities. Insofar as, the

participants' perceptions of reality related to occupational stress and nurse anesthetists are relayed as accurately as possible in the remaining chapters (Merriam, 1995).

Second, peer or colleague examination of the data also adds to the credibility of research findings. The dissertation committee provided assistance in examining the data and "comment[ing] on emerging findings" (Merriam, 1995, p. 55). Consequently, exposing my research analysis findings to examination increased the rigor of the study.

In addition, colleague checks were utilized. After the completion of an interview, each participant was offered the opportunity to review his or her transcript. Twenty-eight (80%) immediately declined this offer. While the other seven (20%) were sent a transcript via mail, only five (14%) returned corrected interviews after I had enclosed self-addressed stamped envelopes. Those participants that returned amended transcripts made minor modifications (e.g., correction of a spelling error) to their original statements. Included with the transcripts was my phone number, and physical and email addresses in case they wished to contact me further. Since then, I have not been contacted.

Finally, by acknowledging my biases, assumptions, worldviews, and experiences early on, I became honest with the audience and myself. The reader became empowered. By sharing my personal predispositions and worldviews, the audience will better comprehend how the data was interpreted (Merriam, 1995). A thorough discussion of the role of the researcher, along with assumptions and biases, was presented at the onset of this chapter.

Transferability. Transferability addresses the concept of external validity, which is defined by Merriam (1995) as "the extent to which the findings of a study can be applied to other situations" (p. 57). Sometimes transferability is referred to as reader or user generalizability. The term transferability is preferred to generalizability because qualitative research seeks to comprehend the particular in detail, instead of discovering what is generally factual of many (Merriam). Wolcott concurs: "What can we learn from studying only one of anything? Why, all we can!" (1995, p. 171).

Transferability is useful in this research in two ways. First, intense, full descriptions of the CRNAs' experiences with work-related stress are provided, whether through observations, interviews, or a photograph. Relating enough information via detailed descriptions help readers determine how closely their situations coincide with the research situation. As a result, the reader decides whether findings are transferable (Merriam, 1995). One interesting way I

promote transferability is through crafting a profile or vignette of a participant's experience, as mentioned earlier. Vignettes and profiles express the personal identities and worldviews of the participants. Seidman (1998) writes that a profile or vignette is an efficacious method of exposing interview material to analysis and interpretation. It is my duty to present the CRNAs stories as they are told, yet "leave to readers the challenge of making [generalizations] depending on their present concerns and prior experiences" (Wolcott, 1995, p. 172).

Secondly, interviewing CRNAs employed in a variety of hospital settings was apropos. Hospital settings in which they worked include: a pediatric hospital; two hospitals for veterans; and two community-based hospitals, one located in a small town and the other in a metropolitan city. If the perspectives of nurse anesthetists from a variety of hospital sites are communicated, compared to those CRNAs practicing at just one hospital, then the reader is afforded greater opportunity to identify with a certain perspective. "Multi-site designs—the use of several sites, cases, situations, especially those representing some variation will allow the results to be applied to a greater range of other similar situations" (Merriam, 1995, p. 58).

Part of the data analysis discussion entailed addressing issues of trustworthiness, credibility, and transferability. These are the means recruited by qualitative researchers to deal with the issues of validity and reliability. Since this research involved the lives of human beings, factoring trustworthiness, credibility, and transferability into the study became vital. The next chapter continues the idea of these concepts by acquainting the reader with the nurse anesthetists on an individual level.

Chapter 4

CONTEXT:

PRESENTATION OF NURSE ANESTHETIST PARTICIPANTS

“There’s no happier time than when I wake a patient up and their problems would be solved. They’re comfortable, and you get things that are right. It’s just a good feeling.”—Mayo, CRNA

Group Preamble

It would be remiss of me if I did not introduce the nurse anesthetists. Participant demographics will first be mentioned. A discourse on what opinions the anesthetists have in common will follow, along with in-depth individual profiles.

Demographic Description

Table 4.1 on the next page represents the demographic information of the nurse anesthetist participants. A brief discussion of the data listed in that table will now be presented.

In this study, 80% (n=16) of the nurse anesthetists are women. Even though a “total of 42% of the nation’s 27,000 CRNAs are men,” it became a challenge recruiting male nurse anesthetists for interviews (American Association of Nurse Anesthetists, 2002, on-line). I had to actively recruit male participants--it was like trying to find a needle in a haystack. In addition, two male CRNAs turned down interviews. The majority of the nurse anesthetists in this research investigation are married (65%), aged 50 and older (60%), and possess Diploma degrees in Anesthesia (85%).

Fourteen nurse anesthetists work full-time, while three are employed part-time. Three nurse anesthetists left the profession for various reasons, which will be revealed later in the profile piece of this chapter. Exactly half (n=10) of the CRNAs earn greater than \$110,000 a year in wages. According to my sample, 25% of the anesthetists have practiced 11-20 years, while 70% have more than 20 years experience.

Table 4.1. CRNA Demographics

Gender		Age Range					
Male	Female	30-39	40-49	50-59	60-69		
n=4 20%	n=16 80%	n=1 5%	n=7 35%	n=10 50%	n=2 10%		
Marital Status				Educational Preparation			
Married	Single	Divorced	Widowed	Diploma in Anesthesia	Master's Degree in Anesthesia		
n=13 65%	n=2 10%	n=4 20%	n=1 5%	n=17 85%	n=3 15%		
Years Practicing Anesthesia					Work Status		
1-10	11-20	21-30	31-40	>40	Full-time	Part-time	Inactive
n=1 5%	n=5 25%	n=10 50%	n=3 15%	n=1 5%	n=14 70%	n=3 15%	n=3 15%
Yearly Salary Range							
Refused to Answer	< \$80,000	\$80,000-90,000	\$91,000-100,000	\$101,000-110,000	> \$110,000		
n=2 10%	n=1 5%	n=2 10%	n=2 10%	n=3 15%	n=10 50%		

Common Ideas

When interviewing the nurse anesthetists, I noticed that they found it strange to take the time to sit down and discuss their thoughts and feelings. The concept seemed almost foreign to them. Fortunately, they quickly warmed to the idea. I noticed that the nurse anesthetists share common ideas related to their scope of practice, including decision-making skills, operating specialized equipment, and delivering anesthesia.

The participants selected anesthesia as a profession due to the autonomy, excitement, challenge, high responsibility, and financial stability. Autonomy is especially appealing because the CRNAs view themselves as capable of making independent decisions. In fact, part of their

responsibility is rendering patient care independent of physician supervision the majority of the time. When asked how they felt about the fear of making potential client mistakes, the group consensus was that even though it is a healthy fear, it is not at the forefront of their minds. However, they would not hesitate to call for assistance when needed. Consequently, the CRNAs realize their limits and adjust accordingly.

The group feels comfortable with operating the specialized equipment, such as the anesthesia machine. Even though occurrences (e.g, mechanical failures) with the equipment can happen, this is not often. Adjectives used to describe the equipment are: progressive, modern, and dependable. In addition, the anesthesia technician and/or the administration assumes up-keep of any equipment, freeing the minds of the nurse anesthetists to deal with more pressing issues.

The nurse anesthetists concur that anesthesia delivery is relatively routine, albeit some aspects of uncertainty exist. However, they believe they are able to adapt to instances of uncertainty. If censure is given by a physician about the delivery of patient care, the CRNAs are open-minded enough to receive that criticism, as long as it is justified and conveyed with professional respect. In other words, the participants recognize that there is more than one way to accomplish an anesthetic means. Perhaps Marilyn put it best related to the aforementioned points:

There's a certain anesthetist personality—there really is. You're A-type personality; you're independent; frequently out-spoken, and for the most part, don't let people take advantage of you . . . There's just a little mold that anesthetists come out of, I think.

Most anesthetists basically are the same type people.

To conclude this section, the group feels that the public is uneducated about anesthesia and the role nurse anesthetists' play. As Guy stated in his interview, "People don't realize who actually is doing the anesthesia and who's taking care of them." From their perspective, all too often the anesthesiologist receives credit for work that the anesthetist is performing. Consequently, the participants feel a strong desire to inform the public about what a nurse anesthetist is and does. It is my fervent desire that this research will acknowledge the efforts our nurse anesthetist put forth.

Individual CRNA Profiles

Each participant will be introduced alphabetically by pseudonym. The profiles will consist of background information and original quotes from the nurse anesthetists themselves. Crafting a profile of each CRNA is justified because it uses the participant's own words and reflects the "person's consciousness" (Seidman, 1998, p. 102).

Chuck

Chuck is a married male in his 40s and has practiced anesthesia for over twenty years. Chuck is also the chief nurse anesthetist, which includes making out the schedule for all CRNAs. I had the opportunity to observe Chuck at work. He gave a concise interview sprinkled with an occasional joking remark, which is indicative of his personality. During the interview, his posture was open, and he made direct eye contact frequently.

I went into anesthesia school because I didn't like the floor, and it's the only nursing I did like. On the floor, I realized I was going nowhere. I graduated from Duke [when] it was a two-year program . . . [However, if I had to do all over again], I would have gone to medical school instead of being a CRNA because I would have retired by now I've worked here at Southeastern Pediatric Hospital for three and a half years. Has it been that long? I like big bowel cases but not craniotomies because you can't see much. [I also dislike] lumbar laminectomies because of the positioning of the patient, the pain the patient's in, and they're boring . . . I consider the preemie/baby cases most stressful due to lung disease and sometimes they don't wake-up right. Losing a baby a month ago with a heart problem was stressful--so are doing big heart cases. The stressful ones are the ones you've wrestled death with. I'll tell you what stresses me—those itty-bitty one-kilo babies. [Regarding the death of a patient], the baby is better off—like that one-month old with the heart defect. I always examine it and see if I could have prevented [the death]. I'm saddened by it but don't feel guilty. It's in God's hands I try to [handle stressful situations by] staying calm. You have to have a sense of humor in this place, but you just deal with it. I'm a pretty low-stressed guy. [If I am feeling stressed], I go home and sit in the recliner and stare at the wall or the fireplace. I'm going to handle it myself . . . I never thought about the stressors [in anesthesia]. That's why we go into it—for the excitement [So, I see myself] right here [at Southeastern Pediatric

Hospital] ten years from now, unless they go to trauma. Then I'll leave. I'm too old to do trauma. I plan to finish here.

Clarissa

Clarissa practiced anesthesia for 25 years before leaving the profession two years ago. Clarissa is married and has a Master's Degree in Nursing. I found Clarissa articulate and very intelligent. She is currently practicing nursing but not as an anesthetist. During the interview, her almond-shaped brown eyes reflected the pain that she has experienced due to her inactive practice. The rainy weather only added to the somber mood of this interview.

I was a Critical Care nurse. I was happy with Critical Care nursing, but I decided to enter the nurse anesthesia program with the stipulation to myself that if I did not like it, I would quit . . . I graduated from an 18-month diploma nurse anesthesia program and have been an active practicing nurse anesthetist since [the 1970s]. My experience includes open hearts, children, adults of all ages, and a wide-variety of anesthesia surgical procedures. I like chest cases the best because anything can happen. They're exciting because when you get into the chest, you get into the vasculature—the hilum where all the important pulmonary vessels are. I *loved* [italics added] anesthesia. [It is] challenging, satisfying, fulfilling . . . I look forward to it because of the anticipation of not knowing what's going to happen. The circumstances that caused me to leave anesthesia was, I guess to be perfectly honest, problems in my department where I worked, and secondly, the need for nurses [elsewhere] . . . but mainly [because of] interpersonal relations and lack of management to address the waywardness of some people's actions and attitudes and verbalizations—disrespect. In the past as a nurse anesthetist, I would introduce myself to a patient, sedate them, and put them to sleep and had very limited contact with them. So, it's really quite refreshing to deal with the patients and their families [now]. A typical working day for me now is 8:00-4:30 Monday through Friday, no holidays, no weekends, no nights, and no call. I enjoy that. Working as a nurse has been a learning experience for me, and I'm glad I've gotten to do it. I still consider myself a nurse anesthetist because I've been doing it for so long. I'm one of those people that went into nursing for nursing. I didn't go into nursing to be a nurse anesthetist . . . But looking back would I have gone into nurse anesthesia again? Probably not. Nurse anesthesia is a restrictive career. In nurse anesthesia, basically that's all you're ever going to do is be a nurse

anesthetist . . . I feel like you're limited, and you're always going to be in the operating room or in a confined space. And I'm sort of a person who likes to have some freedom of movement physically and mentally . . . I think if I'd known then what I know now, I probably would have picked something a little different—maybe business. I would have done my own business where I would have had more opportunity to be creative and expressive as an individual. It's very hard to be individually expressive and creative in a scientific occupation because there are protocols and checklists and regimes and schedules. I like the idea of being able to have more opportunity to branch out. It's confining. Physically and mentally, it's confining.

Derek

Derek's interview was the longest I conducted. The environment in which the interview took place was conducive for talking: we chatted on the screened-in porch on a warm summer's day. He was an interesting person to interview. Derek has practiced anesthesia not quite 20 years, with experience ranging from small community hospitals to large academic university settings. He just recently started a new job in a small town.

[I was prompted to enter anesthesia when working] as an ER nurse making \$8.00 an hour. I was burned out of that position already, but it was a low-paying, high-responsibility, very high-pressured job that just did not offer any reward at all . . . I had in the back of my mind that nurse anesthesia was probably the career for me: it had a high level of independence; the autonomy was good; the responsibility was high; but you [are] a very valuable member of the team . . . CRNAs tend to think of themselves not as nurses anymore for some reason. I'm not sure why; I'm a nurse first. Without being a nurse, I couldn't be a nurse anesthetist. I think of myself as a nurse first . . . [I've done] a whole wide range of cases . . . locum tenens, . . . bread and butter and OB anesthesia with some neuro, occasional triple A and carotids . . . I did 10 years of plastic surgery . . . I have worked with an anesthesiologist in a big center to working without an anesthesiologist in a small office space practice . . . I like cases that turn over rather rapidly. I like to be efficient, get the cases done, and get out of there . . . Well, I like to be efficient, and I like to move cases along. I don't like the push towards just get the case done, drop the patient in the room, and go, go, go, go, go . . . My favorite cases to do are probably carotid surgery and triple As—abdominal aortic aneurysms. Those are fun cases, . . . [yet] the

number one most enjoyable thing is being able to make a difference in how someone comes in. I have a sense of humor that I like to get people laughing . . . If I can get them laughing or at least a smile, typically you've got them then. They're yours. They've relaxed enough to smile or laugh. [And] anesthesia is safer than anything you can do. Driving: very dangerous. You should never drive in your car . . . Walking across the street: don't do it. Drinking in a bar: bad. (laughs) People fall off the barstool! . . . So, anesthesia is a very safe thing . . . As a matter of fact, you can take a really sick patient, and they do better under anesthesia than they were doing prior to. You put a tube in them; you're breathing for them; you're giving them lots of oxygen; you control their blood pressure. You do all this stuff for them. You give them every kind of drug you can think of—uppers, downers. You can improve their oxygen use. They do much better with anesthesia. [So], I don't see it as being uncertain. I see that complications arise and problems develop, and you're trained to deal with those problems . . . I think the stressful part comes if [the patients] don't respond the way you expect them to, and they don't bounce back enough. That's when it starts to get a little tight, and you start to go, "Oh, boy." I try and do the best job I can on this patient . . . Once I started work [after the move], it was like a stress release. Once I got to work, I went, "Oh, anesthesia! I know how to do this!" Anesthesia is an expected stress. I expect to have stress in anesthesia, so I deal with it . . . I was born to do nurse anesthesia. That's what my niche is. I enjoy what I do, and [in 10 years] I'll probably still be working.

Guy

Guy is a soft-spoken, married male in his 50s. He works full-time at a large hospital in Tennessee. Occasionally he travels to Virginia, Idaho, and Oregon giving anesthesia, but he is not a locum tenens (i.e., temporary hire). Guy has worked at the same hospital for 24 years, which is the length of time he has been practicing anesthesia. Another CRNA participant, Lynn, referred Guy to me.

[My] three cousins who are nurse anesthetists . . . encouraged me to go into [anesthesia]. I've enjoyed the medical field--medical work . . . Mainly, I really enjoy what I'm doing. I like the operating room. I thought, at one time, of being a surgeon. I worked as a surgeon's assistant—helping the surgeon on major cases before I went into anesthesia and enjoyed that very much. There wasn't as much ability to move to areas of the county

where I wanted to and get a good paying job. So, I investigated anesthesia and went into it. I'm really glad I did . . . I've been here since—traveled around a little bit and done some anesthesia at other hospitals around the nation on vacation time . . . Part of the reason I like to travel and work at different hospitals [is] you can learn different techniques and new ways of doing things in other parts of the country . . . I [also] like orthopedic cases [because] I just enjoy a lot of the doctors that I work with as far as orthopedics. I've always had an interest in ortho injuries and treatment. Plus, I have a degree in physical education . . . I enjoy doing a variety [of surgical cases]. I guess the ones I dislike the most would probably be open-heart surgeries. The rooms are cold, and it can be boring at times . . . [Even though the workload] is fairly stable here, we started doing hearts more now. We used to just do them during the daytime. Now, they're wanting us to take call during hearts . . . That's added more work, more hours of on-call situation. So, the chance of getting called back and staying late is one of the problems because you can go in at 6:30 of a morning, and you don't know when you're going to get out. You might get out at 3:00; you might get out at 10:00 at night. So, it's hard to plan, especially for the ladies that have children. If they're with babysitters, they just don't know when they're going to get out to get them. It makes it more stressful on them than on us who have older children or no children . . . [Anesthesia] is also physical, depending on what you're working in. A lot of times, if you're in the OB department, you have to do things quickly. Sometimes you have heavy patients you have to move and change positions on quickly. We have gastric bypass patients who range from 300 to 600 pounds that you're having to move and deal with as far as intubations and moving them. Sometimes [we have] big back patients that you have to turn them over to put them to sleep, if they're doing what we call a 360—operate on one side and you turn them over and they have to operate on the other side. So, you try to keep all your lines straight and get them moved without injuring the patient. It's a little bit of work, . . . [and] I just recently broke my hip out biking. There's some stresses as far as, for a while, not being able to move as easily in OR, and that makes it harder to do your job . . . [However, in 10 years], I'll probably be doing either locum tenens or part-time—choosing when I want to work and how much I want to work. I'll probably be what they

call semi-retired. I don't want to quit, but I'd like to slow down a little and enjoy life a little bit more.

Hilda

From the moment I drove up to Hilda's property, I knew she would be entertaining. Half of her house is underground, protected by big dogs and a wrought-iron fence. This single, middle-aged lady is self-sufficient, as evidenced by growing her own garden and stockpiling food in the house. I was armed with the foreknowledge that Hilda served two terms in Vietnam as an anesthetist, which may explain her peculiar living arrangements. Her personality was warm, welcoming, and colorful.

I first got into anesthesia in Vietnam in 1970. I was given on the job training because they needed someone to give anesthesia . . . I was good at it, and they shoved me into it anyway. They had all the paperwork filled out, and the Colonel helped boost me right into it . . . After finishing that tour of duty, I went through anesthesia school . . . When I was in anesthesia school, I really enjoyed best the children because I hadn't had a whole lot of experience with those. [I] did a lot of pediatric cases . . . [Then I] had the great pleasure of being called back to Vietnam again because I had a critical MOS [Military Occupation Specialist] . . . [Also, I've] worked 14 ½ years as a solo anesthetist . . . [I've done] everything from chest surgery [to] emergency craniotomies [to] all kinds of bowel resections, hysterectomies, hernias, and repairs [on children]: hernias, tonsils, adenoids, ears, [and] dentals. We did a lot of dentals . . . I've never particularly disliked anything about the job, except that it's been some of the people I've worked with, but I've always loved anesthesia . . . [and] seeing the patients recover and being well . . . I liked the chance to try out matching your skills against what's going on and knowing basically you're well grounded and everything's going to come out . . . Pretty much, [I'm] self-confident and clear-minded . . . In Vietnam, I learned to deal with the stressors . . . Even though I was pushed into [anesthesia], I would have gone into it. I was good at it—no doubt in my mind. I've done thousands of cases. [I left anesthesia because I was] not able to do the job anymore—not being able to sit or stand or reach overhead to hang IV bottles. I was hurt in Vietnam during the TET Offensive. I was blown through a wall. They blew the ammo dump that was right next to the hospital, and the force of the explosion blew me right through the side of the building . . . [So, I've] had back problems

since. Something aggravated it when I worked at Fort Bragg when I was there in the 1970s. I had a patient on the table with a spinal in. We were doing a TURP [transurethral resection of the prostate]—a prostate. The doctor liked to raise the table way up high. He liked to stand while he did his TURPs. We both had the controls on each end. I had controls, and I could move the table any which way. And he had controls. All of a sudden, the table started going this way (does tilting motion with hands), . . . and we both grabbed the patient. Well, the patient weighed about 300 pounds. So, we ended up all on the floor with the patient on top of me because I was trying to support him. What happened was the patient did not get hurt. But that ton table came down [along with] the patient on top of me. For about six months, I was where I could not even tie my shoes. My hands were not functioning . . . They finally determined it was just nerve damage, . . . and I've got degenerative joint disease starting from the cervical all the way to the coccyx . . . Not being able to go back and do my work and not being able to do the job that I would like to do [is a stressor].

Holly

Holly, a divorcee who has practiced anesthesia for 23 years, works part-time for a large private hospital and part-time for a Veterans Administration hospital. This participant is straight to the point, yet I found her extremely humorous.

I had always been a nurse and worked very, very hard, and was earning little money and had a child to raise alone. My mother was living with me and she was very ill. My father had just died. I needed more money to keep us all up. So, I went to anesthesia school because it was supposed to be better hours and more pay . . . The patients are just lovely people. [I] usually relate to them very easily. They're very open and honest with you when you're talking to them. Being able to help somebody is the most rewarding thing about [my] job. [The reason] I like general surgery cases the best [is] the patients seem to do better. They get well, and the outcome is almost always better . . . [unlike] a reanastomosis of the fallopian tubes, which takes hours and hours and hours . . . The outcome's not always good. Sometimes the patients are never able to get pregnant again no matter what we do . . . I like to see [a] positive outcome . . . [But the workload] is tremendous—absolutely tremendous. There's not a day goes by that we don't have 60 or 70 cases posted. It's not unusual at all. It's the routine now, and that used to be record-

breaking. We've increased what we do by 1.5 times or 150% . . . We're doing 1.5 times as much work as we were doing two years ago with the same number of people or less. [The hospital] has already been told that we were at 98% efficiency, and they couldn't push us any harder. But they [are] anyway, and that's made a lot of people very stressed out . . . It's showing on everybody. It seems to be that's the way America is coming to. In a way, I understand why, but ever since the government stepped-in, we've had trouble. HMOs won't pay but just so much. Just craziness. It's got to end somewhere, and it will. It will make the circle back around. I think there are better days ahead . . . [But yet the] men [CRNAs] are always given the best deals—The Good Old Boys. We have the Good Old Boys Syndrome at our job. There's only two female MDs, and the other 25 are male. So, the males do the male-bonding thing . . . If you have a case that's going to last eight hours, you can be assured, if there's a male and a female, the female will get that and the male will get the five-minute case and be through with the rest of the day . . . [I used to feel] anger most of the time. Now, I eat (laughs), . . . [but] I'm a compromising person. I do like to be in a cohesive group, and I like to be where people get along and work well together . . . I've always liked interacting with people. [Maybe that's why] I would not have gone into nurse anesthesia but [instead] I would have gone to medical school—probably be in obstetrics/gynecology or emergency room medicine. It would be much more interesting than anesthesia. Anesthesia is a very narrow field.

Irene

Irene is an attractive, mother of two working full-time at Southeastern Pediatric Hospital. She has 12 years of anesthesia experience--four of those years spent working at a university setting and the remaining eight at Southeastern. Irene is one of Chuck's co-workers. I had the opportunity to observe her on the job, and at the time of the interview, we are dressed in scrubs sitting in an empty office.

What prompted me to enter nurse anesthesia was a dare. I worked in an Intensive Care Unit, and I knew I didn't want to do that forever . . . My best friend and I both applied, thinking we would never get accepted. But we did, and we went, and we loved it! The cases can be very challenging at times but are very rewarding. I like open abdominal cases, such as intestinal obstructions, appendectomies, et cetera. They require paying close attention to fluids administered and fluid shifts in the body and the continuous need

for muscle relaxants and narcotics . . . I do not like doing cleft palate repairs on little babies. They are most rewarding from the surgical standpoint, but I don't like turning over the patient's airway to the surgeon. All too easily, the endotracheal tube can become kinked or pulled out of the trachea or pushed too far into the trachea—not to mention the fact that there is an increased risk of a breathing complication immediately post-extubation in these babies . . . The most enjoyable aspect of [my] job is the autonomy for sure. I get to make all the decisions about how I want to put my patients to sleep, what drugs I want to use. I have very little supervision and only get the opinion of an anesthesiologist when I ask for it. Respect from surgeons is another plus . . . I would absolutely have gone into nurse anesthesia again. I enjoy my profession . . . I [also] enjoy doing children so much more. [So], I hope to be at Southeastern Pediatric Hospital [even 10 years from now] because I would not want to go back to anesthetizing adults. I would rather be here. I just don't like doing adults. Once I've gotten away from it, I don't feel comfortable with it. There's too many new medications out that adults take for everything. I'm not as familiar with them as I used to be. [Adults] are big and slobbery and hairy (laughs) . . . [But] my vantage point of patient care is taking the best care of that patient at that moment. While they're in my care, making sure that I'm doing everything I'm supposed to be doing for them—making sure that their vital signs are stable and they're warm and that they're not laying on something that they [could] get an injury [or] . . . get burned--all those little things. [The anesthesiologists] are looking at the big picture, and I'm looking at the small, fine details. I just think that there's a different mentality in the anesthesiologists and the nurses . . . My [vantage point] is let's just focus on that patient that's on the table at that time.

Jane

Jane, who is in her 30s, is the youngest of all the participants. She is married with children and has ten years of anesthesia experience. I had the privilege of observing Jane several times at Southeastern Pediatric Hospital. Her laugh is infectious, and I found her pleasant to interview and observe.

After I earned a BSN, I got six years with critical care experience. Then after that, I underwent intensive anesthesia training [because] I did not want to be a critical care nurse at the age of 40. This was followed by six years working in adult anesthesia, and now I

have been working for four years in pediatric anesthesia . . . I like any cases that are complicated, intense, critical, and long. But after a long day of being on call doing case after case or long procedures or intense cases, I enjoy “no brainers” or dentals . . . Very critical neonatal cases are very stressful. They take a toll on me emotionally because the margin of error is so narrow--equipment is usually different. Lines are usually different, as in they may have umbilical artery vein-type lines, central-type lines that the other kids don’t . . . One of the most stressful cases was a preemie, less than one kilogram—a NICU [Neonatal Intensive Care Unit] baby. The baby was having a bowel resection. The blood loss and fluid requirement were difficult to ascertain. The only thing you have to go on these little bitty babies is a heart rate and a blood pressure and an oxygen saturation. I could not obtain a BP [blood pressure] with the cuff. So, here we are with an open belly on this little bitty baby, and all of a sudden, my blood pressure’s in the 40s systolic, and then I can’t get anything. I cannot get a blood pressure. So, I’m opening up the volume, the fluids, on the baby. Now, see it’s very easy to overload these babies, too . . . I was maintaining a saturation. I did have a nice heart rate, but it didn’t matter what I tried to do to get a blood pressure to work. The surgeon was complaining and asking me to stop messing with the drapes and get out from under there. He could care less what my blood pressure was. So, I called the MDA in. Well, now the surgeon’s saying, [after] the anesthesiologist has come in, “Well, I have a pulsating mesenteric artery. So, I know you have a blood pressure.” I’m like, “Okay.” That’s the first time I’d ever known of that (snickers). No one in training ever told me that they had a blood pressure if they had a mesenteric pulsation, but it makes perfect sense now . . . For all the education and years, I would have become a physician because I wouldn’t have to put up with all this hierarchy stuff. [Even] the MDA and CRNA relationship is stressful in and of itself. The MDs do not seem appreciative of our hard labor, commitment, and standard of care . . . Their attitude is the biggest stressor for me—not the work.

Jody

This interview takes place in North Carolina, where Jody works for a large, metropolitan hospital. Since she works part-time, Jody does not take call and rarely works over-time. In addition, Jody works with Holly. This soft-spoken yet straightforward participant was one of the

youngest in her class to graduate from anesthesia school at the age of 24. She has been an advanced practice nurse for 28 years and enjoys being a wife and mother of two children.

When I was in nurse's training, I worked on the weekends as an evening supervisor, and I did not like it. I had to go behind other people and tell them what to do and finish up what they had left undone. I wanted to go into a job where you could make your own decisions without being responsible for a whole bunch of nurses. I would just be responsible for the patients and myself . . . Feeling [I'm] competent enough to take charge of [my] own little world for that patient is enjoyable about my job . . . I dislike the bureaucracy [in my job]—all the different changes that go on in the department—not necessarily with anesthesia [or] the art of giving anesthesia but all the other things that go along in the department with anesthesia. [For instance], it used to be where the women seemed to get all the hard cases, and the guys got to go home early and had the slack cut. It was pretty obvious that the male anesthesiologists were babied before the merger. [But] we're so busy [now] that everybody has to pretty much carry their own load . . . Since the merger, the CRNAs on this side of the street felt like the stepchildren. When the merger took place, they weren't going to give us the same salary. We were going to have to take a reduction. It was really bad there for the first year and a half. Really bad in the fact that we felt like we had to prove ourselves all over. So, everybody was very tense, very stressed-out . . . [However], what makes this job stressful is the uncertainty. Most patients do well, but what keeps you on your toes are the ones that are stressful. I can handle everyday cases and move them along fast. I feel like I'm good at that. The emergency-type cases, I haven't had to handle in quite some time because I don't take call. Most of those cases come in while you're on call. So, that has reduced my stress level because I don't take call . . . Gardening, sewing, . . . doing things with the girls [also] help if I'm feeling stressed. My husband can't understand why I love to work outside: I'm inside all day long. I'm cold all day long. I want to work outside. In the wintertime, you stay depressed because you don't get to see outside all day long. When you get off, it's dark. When you go to work, it's dark. It's depressing. You can't see outside. There are no outside windows . . . Since [anesthesia] has been my whole life—practically 28 years of it—I'm not sorry I did it. I'm glad I did it because it has its rewards.

Laura

This interview took place at Laura's house in the sunroom. It is hot outside, and the air-conditioned room is inviting. This graduate of Duke and former military nurse is a single mother in her 50s. She works full-time at a small community hospital. Laura works with Derek. She has a gregarious personality, which is evident throughout the interview.

When I was in the service, I was stationed in a hospital that had one OR (laughs) and two nurse anesthetists and no anesthesiologist at all. I was envious of [the anesthetists] independence—the way they worked independently and did their job. They, of course, got a lot of respect. I thought it was something I could do, and I became friends with the anesthetists. They were very encouraging about going back to school and doing it. So, I tried out for it and got into a program . . . Our salaries have made it a career for people who want to be independent. This is something a woman who is single, like myself, can do, and I've been able to afford a house, adopt a child. I felt like I could financially take care of her . . . It's just allowed me more ability to do things, and I enjoy that part of my job. I [also] like [doing] C-sections because a baby is born and then most of the time, it's a happy occasion. The mother's happy; the father's happy; and the baby, he's probably happy. I enjoy those kinds of cases, . . . [yet] I don't enjoy doing children under a year of age, and that's mainly because I don't do them very often. I feel uncomfortable with children under a year old because of a lack of experience . . . [But] I feel comfortable doing what I'm doing. I like being in charge of what I do and organizing myself and carrying through . . . [Anesthetists] are very anal. We do everything in the same manner. We set up for emergencies. You're supposed to be thinking about this and [that] this could happen. You're supposed to, in your mind, have already decided what you would do if this happened. You're supposed to be prepared. I had a patient once who had a really bad reaction, and I had no idea why she was having this reaction. I think I handled it fine, and later on, after I had left the room, I was just shaking. Yet when I was in the room, they said I was calm and quiet . . . Apparently, I did what I was supposed to do . . . I think you have to be honest with yourself from the beginning about your qualifications. You're going to be good at something, and I had students in my class in anesthesia school that were just leaps ahead of me in doing things. Some people are just really good technically. They can get those A-lines [arterial lines]; they can get those intubations.

Some people are like that; some people have to work harder . . . [Anesthesia] has worked well for me. My career has been good to me. I think I would have gone into nurse anesthesia again.

Lori

Lori, a wife and mother in her 40s, is one of the most talkative interviewees. She holds a MSN and has been practicing anesthesia for 18 years. She works full-time at a Veterans Administration Medical Center (VAMC), which is currently short-staffed by one CRNA position. Lori is also the Chief Nurse Anesthetist. Due to her service in the Navy, Lori has a wide anesthetic background—from working in Maryland to San Diego to Japan and now in the southeastern United States for the past 13 years. Holly and Lori are co-workers.

I became a nurse anesthetist for a couple of reasons. I first became an RN because my mom was an RN and my sister was and three of my mom's sisters were nurses. So, I just thought I needed to be a nurse. However, I was sort-of disillusioned with, not the duties of a nurse, as much as I was with the hours of the weekends and the nights . . . I didn't see that it was ever going to get any better . . . When I worked in the ICU, I saw some CRNAs bringing patients to me, and I was very interested in what they were doing. So, I inquired about it and started to look along those lines. I was just thrilled to get accepted into school, and I feel it was the right move for me . . . I enjoy most the autonomy. I enjoy deciding what I'm going to do for my patients, and I enjoy doing things to people or for them. Giving anesthesia is a big procedure in and of itself, but I like a variety of cases also . . . I dislike the fact that we always have to run short-staffed, and the administration is proud of that. They're proud that we can do more cases than other VAs with half the staff. They delight in that when it's not good for the morale of the employees, and it's not good for the patients if everybody's always overworked [and] understaffed. It doesn't breed a content environment to work in . . . And the division of labor is not fairly distributed because if some people are workers, it's easier for people who make the assignments to continuously assign them to cases [while] other people are not . . . It's not across-the-board fair. I think some of the quicker, more flexible CRNAs tend to get some of the bigger cases . . . [However], we do try to rotate the workload. If you've been on-call, you get to pick the room the next day . . . I want so much to be in a department that's a family. We have unity in our department, and that's the way I like to

lead. It's not a dictatorship at all. I want everybody to be as competent as each other. So, I like personality. Certainly, we are task-oriented people. We are people that have work to do. We need to get through the cases, . . . but people need to have personal growth. I definitely believe in personal growth and development of CRNAs. The best thing about the VA is that it allows us the opportunity to grow. That is one reason I think it's good for the people from [the private hospitals] to come over here because I worked in that environment and pretty much, you are a robot . . . I get gratification through knowing that the CRNAs are feeling fulfilled professionally and not just someone sitting on the chair and getting the next case going . . . I think it's a privilege to take care of patients—to provide anesthesia. Not everybody can, and it truly is a privilege. It's a community of people I like to identify with. I started school 20 years ago, graduated 18 years ago, and I have been excited about it ever since. I wouldn't do anything else.

Lynn

Lynn is a mother in her 50s. She works full-time at a Veterans Administration Medical Center that this short-staffed by one anesthetist. Lynn was educated at a religious school. She has practiced anesthesia for 35 years, working at several hospitals doing a variety of cases. Interestingly, Lynn worked for a hospital serving indigent clients for four years. At the time of our interview, she was on-call, wearing a beeper on her shirt. She is sipping milk as soft music plays in the background.

A little old man kept pestering me about entering anesthesia (laughs). In fact, he was the director of the school at the time. He kept wanting me to go to school. I told him, "No, I wanted to work a while" [as an RN]. And so, I went to Florida and worked, and I decided this isn't for me. I don't want to do this the rest of my life because I was working nights . . . I wanted to live like normal people . . . What I like best [about the cases] is being able to go in there and work different cases and not do the same thing everyday. I enjoy the variety. Variety is the spice of life . . . As far as the patient care, I enjoy going to work—the challenge, talking to the patients, taking care of them. I enjoy that kind of stuff, but it's all this other stuff . . . the political side of it. Most of the time, I enjoy doing the work, but it's just not knowing who's got a knife in their hands . . . It seems like somebody is in there trying to stir the pot, and I think management is right up there trying to stir that pot . . . [That is why] I've turned down a lot of the social

activities that my co-workers have asked me to lately because I just don't appreciate going out with somebody that knifes you in the back or talks to you like they do If it's an anesthesia-related situation, I try to solve the problem. I try to solve the problem even if it's peer-related. [As far as] an in-service being held at work about stress-reduction techniques, I've heard all that stuff. Some of it works; some of it doesn't. I don't think it would make any difference to me . . . Church, crocheting, playing a game [on the computer]--anything that's repetitious--helps defuse my stress. I love reading, gardening, mowing the grass, petting a cat, feeding a dog. There's a lot of ways to cut-down on stress, and I don't let the doctors get to [me] when they're hollering or yelling Compared to 10 years ago, the job has become more stressful because it seems like [the hospital] is trying to get rid of the older women—an increase in professional jealousy. Maybe it's to get rid of them because they can hire younger people in that are less salary? . . . [But] if I had to do all over again, I'd do it. It's been a good job, and it's something that I've enjoyed doing all my life. It's something I still enjoy doing . . . As long as I can work, I'm sure I'll enjoy doing it. It's been a very enjoyable job I guess what I enjoy most is seeing the patients and being able to help them and seeing good outcomes—like them going home [or] being able to see when they couldn't see before. We help people, and seeing the veterans very appreciative of what we do, I get my perks from that.

Marilyn

Marilyn recently moved to North Carolina and started working full-time at a small community hospital just one week shy of the September 11th terrorist attacks. At the time of her interview, Marilyn's husband was up north, planning to join her after closing a steel mill business due to financial difficulty. This petite participant has 28 years of nurse anesthesia experience and coordinates with a local university in having CRNA students do clinical rotations at the hospital. She works with Derek and Laura.

When I went into anesthesia, the two choices that I had in my mind were nurse midwifery and nurse anesthetist. In 1972, midwives were few and far between. I chose anesthesia because I thought there was more versatility as far as getting a job and following my husband. I think I made the right choice I remember when I graduated from nursing school, the director of nursing just about disowned me when I told her I wanted to go into

anesthesia because she said that's not nursing. Well, I told her at the time I thought it was, and I still feel that it's very good nursing. You have five to 10 minutes to set up a rapport with the patient that is putting their life in your hands. It's a challenge from the get-go . . . General surgery and vascular surgery [is] challenging. Blood pressures change minute-to-minute. Those in general surgery are very interesting cases, especially the bigger general surgeries when you truly have a lot of fluid shifts, and the patients are frequently older patients. So, they need a little more tender loving care. You have to really try to figure out how the drugs that they're on interact with what you're giving and what to do if it doesn't work out the way you want it to . . . I would say what I dislike about the job is that sometimes I feel the surgeons abuse the after-hours. We do things after 3:00 that truly are non-emergencies that could wait. We do it for the convenience of the surgeon. That gets rather irritating, especially on a weekend when you've gone home four times in one day just to get called back to do something that might be able to wait. We're a small hospital; we have five ORs. We're a 7:00-3:00 surgery place, except for emergencies. They need to stick to the 7:00-3:00 and not let the doctors over-book. People don't think and function after 12, 13, 14, or 15 hours of doing the same thing. There have been nights that we've had to do that, and you're just dragging by the time you're finished. I would say most days it's very doable, but there are some call days that you're still finishing up the scheduled cases at ten-eleven o'clock at night. That's hard, . . . [and] I try not to take work home. Once I walk out the door, I try really hard and say, "Okay, that's it until tomorrow. I'm on my time now." It's very hard to do. With my mom living with me it's probably more stressful than work because I'm dealing with this whole new disease [Alzheimer's] that I really had not dealt with . . . It's almost like having a child at home. You really don't have another adult to talk to. I think the stress will lighten-up when my husband gets here . . . [And in 10 years], I see myself retired, walking on the beach.

Mark

This participant, a tall male in his 40s, is very personable. Mark has been a CRNA for 22 years and currently works full-time at Southeastern Pediatric Hospital. In the past, he has worked at a university medical center and as program and clinical director at a School of Nurse Anesthesia. I had the opportunity to observe Mark in OR and during pre-op rounds.

Anesthesia is the best field in nursing [to be] because it is the most challenging. I like simple ENT cases because of the fast turnover. ENT cases are also rewarding due to sick kids getting well . . . [But] sometimes the turnover pace is too fast, which leads to safety issues . . . Say I've got a patient that I've had a difficult airway with and I know that it's going to be a problem in the recovery room. It's going to take you five minutes over there to take care of it, and they've already sent [for the next patient]. So, when I leave the operating room, they've already sent for that patient and I know he's going to be sitting there within the next three or four minutes. Then I've got this other patient to take care of [that I'm] concerned about going into the other room. Obviously, my primary concern is the patient that I just got through sleeping. But at the same time, I don't know the history on this next patient that's coming in. He may be complicated or may have some problems that I might need to deal with as soon as he's rolled in the room. The operating room trying to expedite things at times can cause, in my mind, some safety issues . . . Each anesthetist averages 900-950 cases per year. Well, that's a fairly heavy load . . . You've seen us do pre-ops, and you know how fast it sometimes moves. As [the patients] become more and more complicated, they obviously require more of your time. There's more missed on those patients. My peer is relying on my pre-operative assessments, and he or she accepts what knowledge I've gleaned from the chart. I could potentially miss something. If I miss it, they miss it, and then that could have a life-threatening affect on the outcome of that case . . . Things move so fast and personalities are such that you have to really rely on word of mouth and someone else's ability to evaluate that patient and give you a report . . . Hopefully, I've done a good job and administered safe anesthesia . . . To some degree, I think about all my actions [from] the day before. I have Sunday Night Syndrome horribly still to this day. It's when you're always waking up, looking at the clock. [You] just worry about your cases the next morning and want to make sure that the alarm goes off; although it's set the same way it always is. [I'm] just concerned about starting a new week . . . My advice is to leave it [the stress] at work.

Marlene

This interview was conducted at Marlene's home, and the weather is perfect for an outdoor discussion. Marlene, a divorcee in her 60s, raised a child as a single mother. She has

practiced anesthesia over thirty years and works part-time for a clinic that performs plastic surgery. Marlene is elegantly dressed in black pants and a green, short-sleeved sweater.

I was trained in a school of anesthesia that did not have a degree program attached to its' name at the time. I was trained in a class of six mostly. My work has been since then, for the greatest part, hospital-based. [I entered nursing because] I was just divorced and realized that not only did my salary need to be better than just an RN to survive with a child, but it was something that was challenging and interesting to me . . . I suppose my greatest experience and greatest knowledge is in general surgery. I dislike open hearts [because] I've only been minimally exposed to that. I dislike it because of the atmosphere locally in the operating room. The surgeons we had were not pleasant people, and the environment was not pleasant . . . The most enjoyable aspects [of working at a clinic] are the one-on-one with the patient and the environment in which I work. The relationships with the doctors and the people I worked with [are] very, very pleasant. The only thing I dislike is if we don't have a [plastic surgery] case, and I have to go into the hospital setting and get thrown into a situation that I haven't prepared for. Meaning: I'm sent to a room to relieve or start a case without having time to review it That's probably our most stressful thing is not knowing what's coming next [That's] the number one anxiety-producing situation . . . There are some areas of the hospital that I don't go to, and if they ask me to go do something in that area, I feel very uncomfortable. It's like having a new job all of a sudden because you don't know where the equipment is. You hardly know where the room is, . . . [and] who the doctors are because you've never seen them before. That's anxiety producing . . . I think more stress came to me in my working career from trying to be a mother and a wage earner and a homemaker and being single than all the stress put together in being a CRNA If I had it to do all over again, I would never have been a nurse. At my time in life in the 50s, [my family] did not have a lot of knowledge about what women could do. I should have been an engineer, but my family didn't know it. We didn't have counselors at school that helped you decide what to do. You were either a nurse, a secretary, or a schoolteacher in the 50s.

Mary Ann

Mary Ann, an attractive, married lady in her 50s, has practiced anesthesia over 30 years. This participant works part-time at a community hospital. Her experience in anesthesia also includes working at a major medical university, as well as being the former Chief Nurse Anesthetist at her current place of occupation. We chatted at Mary Ann's elegant home.

I was a scrub nurse for a surgeon, and it was very boring. I was just bored with that, and anesthesia had always interested me . . . [That's why] I don't like to do a lot of any one particular thing all the time. I like to do a lot of different cases. In general surgery, there are so many different types of surgeries. You have a lot of variety in that one particular specialty. You're doing ENT; you're doing C-sections; you've got your laparoscopic stuff . . . It's always interesting and you don't get too bored because you can't say everything is routine. You might have the same cases, but every patient is different. I actually enjoy the people. I really like meeting the patients. Since it's just a small town, I do a lot of people I know, and that's a nice aspect . . . I also like the people I work with. It's the nicest group of people, and we work so [well] together. There's not a lazy bone in the bunch. Of course, the salary is a very enjoyable thing. I can't say that it isn't . . . I like success, and I think that I should be rewarded for it . . . [Though], a constant, constant worry [is] what can happen to a patient. I never worry about calling for help. If what I do doesn't help, I immediately call for somebody else to help me. If [I'm not] capable of handling it, [I] just get somebody in there right away. Don't be a hot shot . . . There's a lot of ways to do things. [My] way is not always best. There's so many ways to do one thing. As you go along in anesthesia, you find out that there are many, many ways, and you learn all the time . . . [Plus] my job has gotten a lot easier. We have so many new drugs—the newest muscle relaxants that have been invented or devised have made things so much easier as far as that. When I first started, all they had was curare and succinylcholine. I hate succinylcholine! Some people don't wear it off; you don't know how people are going to react to that. Now, we have things that, depending on the dose, you can make it last 15-minutes, 20-minutes, [and] 30-minutes. So, that has been one of our easiest things. Also, the old gases are passé, and the new gases are wonderful because it makes it so much easier. We have sevoflurane. You can gauge your short cases. [With] the new LMAs [Laryngeal Mask Airway] that we have, you don't have to

intubate all the time. There's so many nice new things that make [the job] so much easier than it was 10 years ago . . . That's the reason that we choose the anesthesia that we do—whatever is the safest for that patient is why we choose that particular one. So, if the surgeon has any reason to challenge you about it, you've got a good reason to back it up. I always feel good about the anesthesia that we've chosen. I'm prepared to defend it.

Mayo

Mayo is the last participant that will be mentioned who has left anesthesia. She practiced for 25 years before leaving due to physical and mental burnout. Although she desires to return to the profession, that remains to be seen. Mayo, who is in her 50s, is pleasant, garrulous, and eager to share her experiences about job-related stress.

I was always in pain for a long time at work The workload was so heavy that you didn't feel like that you could afford to give the patient the time and the care that they were paying to have . . . It got to where actually the workers in my room--maybe the nurse's aide, RNs, OR scrub techs, anybody—would begin to take your equipment off the patients before you were ready to go, which isn't their responsibility. They would stand there with baited breath ready to take the patient over . . . It got to where the RNs and a lot of people in the room called the shots. They took responsibility to try to do our job. It just got to be more and more unhappy. It was uncertain all the time—your scheduling and your workload One of the biggest disappointments [is] you would come to work in the morning and would have, say, four cases. You studied those histories early in the day to get your mind familiar with what [the patients] illnesses were and the complications you might look for. Well, it became that you never gave the anesthetics to the people that you were assigned. They would switch the cases from room to room to save five minutes. Sometimes that's all it saved . . . It was like an assembly line Used to, we didn't get lunch. Sometimes we didn't get to go until 3:00. In anesthesia, if you've been in a two-hour case and hop right into another two-hour case, you need to go to break. Your brain needs a little break just for a few minutes either to get a little nourishment or to walk around As time went on, I got more and more emotionally tired. I just began to notice that emotionally trying to do my job, and taking care of my family and aging parents began to wear me down. [When] you're under stress for a longer period of time, you're finally going to see physical ailments. You begin to get

sick, and that's what happened to me. I began to have fibromyalgia; I had a lot of degenerative disc disease, laminal stenosis anterior and posterior in my spine. A lot of it's job-related, I'm sure, and it accelerated [my] deterioration because in anesthesia you use your upper body a whole lot—a lot of lifting, turning, watching monitors. You use your neck and head, and you're always bent over the patient . . . The cold temperatures in OR hurt my condition because a lot of days it was 60-degrees . . . The stress, I think, is truly what brought me physically down . . . Physically, I didn't realize what it was doing to me all these years. I didn't feel like I slept through the night. I didn't realize that I wasn't probably handling it. I lived under constant stress. Maybe [some]time I could go back to a lighter schedule—maybe an outpatient setting or maybe do cataracts. I was offered a job by an anesthesiologist to come and do post-op rounds. Sometimes I think about doing post-op rounds. I'm personable; I'm a people-person; I like to talk to people and listen. It's a continuation of care, [and] post-op rounds are a real important time . . . You can pick-up on a lot of things if you do a good post-op round early on. You can prevent a lot of pneumonia or different things . . . I think I would enjoy it because you're just alone a lot and see [the] patients in a different light.

Sandra

Sandra is a widow in her 60s. She has practiced anesthesia the longest of any of the other participants—over forty years. This former Duke instructor works full-time at a federal facility. In fact, she has been employed at the same facility for over 30 years. I found Sandra's interview a very positive one because it reflects great maturity and thinking.

I like to do different cases. I enjoy eye cases because the patients that are elderly are so excited about getting their vision back. For the children that have strabismus, [they] are real excited about not being cross-eyed anymore or being teased by other children because they look different. I enjoy the general surgery patients because they're a little bit more difficult in terms of anesthesia management. I actually enjoy all phases of surgery, and I enjoy the variety. The variety keeps it interesting and challenging [What] I dislike about my job [is] the red tape. The thing I resent most is having to pick-up the ball that somebody else has dropped in order to go ahead with the schedule. For instance, the residents might not have ordered type and cross-match of blood on a patient, which is very important, particularly [with] a big surgery. I think to do what somebody

else should have already done so that it facilitates surgery is the most resentful part of my day . . . You should know what your responsibilities are, and you should do them on time . . . The situation of interpersonal relationships with people dropping the ball probably causes me more stress than anything else. I know how to handle a patient that's hemorrhaging to death, but for personnel that don't handle their end of the bargain and do the things [that] they should do is hard to handle [and is] very stressful . . . You try to handle it diplomatically. I realize at this stage of my life that I'm only responsible for me, and it's how I react to a situation that has a tendency to cause me stress. So, I usually try to keep my cool . . . Then on the other hand, if you have residents and circulating nurses and scrub people who do their job, it's very rewarding, relaxing, and fun work. If everybody does their job like they're supposed to, it's enjoyable . . . I enjoy being able to do my job and do it well. I also enjoy helping other people and teaching other people. It's rewarding to have co-workers say, "If you need some help saving that art [arterial] line, get [Sandra]—she's good at saving them." I don't feel that I'm better than anybody else. I just feel that I've had more experience. I enjoy passing my experience onto younger people . . . My job is very rewarding. There are no two patients that are the same, and I enjoy what I do. It's challenging. My job has been described as sheer boredom or holy terror, and that's a pretty good description.

Vanessa

Vanessa is a full-time employee at Southeastern Pediatric Hospital. She has 12 years of experience, with seven years spent at a trauma center and the past five years at Southeastern. Vanessa holds a Master's Degree in the discipline. I had the opportunity to observe Vanessa several times in OR. Even though she is straightforward during the interview, her posture is open and Vanessa makes direct eye contact frequently.

I enjoy what I do . . . The autonomy, hours, and salary prompted me to enter anesthesia. For the most part, I make my own decisions about patient care on a daily basis. I think that there are several different ways to do an anesthetic. What I do, in my hands, is probably better than if I were trying to do something that somebody else was instructing me to do . . . Part of my responsibility is making independent decisions on a daily basis. I am comfortable with this aspect of my job. I do realize my limitations and seek advice when appropriate . . . It's frustrating, [though], when we are often hurried to start cases

to accommodate a surgeon. The patient comes first! I try to make sure I am adequately prepared by anticipating the needs of all procedures. I would rather over prepare, . . . [but] we are doing more cases with a higher acuity. The vast responsibility falls on the CRNAs. The MD functions more to supervise . . . I guess it's my attitude, [but] I don't think it would be helpful [if my employer held an in-service about stress reduction]. I probably have already received enough information that I should use what I already have or stack on what I have . . . Stress management was part of our curriculum in the nurse anesthesia program. We actually had a class that looked at ways to reduce stress, and we got credit for it. I don't know that it was really [helpful]. Some of that may be that I didn't implement, by choice, all of the information that was given [to] me. I definitely think that it needs to be part of the curriculum just to give people other information about what they're up against and how they might be able to deal with it . . . For the most part, even with being hurried and [with] pre-ops, I manage to function fairly well without feeling overly stressed—in my eyes. Maybe I have poor coping methods, [and] somebody else could probably look at me and say, "You're real stressed." But on a daily basis, I don't feel overly stressed--on a routine day.

Zsa Zsa

Zsa Zsa is a soft-spoken wife and mother in her 40s. Her hair is gray with some speckles of black. She has been a nurse anesthetist for 16 years and works full-time at a community hospital. Zsa Zsa is also the Administrative Director for both the anesthesiologists and nurse anesthetists at the hospital. She offered insight into the occupational stressors that a CRNA-administrator might face. Zsa Zsa's profile is the last one to be presented of the participants in this research.

After anesthesia school, I worked for several years at a big university center. [It was] over a 1,000-bed hospital. I worked the call team there. Then after working there for several years, I went to a fairly large community hospital that was, at that point, 100 beds. I worked there for another five years. [Now], I am at a smaller, community-type hospital . . . I like working in a small community hospital because we really have nice camaraderie, and the people you work with are your friends and that's a really special part of it, too . . . The thing that most bothers me sometimes is what I call production pressure. It's like being on an assembly line, and somebody keeps speeding up the

conveyor belt. Sometimes it's really a struggle keeping up. You want to do everything right, yet speed is crucial. So, production pressure is an issue with me. Sometimes we're at odds with the OR nursing staff, and it's because they have their agenda and we have ours. It all goes back to production pressure. If the turnover wasn't fast enough or if the patient wasn't put to sleep within a certain period of time or if there was a delay, the first thing that OR says is, "It's anesthesia's fault!" . . . Our workload is reasonably high. We average over 4,000 cases a year, which is about 350 cases per month. The trouble with our practice is it seems to be either feast or famine . . . We have slow days. We'll have two rooms done by 12:00, and then we'll have two or three days a week when we're going past 5:00. You never know sometimes how it's going to end up . . . Sometimes the long hours can be a little bit grueling if you're on call. The older I get, the harder it gets . . . I have to say the biggest worry that I have is not so much the anesthesia part of it—it's the administrative part with all the regulations and compliance issues of JCAH and CMS and all the other regulatory bodies that are out there. Is the staffing being met? . . . What bothers me the most is being in a situation where there are staff conflicts or personality conflicts or complaints from surgeons or patients or administration because I'm the one that's accountable . . . That's the biggest part of my stress—just being the Administrative Director. Every situation is entirely different, and there are no cookie cutter solutions for every problem because it involves different people, different situations. Basically, it's just hearing out all sides, doing your investigative work and trying to come up with a fair solution to cure whatever problem is happening at the time. . . . If you don't handle things right away, they just get bigger. I try to think of a game plan and go right to it . . . [Stress] is almost such a part of the background that you don't recognize it anymore. It's just a daily part of the job. Stress wise, I don't feel a difference one day to the next. There's very little that really, really stresses me out, except JCAH. Then, I'm a nervous wreck (laughs). I will nip and nip at people, trying to remind them to do this, do that, make sure that's locked, and I know I get on their nerves. They're pretty gracious about it. Of course, I think they recognize the pressure that I'm under. We all are, but I'm the one that's put on the block if it isn't right . . . I think the government is way too big. It's way too invasive. We're continually trying to do things just to please the regulations—not because it's good practice, not because it makes sense

but just to conform to regulatory standards that are arbitrary and sometimes very counter-intuitive. We have several regulatory bodies that all do the same thing, and they come several times a year. I understand that certain things need to be monitored, but some of the things they get into are just absurd. To get into my department at night on call, for instance, I have to go through a set of six keys to get to my anesthesia work room, my drugs, my anesthesia cart, get into the operating room, and get into the hospital. Now, this is all to satisfy the regulatory bodies. They're not the people who have a stat C-section and a baby dying, but I've got to stand there and take four or five minutes to get through these series of keys to satisfy all their regulations. It's way, way over kill. It interferes with patient care.

A lengthy profile of all twenty participants has been presented, along with a discussion of group demographics and common opinions that the CRNAs share. The reader has been afforded a glimpse into each of the nurse anesthetist's personality, beliefs, practices, and perceived stressors. Before answering the research questions and addressing the findings related to the research questions in Chapters Five and Six, it was vital to acquaint the audience with each individual anesthetist.

Chapter 5

ADDRESSING THE RESEARCH QUESTIONS

“Credibility is a tremendous thing in our business. If you’re considered capable, you have a tremendous amount of credibility.”—Derek, CRNA

This Chapter is divided into four main sections: The sections correspond directly to the research questions posed in Chapter One. The research questions are presented as individual headers of those sections for reader convenience. Quotes from CRNAs and their peers will be mixed with additional references and literature, along with my analysis. Vignettes, fashioned from the field notes, are used to enhance the discussion of the research questions. Thus, any observations noted in this research will use Southeastern Pediatric Hospital as the point of reference. To reiterate: five out of the 20 participants were observed.

Research Question #1:

What are the roles and responsibilities of the CRNA as they see them?

New Webster’s Dictionary (1992) defines roles as “a part played by an actor [or] . . . a task in public life” (p. 327). After observing and interviewing, three major roles of the CRNA appeared: typical anesthesia duties, offering assistance or being a reliable co-worker, and collaborator. Each one will now be discussed.

Anesthetic Duties

Anesthesia extends beyond the OR walls and before the first incision is ever made by the surgeon. Anesthetic duties can be divided into three main stages related to the act of surgery: pre-, intra-, and post-operative care.

Pre-operative (before surgery) duties. I got to observe first hand the pre-operative duties of a CRNA at Southeastern Pediatric Hospital. The participants arrive at work between 0600-0700, depending on the facility where the participants work. Private sector employees usually begin their day earlier versus the government employees. After changing into scrubs, the staff checks the assignment board. Since surgeries start at 0700, those who are assigned to do pre-op rounds begin immediately--usually by 0630. The goal of pre-ops is for the CRNA to notice a nuance that might have been overlooked or problems that could potentially cause complications. Out of courtesy, the CRNA checks-in with the floor nurses before making rounds. After the

CRNA introduces him or herself to the patient and their family, they check the patient's armband for correct identification. Various topics are then covered: family, medical, surgical, and anesthetic histories; current medications; and allergies. The CRNA then explains the procedure in easy-to-understand language. Vital signs (e.g., pulse, respirations) are measured and recorded. Afterward, patient questions and concerns are entertained. Even though it is the floor nurse's duty to ensure all lab work is complete, the anesthetist double-checks on all the appropriate lab work. The CRNA signs the pre-anesthetic evaluation and places it at the nurse's station so that the nurses will know that patient has been worked up. However, if the CRNA determines a complication could arise, he or she goes back to OR to tell the anesthetist responsible for inducing that particular patient. "The preoperative assessment and preparation of patients should serve to optimize the safety of the anesthetic experience" (Barash, Gullen, & Stoelting, 1991, p. 2). I am amazed at how efficiently the CRNAs perform this aspect of anesthesia care. Pre-op evaluations are normally completed within five to seven minutes.

Intra-operative (during surgery) duties. I found this aspect of the CRNAs roles to be complicated, and books are devoted to delineating the intra-operative duties of a nurse anesthetist. Consequently, the highlights of my observations are discussed. Except in the cases of an emergency or unexpected patient outcome on the OR table, anesthetic duties are generally organized and routine. Before the client is brought to the OR table, the CRNAs already have their room arranged. Intravenous (IV) bags of lactated ringers are hanging on the poles; tape to cover the eyes during surgery is torn and sticking to the anesthesia machine; and the carbon dioxide absorber may have been replaced with a fresh one. (Upon expiration, the patients breathe out carbon dioxide, and this is absorbed via a device on the machine. At Southeastern this device is changed once a week per facility policy). In addition, other equipment and tools (i.e., oxygen masks, endotracheal tubes, laryngoscopes)³ the CRNA uses are readied. Medications are drawn-up, and a bed warmer might even be placed under the sheets of the OR table, if the patient is a baby, if the procedure is long, or if the surgeon likes to keep the room cold.

After the patient is brought in, the CRNA works efficiently--intently focused on his or her duties. The CRNA converses with the patient as a blood pressure (BP) cuff, oxygen saturation monitor, and electrocardiogram (EKG) leads are placed. Also, he or she helps the RN

³ Refer to Appendices F and G for photographs.

position the client. After all the preliminary work, induction can then begin. A photo that I took of the anesthesia machine is located under Appendix F. On this machine are three outlets for the drug gases halothane (it is no longer used), isoflurane, and sevoflurane. Sevoflurane is normally used on induction and then the CRNA switches to isoflurane for extubation since it is cheaper for the patient, albeit the quality is not any less than that of sevoflurane. Various gases and medications are used to accomplish induction, depending on the surgical procedure and the patient's needs. One CRNA (that I did not interview) said, "It's like a cake recipe. Each nurse anesthetist has their own preference regarding which drugs to use." The second drawer of their medication cart is filled with drugs—from propofol (i.e., general anesthetic) to mivacron (i.e., short-acting muscle relaxant) to emergency drugs. After induction, the eyes are taped in order to keep them moist and prevent scratches. At this time, the CRNA may or may not start an IV. IVs are begun on children after they are asleep to minimize their pain and to facilitate the staff's job. At Southeastern, the circulating nurse starts the IVs; however, the CRNA is available to lend a hand, if needed. According to those anesthetists that do not work at Southeastern, they sometimes start patient IVs. During surgery, the nurse anesthetist charts which drugs were given for billing purposes. They also chart on another sheet of paper vital signs (taken every five minutes); gases administered; type of equipment used (e.g., size and location of IV); urine output and estimated blood loss, if appropriate to the type of surgery; any special type of care (e.g., use of bed warmer, eye care); and if any difficulties were encountered with patient care (e.g., intubating). A CRNA states, "We have a lot of paperwork, and that's very time consuming." Also during surgery, other medications are given. For instance, zophran might be administered to help with nausea and vomiting when the client awakens. If there is a lag in the current case, the CRNA will begin setting up for the next case.

Following the surgery and patient extubation and responsiveness, the CRNA escorts the patient to recovery room along with the operating room nurse. This is the last step of the intra-operative stage. Minimal time is spent in the recovery room—usually no more than five minutes, if the patient's recovery is smooth. The CRNA gives report to the nurses, stating the patient's name, age, surgeon's name, weight (in kilograms), procedure done, the outcome of the procedure, and if any difficulties were encountered. The recovery room nurse reports the vital signs to the CRNA, who charts that in the paperwork. A patient's vital signs must be stable before the CRNA will leave the recovery room. For instance, Vanessa stated that she likes the

oxygen saturation (i.e., oxygen content of the blood) to be 98% before going back to OR. After client stabilization, the nurse anesthetist is free to leave. The original copy of the paperwork is given to the recovery room nurse and the other duplicate copies are placed in slots hanging on the wall. Then the nurse anesthetist returns to OR for the next surgery.

Post-operative (after surgery) duties. After the surgery schedule is complete for the day and before going home, the CRNAs like to refill their anesthetic gases, as well as straighten-up their work area. I did not have the opportunity to observe specific post-operative care at Southeastern Hospital because that is not part of the CRNAs duties. Forrest⁴, an MDA, revealed in his interview that he helps with the post-op rounds of patients. However, the other nurse anesthetists indicated in their interview that they did do post-operative rounds; although the content of post-op rounds were not divulged. According to Barash et al. (1991), post-op patient care includes that vital signs, blood loss and urine output are within acceptable ranges; pain management is ensured; diagnostic tests are acceptable or within normal limits; and other problems have been anticipated, such as cardiopulmonary. In addition, an assessment of the patient's general condition, cardiovascular system, ventilation and oxygenation capabilities (e.g., able to cough), and airway management (e.g., able to swallow and gag) are performed. I am reminded what Mayo stated in her interview that post-op rounds are a "continuation of care." A vignette delineating the pre- and intra-operative duties of the CRNA follow. It is evident that several forces converge from different places to deliver the patient to OR and have as good of a surgical outcome as possible.

At 0630, Mark begins pre-op rounds on the fourth floor. The list of patients to be seen is in a file at the nurse's station. Mark picks up a pre-anesthetic evaluation and checks in with the RN. We walk into the client's room. Mark introduces himself to the young child and her family. He also introduces me as a student doing a study on nurse anesthetists. Since the volume of the TV is loud, Mark states he is going to turn it temporarily down so that he can hear. Mark asks the patient's name while checking her armband. The CRNA then proceeds to inquire about allergies, medications the patient is on, diseases the client might have, as well as about family history related to anesthesia. He also asks the mother if the patient was delivered full-term. She replies, "Yes." He also asks, "When did the patient last eat and drink?" The parents tell him 9:00 last night. Mark then gives instructions about the anesthesia treatment and when the parents will be able to see their daughter. Mark approaches the client, telling her that he is going to put "this thing" [his stethoscope] on her chest to listen to the heart. The client cooperates. After determining the patient has no heart murmurs and informing the family to that fact, Mark asks, "Do you have any questions?" The family has none but states that their child

⁴ Refer to Appendix H for a brief description of the CRNA co-workers.

sucks the thumb on her right hand. Mark replies that he will make a note to have the IV placed on the opposite side of the thumb sucked. Mark turns the volume back up on the TV, and we exit the room. It is 0635. Mark places the pre-anesthetic evaluation at the nurse's desk after completion to "help the nurses out." We continue with the pre-op rounds, interviewing patients scheduled for dental restorations, tonsil and adenoidectomy removal, and probe and irrigation of the nasolacrimal.

About a week later, I had the opportunity to observe Mark in OR for a spinal fusion of a scoliosis patient. This case best represents the intra-operative anesthetic duties of the CRNA that I was privy to.

It is 0705, and Mark and I are in the recovery room. Mark introduces himself to a teenage, African-American male patient. He gives 50mcg (i.e., micrograms) of fentanyl and starts another IV; the patient now has two IV placements. Mark starts an arterial line, which is routine for big cases due to the blood loss potential. An arterial line is used to "measure systemic blood pressure and to provide ease of access for the drawing of blood for study of gases present" (Davis, 1993, p. 150). At 0725, the patient is brought into OR. Mark administers his anesthesia before the patient is transferred to the table. There are wires all over the place--some of them connected to the patient's head. His nerve function will be observed the entire surgery since there will be manipulation of the spine. Mark places the teenager on a ventilator with the tidal volume set according to his weight (15-20cc per kilogram of weight). The CRNA asks me to sit in his chair during the 'initial scurry' of activity. Mark reports to the OR nurse the lines that were placed in the patient and their size (i.e., 16 gauge IVs; 20 gauge for arterial line). The act of setting-up for this surgery is incredible and complicated! The overall goal of surgery: correct the scoliosis without rendering harm to the client's motor or sensory pathways. It is 0800, and the room is cold. Mark says that the cold acts as a vasoconstrictor, which will reduce blood loss, theoretically. The surgery says, "Okay. We're ready." There are eleven people in the room, seven of which help transfer the patient from the stretcher to the OR table. Mark is one of them. The patient must be placed prone without the wires and lines becoming disconnected. He is transferred successfully. Mark ensures that the patient does not lay in a position in which his eyes would have pressure on them; otherwise, he will go permanently blind after the four-hour surgery. Deprivan is given. Mark says, "We'll use several of these [deprivan injections]." Mark then shows me the sheet that helps him calculate the maximum allowable blood loss. At 0822, the first incision is made, and the odor of burning fills the room. Mark gives labetalol to block, which helps lower the patient's bp so that the blood loss will be lessened when the surgeons go into deeper dissection. Blocking means having no neuromuscular junction between synapses. It is 0830, and while the MDs are hammering at the spine, the CRNA is still standing, attentive to tube and line placement and punching buttons on the anesthesia machine. Mark seems somewhat hyper—moving about, whistling, active. He is constantly busy. Mark replenishes the lactated ringers solution hanging on the IV pole and double-checks the oxygen and nitrous oxide. Both are at two liters--perfect. At 0900, Chuck relieves Mark for a brief break, but we are back in OR at 0915. Mark draws blood from the arterial line for check on the patient's hematocrit (i.e., percentage of red blood cells in a given volume of blood). Fifteen minutes later, the lab values return, and Mark verbally

reports it to the surgeon. Mark then decides to place a unit of blood back into the patient. The nurse anesthetist maintains a vigil on the patient's intake and output of fluid. I feel privileged to see the activity. Besides, this is a remarkable surgery to observe. At 1050, Mark is again sending blood down to the lab. Time is not as rushed for the CRNA at this point. Fifteen minutes later the lab work returns—the patient is hemodynamically stable. Mark is happy. About an hour later the second rod is inserted, and Irene offers Mark a break. He declines. At 1210, Mark reports to the surgeon the estimated blood loss. As the surgery is drawing to a close, the staff begins to clean up the patient. At 1246, the patient is transferred to the stretcher in a supine position. Mark talks to him, telling him loudly to “wake-up” after he has been extubated. At 1254, the CRNA and nurse escort the client to recovery room where report is given. After the patient is stable and charting complete, we leave.

Offering Assistance: The reliable and Attentive CRNA

Nursing is known as a profession of caring and compassion. Similarly, anesthetists feel it is part of their job role to offer help to others, especially their peers. For example, one day I observed two CRNAs discussing a case, and one of the CRNAs, who was doing pre-ops that day, asked Jane if she could help set-up her IVs. Jane readily accepted the offer. In another instance, I observed that during a bronchopulmonary lavage of a cystic fibrosis patient that the equipment was not working as well as it should. When the circulating nurse was having trouble figuring out the problem, the CRNA came over to help and fiddled with the machine. The co-workers even acknowledge the helpful attitude of the nurse anesthetists. Darcy⁵ states in her interview that if she is uncertain about the performance of an OR staff person, such as a new hire or a student, then she will ask the nurse anesthetists to observe that person closely and then give her feedback. Darcy said that the CRNAs are “usually very willing to give you feedback.”

The desire to help stems from of an obligation the nurse anesthetists' feel towards their co-workers. They want to be reliable and attentive to the needs of others. For example, missing a day of work, for any reason, is seen introspectively by the CRNAs as disappointing their co-workers because the hospitals are either short-staffed or tightly staffed. Clarissa testifies to this idea:

I've always felt like I've always had to get up and go to work—no matter what the weather, what the situation. When I felt bad or had a cold, I've always felt this driving impulse to get up and go to work and not call in sick. I always felt like if I didn't go to

⁵ Refer to Appendix H.

work, somebody would have a harder day because I didn't go to work. I've always tried to put myself last and the needs of the hospital or the employer or the patient first.

Even more convincing is Irene's statement:

We have no built-in plan for being able to take off for special programs at school or even sickness in the family—or even our own sickness, for that matter . . . If one of us calls in sick, it messes up the whole schedule, and we have to pull somebody who's doing pre-ops to cover the room . . . Since I've been here, I've seen people call in sick probably four times, maybe five times. They were deathly ill. I've come in here before and had an IV started on me because I was so dehydrated that I wouldn't work. Once I was hydrated, I went into the operating room with an IV in place to keep hydrating me because I was so sick. Another CRNA has come in and thrown up in her trashcan behind her machine before.

This “driving impulse” that Clarissa and all the others feel relates to the work personalities of the CRNAs. They feel devotion toward their anesthesia group, patients, and employer.

Question 15 of the CRNA interview (see Appendix C) asks the CRNAs to describe themselves out of four possible choices. Of course, they were not confined to the answers and could describe themselves if none of the choices were applicable. However, all of them chose from the responses provided, and here is how they selected: 19 out of the 20 (95%) selected either ‘a,’ or ‘d,’ or both. Choice ‘a’ mentions the statement: “If a person needs help on the job doing a new task, I would say, ‘Let me show you how to do that.’” Choice ‘d’ states: “I have a concern for group welfare, membership in the group, and flexibility of behavior to the end of achieving unity and coherence of group goals and undertakings. If a person needs help on the job doing a new task, I would say, ‘Let's do that together.’” Those answers, to varying degrees, emphasize the need to assist others, having people's best interests at heart. Their concern for welfare is not only extant between the CRNAs but extends to other disciplines, as well. To quote Darcy again, “There are those of them [CRNAs] who have a great concern for the operating room staff. They are very caring, tender people. [They] care about when others are having a bad time, like in their personal lives. They're very supportive.” What about those that did not select ‘a’ or ‘d’? Laura was the only one, and she selected ‘c’. In her interview, she states why:

I've been known to be bossy (laughs). I don't know if it's always good. We have student nurses now, and I can honestly say I prefer not to have a student nurse with me because I would rather to it myself.

Even though all the nurse anesthetists came across in the interviews as independent and assertive, Laura seemed to have additional independence. Mayo also chose 'c', along with 'd'. Mayo's reason for choosing 'c':

I feel like I have an honesty about myself that I like to do a good job, [yet] I like a lot of rapport and ability for people to work together . . . I just like to be a good person, work with others, see accomplishments [and] that things are done correctly.

Although she picked 'c', Mayo still identified having a concern for others. Zsa Zsa and Clarissa both picked 'a' and 'b'. Selection 'b' has a clause about having a basic concern for the protection, growth, and welfare of others. An over-whelming majority of participants selected choices relating to their work personality that demonstrated, in one way or another, concern for others. The literature supports this finding. A study by Boughn and Lentini (1997) asked the question: what do women want from nursing? A qualitative study of 16 women nursing students studied three major constructs: caring, power/empowerment, and practical motivations. The researchers found that females are strongly motivated by a desire to care for others and that they ask for nothing in return for themselves. They only wish to empower their patients and exercise power for themselves. This study coincides with my research findings as they relate to the roles of the nurse anesthetist. CRNAs are nurses—they serve in a profession known for caring and compassion. Therefore, one of their roles is that of offering assistance to others in order to be reliable and attentive co-workers. The difference between Boughn and Lentini's study and my participants is that CRNAs feel that should be compensated for their expertise, knowledge, and job responsibility. Nevertheless, they share with the female nursing students a genuine concern for others. Derek says, "I'm very attentive to the surgeon's needs, but the patients and the nurses that work in OR, you have to think about all of them. You have to balance."

Collaborating With Others

The last role of the nurse anesthetist that the data revealed is that of collaborating within and outside the discipline of anesthesia. According to Hamric et al. (1996), "collaboration can be thought of as one of several modes of interaction that occur between and among clinicians

during the delivery of care . . . [and] is useful to describe the variety of interactions that occur” (p. 231). Coordination of patient and provider services and consultation with other clinicians are examples of modes of interaction that Hamric et al. speak about. Interestingly, the role of collaborator was more apparent in the observations than in the interviews: I noted this role twice as much in the field notes than in the interviews. Therefore, collaboration is so engrained in the work life of the nurse anesthetists that it becomes second nature to them.

CRNAs collaborate with other disciplines, such as the nursing staff. For example, while observing an esophagogastroduodenoscopy (EGD), a procedure where a thin tube is inserted in order to study various areas of the gastrointestinal tract, the RN and CRNA begin collecting a blood sample from a patient. At this time, the nurse anesthetist held the patient while the nurse collects the sample. Constance⁶ concurs with my observations:

Our nurse anesthetists, almost without exception, are very conscientious; they’re very knowledgeable. You see them share information between themselves. Most of them ask us for information: “What do I know about this patient? Have you seen this patient before?” They’re very eager for it. They’re very glad to have information.

CRNAs are not only collaborators of patient information, but they also collaborate regarding hands-on duties. Julie⁷ states in her interview: “If the nurse was to happen to go out of the room and if [the CRNAs] can get you something, they would gladly get it for you. They’re the main part of the team in the room.” Therefore, if it were not for the CRNAs collaborating role, patient care would be greatly hindered. The other departments recognize this important role; although the CRNAs naturally incorporate it into everyday work life. Ultimately, the collaborative role does not go unnoticed by hospital staff.

Nurse anesthetists also collaborate amongst themselves and with the anesthesiologists. For instance, Chuck, Mark, and Zack⁸, an MDA, collaborated with a female CRNA new to Southeastern and pediatric anesthesia. The field notes are listed below:

7-8-02 Day 5 of Observations

1300 The female CRNA relieves Chuck. Chuck offers her advice (i.e., it is important to watch the oxygen saturation on this baby and for blue lips). The MDA and Mark help the female with

⁶ See Appendix H.

⁷ See Appendix H.

⁸ Refer to Appendix H.

intubation and offer her advice on medications and tube placement. The MDA says to watch hyperventilation because it could lead to respiratory acidosis (i.e., results in retention of carbon dioxide).

1330 Mark checks on the female CRNA, who is having trouble with the BP reading. She wants to stay with the case for now. She seems timid yet determined to learn.

1345 Mark checks on the female CRNA. He tells her, “You’ll never want to do adults after getting over the initial willies with kids.” Chuck leaves, and the CRNA continues with charting and watching fluids.

1405 Mark checks on the female CRNA.

1407 Surgery is over. Mark asks the female, “Are you happy?” She states, “I am.”

Notice that three professionals, two CRNAs and one anesthesiologist, are collaborating with another peer at the same time. In addition, two different nurse anesthetists check on the female CRNA within 15 minutes of each other. The atmosphere was not one of “gaining up” on the new recruit, either. It was one of true collegiality, and I found it impressive to watch.

Secondly, Zsa Zsa mentions in her interview the need to collaborate with anesthesiologists relating to her administrative responsibilities:

[I am] the Administrative Director, [and] one of the anesthesiologists serves as the Medical Director. I do things like staffing, meeting regulations, trying to enforce policy, conflicts; and he does more helping to medically direct certain policies, like when we’re trying to put together a policy for a patient lab procedure. He’ll consult with me in terms of what needs to be ordered, and I bounce a lot of ideas off of him.

So, the nurse anesthetist not only collaborates for his or her benefit but also collaborates to benefit others, such as the patients, their peers, and the hospital as a whole. In other words, collaboration is a two-way street. Moreover, this role applies to other settings besides OR and reaches into other arenas of duty besides administering anesthesia. The responsibilities of the nurse anesthetist will be discussed next.

New Webster’s Dictionary (1992) defines responsibility as “a charge; an obligation” (p. 321). Interviews and observations revealed three major CRNA responsibilities: patient care and safety, continuing education (i.e., learning and growth), and administration.

Patient Care and Safety

The primary responsibility of the nurse anesthetist is patient care and safety. CRNAs administer 65% of the 26 million anesthetics provided to clients yearly in the United States. In fact, nurse anesthetists are the sole anesthesia providers in about half of the hospitals and more than 65% of rural hospitals (*Shortage of Certified Registered Nurse Anesthetists Limits Availability of Health Care*, 2000, on-line). All 20 participants, to varying degrees, mentioned in their interviews that they feel an obligation towards their clients and their families. They truly have the patient's best interests at heart, as noted during the second day of observations:

7-2-02 Day 2 of Observations

1330 The patient comes into OR awake, and Jane tries to talk with her and get her to breathe through the mask. The patient struggles, and Jane holds her gently and looks at her with care, saying, "It's okay. It's okay, sugar. Do you see the mask? It's okay. You'll feel funny. Don't be scared. We're not going to hurt you. I know—just blow it [the gas] away. It's okay. Keep blowing. It's almost over. You can do it, baby girl."

Hilda, the Vietnam CRNA, emphatically states:

The only important person in this room is the patient. My main concern was always the patient . . . We're all there for the basic one common good, and that's the patient. Period.

I'm not there to win any popularity contests. My main concern is the patient.

Thus, the patient is the focus of the nurse anesthetists, and they feel that the whole OR staff should share in that sentiment. The last day of observations, I got to witness this first-hand in the EGD room with a male CRNA that was not interviewed:

July 12 Day 9 of Observations

1145 The patient is rolled in for an EGD.

1200 The CRNA says to the patient, "Hi, ya'." Then, he proceeds to check on the IV. He flushes the IV, afraid that it is not working. He attempts to give a medication and asks the patient, "Does that hurt when I push that in there?" She shakes her head no.

1203 The patient cries, "It's burning! It's burning!" The CRNA then begins to give anesthesia via a mask. He is mad about a blown IV being sent to surgery. He calls it "ludicrous."

This CRNA was very disturbed that the floor sent the patient to OR with a defunct IV. Again, this demonstrates that nurse anesthetists feel that staff should have the patient's best interests in mind.

Secondly, the nurse anesthetists do not make any distinctions about the quality of care they provide for their patients. No matter who is wheeled into OR, they are alert to that patient at the time—their attention is undivided. Sandra, the seasoned CRNA, said in her interview:

Patient appreciation in the VA hospital is a very important part of really striving to do my very best. Our veterans are special people, and I feel that they have done their best for me as a citizen of the United States, and that makes me want to do my best for them.

Most of our patients are not able to pay for medical treatment in private hospitals. Being able to make them feel important, to me, is very gratifying . . . to let them know that they are just as deserving of my best services as much so as the President of the United States. Moreover, the care that they provide is top-notch without all the expense that might incur if an anesthesiologist were performing the anesthesia instead. Pete⁹ said in an interview:

I have chosen CRNAs for my surgeries over any doctor. I've never chosen a doctor . . . I trust them. I trust them. The public doesn't know about the CRNAs in relation to the doctors. They don't know. To me, actually, they're more experienced.

The literature supports this notion of high-quality, low-cost care that the anesthetists provide:

“With managed care continuing to pursue cost-cutting measures, coverage plans are recognizing CRNAs for providing high-quality anesthesia care with reduced expense to patients and insurance companies. The cost-efficiency of CRNAs helps keep escalating medical costs down” (American Association of Nurse Anesthetists, 2000, on-line). GL¹⁰, an operating room nurse, states in his interview: “They [the CRNAs] provide an excellent service to the patient and certainly more cost-effective than a total MD anesthesia provider. The quality of care is equal and sometimes better.” Even the co-workers recognize the type of care the nurse anesthetists provide. The reader may recall that I mentioned in the previous section about job roles that when using anesthetic gases, the CRNAs consider the expense of those gases and how much the patient will be charged. Right before extubation, the nurse anesthetists switch over to a less expensive

⁹ See Appendix H.

¹⁰ See Appendix H.

gas (i.e., isoflurane), if appropriate for the client and their surgical needs. The nurse anesthetists' care is uncompromising in value.

Thirdly, patient safety is also a concern of the nurse anesthetists. During observations, I noted that the anesthesia staff consistently used personal protective equipment (i.e., mask, gloves, hat) to protect not only themselves but their pediatric clients, as well. If any procedure required sterile technique, the CRNAs were careful to honor procedure and protocol. In addition, if the nurse circulator (i.e., OR RN) needed to do a task with the patient on the OR table, the CRNA would hold the client to prevent them from falling off the table. Also, before transporting a patient to the recovery room, the side rails of the stretcher would always be up so the patient would not fall out. The nurse anesthetists were very safety-conscious.

Due to this client devotion, the nurse anesthetists will abide by their convictions regarding the care they provide, even if that means respectfully disagreeing with others about treatment. Derek reveals:

There are pushbutton issues you will go to the wall on—go to the mattresses is the mafia expression. These are the lines I will not cross . . . I won't do what I don't think is right for a patient, even though I know there's a lot of ways to skin a cat.

Overall, anesthetists respect the surgeons; however, they will disagree with them about the type of anesthesia to give a patient if that becomes an issue. For instance, Jody and Lori reported that some of the surgeons they work with want the patient put to sleep so they can listen to their music or tell inappropriate jokes; however, a spinal may be more conducive to the patient's outcome. Therefore, the anesthetist will not hesitate to defend their anesthetic choice. Lori says, "You're a patient advocate. I think we need to not give in—be that advocate and tell the surgeon, 'Just behave yourself for a couple of hours for this case.'" Lynn says that if she is having disagreement with a physician concerning treatment and she felt harm would come to a patient, she "would either walk out or wouldn't do it." Fortunately, the CRNAs stated that once they explain their rationalization to the physician about their anesthetic choice than the physician usually agrees with them.

Ultimately, the participants' responsibility is to the patient first and foremost. This devotion is evidenced by their ability to provide safe, cost-efficient care, while advocating for their clients. "Every anesthetist has to be brave, no matter what the situation is. [They] have to

have the courage to do what [they] think and what [they] have been taught is the right thing to do” (Sandra, CRNA).

Continuing Education: Learning and Growth

Anesthesia is a constantly changing field: new drugs are discovered or the old ones are refined; people are living longer or presenting to OR sicker than ever; and patients are taking the newest medications and herbal remedies--faster than the drug books can keep up with. Nurse anesthetists recognize this and realize the need to avoid learning plateaus in their careers. Thus, part of their responsibility is staying up-dated on the latest medication, technique, or piece of equipment. Guy states in his interview that the reason he likes to travel and work at various hospitals is so he can “learn different techniques and new ways of doing things in other parts of the country.” It should be mentioned that three of the nurse anesthetists have their Master’s Degree. Two of them went back to school to acquire the degree after becoming diploma-certified in anesthesia and working as a CRNA for years. The other nurse anesthetist went to graduate school immediately after practicing as a Registered Nurse.

I observed a learning situation between Jane, CRNA and Zack, MDA regarding the insertion of a Laryngeal Mask Airway (LMA). An LMA¹¹ is an alternative to mask use and is designed to be a minimally stimulating and invasive device.

7-3-02 1300 Hours Day 3 of Observations

A boy patient is wheeled into OR, and Jane puts him to sleep.

Zack: Looking down the throat, “The kids here have small mouths.”

Jane: “I’ve never been able to do one [LMA insertion] right [on a child].”

Zack: “Well, with big adults you can.”

Jane: She inserts the LMA from the patient’s left side. The MDA pumps the green breathing bag on the anesthesia cart. Air is not going in properly.

Zack: “Let’s do that [insertion] again. You got more propofol?”

Jane: “Yeah.” She inserts the LMA again. She asks Zack, “What are you feeling for?”

¹¹ Refer to Appendix G for a photograph of an LMA that was used in the Jane and Zack scenario. This is labeled as Photograph 5.5.

Zack: “The epiglottis.”

Jane: “Thank you, [Zack].”

Zack: “Once you feel that, you know you’re in there. You feel a pop like in an epidural or an IV.”

Jane: “That was my first one!”

Zack: “We used them a lot where I was at before. So, I’m pretty comfortable with them.” Zack leaves, teasing Jane to put a report on his desk about LMAs. Forty-minutes later, Chuck comes in to relieve Jane, and she tells him proudly, “I’ve got an LMA in!”

In addition, the participants share learning responsibilities with their fellow CRNAs. The nurse anesthetists acknowledge that they need to nurture each other. One method of passing on knowledge is through meetings and in-services. The participants mentioned that their department conducts regular meetings to discuss techniques and share with others what they have discovered works for them. In fact, my first day on the job, the CRNAs were holding their monthly meeting. During these meetings, various topics might be addressed, such as new protocols and procedures or in-servicing about new equipment. Another method the nurse anesthetists employ to help each other learn is by staying watchful to the needs of others and showing them how to do new tasks. That attitude refers back to question 15 of the CRNA interview guide. Nineteen out of the 20 (95%) participants selected answers that reflected an attitude of helping others learn and grow. At this time, I will refer the reader back to the scenario with the new nurse anesthetist and Chuck and Mark under the previous section about collaboration. This observation delineates two nurse anesthetists helping a colleague learn about the nuances of pediatric anesthesia. After having observed that interaction, I had made the comment to Mark that I noted the collaboration during OR. He replied that it was natural for him since he came from a teaching background. The reader may recall that Mark used to be clinical and program director at a school of anesthesia.

Also, the nurse anesthetists feel obligated to help other co-workers, that are outside the anesthesia circle, learn. Julie says that if the surgical technicians ask the CRNAs a question about a topic they do not understand, then the CRNAs will explain it, and “if they don’t explain it, they will go get in on the internet for [them].” Moreover, the participants share in the responsibility of helping others learn. They do not leave their peers to their own devices.

Administrative Responsibilities

The administrative responsibilities are not as prevalent among the participants. Three out of the 20 (15%) serve in some sort of management capacity, albeit some more than others. Chuck, Lori, and Zsa Zsa assume these responsibilities. Examples of administrative charges include: making out the work and call schedules for the nurse anesthetists; ensuring government regulations are implemented; fulfilling staffing needs; conducting job evaluations; completing and filing paperwork; addressing staff conflicts; maintaining patient satisfaction; and dictating patient assignments. The participants take very seriously this responsibility—so much so that they tend to feel guilty if other CRNAs are still working when they depart the hospital grounds. Even though the anesthetists-administrators endeavor to maintain an equal schedule and workload, they feel culpable when leaving for home while others are staying late. This is in spite of the fact that it might be their turn to leave early after working a heavy day of call the previous night. Zsa Zsa, who holds the most administrative accountability, confesses, “I try and delegate a lot of things, but I could probably delegate more. I feel like if somebody’s head was going to be on the block, I’d rather it be mine.” Moreover, these CRNAs hold themselves to the highest administrative standards and thus, have a penchant to look out for, even protect, the rest of the anesthetists.

Table 5.1 on the next page summarizes the roles and responsibilities of the CRNA. The first research question has been addressed by discussing the roles and responsibilities of the CRNA. I think it is only suitable to conclude this section with quotations related to the duties and obligations of the nurse anesthetist.

So many of the public, they talk with the anesthesiologists, and the anesthesiologist says, “I’m going to be taking care of you during this time.” But they [the public] don’t realize the anesthesiologists are there probably three or four minutes out of the two-hour or five-hour case. The rest of the time, the nurse anesthetist is the only person in the room taking care of them. People don’t realize who actually is doing the anesthesia and who’s taking care of them.—Guy, CRNA

Nurse anesthetists make a more complete picture, not just “I’m signing the paperwork because I’m in-charge of this room.” They’re actually doing the work. I enjoy call with the nurse anesthetists. I feel safe with them.—Susan¹², Operating Room Nurse

¹² See Appendix H.

Table 5.1. Summary of Roles and Responsibilities

Roles and Responsibilities	Summary Description
Anesthetic duties	All pre-, intra-, and post-operative anesthetic responsibilities pertaining to the care of a surgical client.
Offering assistance to co-workers	Helping with clinical tasks and sharing information with others. Rarely misses work days out of obligation to patients and peers.
Collaborating with others	Consulting with others regarding client and provider services.
Patient care and safety	Patient welfare and advocacy come first. Providing high-quality, low-cost anesthesia care without compromising the care and safety of a patient.
Continuing education	Staying up-dated regarding drugs, equipment, and techniques. In-services and meetings are attended frequently. Sharing newly-learned information with peers.
Administrative duties	Includes creating work schedules and assignments, addressing staff conflicts, doing job evaluations, and meeting regulations.

Research Question #2:

What are the CRNAs perceived stressors encountered on the job?

Nurse anesthetists encounter specific stressors while practicing their craft on the job. For the purposes of this research, six stressors were categorized as clinical-practice stressors: client-care, administrative, interpersonal relationships, inadequate preparation for surgery, environmental, and physical. Afterward, a separate discussion about personal life stressors ensues since personal stressors do not qualify as occurring in the clinical-practice arena.

Client-care Related Stressors

Certain surgical cases, patient deaths, and client complications are subsumed under this category because they involve the CRNA having direct contact with patients. Each of these will now be discussed.

Specific surgical cases. Although the nurse anesthetists feel confident about the job they are doing, particular cases can be stressful for them, as revealed in the interviews. The types of

cases that are stressful depend on individual experience; however, there was some overlap between the participants.

Preemie-baby cases were stressful for the Southeastern Pediatric anesthetists because those patients do not tend to wake-up as easily or because the babies are small in size (about one kilogram or 2.2 pounds). Moreover, with the smaller infants, blood loss and replacement of fluids can be a challenge to assess. Chuck said one day during observations, “It’s tough to deal with sick kids and the abused ones. I didn’t think about that before I came here.” Julie¹³, the surgical technician, acknowledges that the pediatric anesthetists have a “hard job [because] the kids are very sick.”

Secondly, children with life-threatening defects are also stressful since anesthetizing agents can alter the force and contraction of the heart, thus changing the blood pressure. Even in adults, maintaining an appropriate blood pressure while trying to keep the patient sedated poses a challenge. Marilyn said about an emergency case of a ruptured spleen in a young man:

The minute I would turn the anesthesia agent up, his blood pressure would bottom out. So, you’re giving lots of versed along the way so he doesn’t remember, but you’ve got this balance. You know you have a blood pressure of 50—that’s not acceptable. What am I going to do to have this patient survive but yet not remember what’s going on?

Other cases that were labeled as stressful include emergency trauma due to the amount blood loss. Gloria¹⁴ stated that emergency cases appear stressful because of the lines that have to be maintained and that there is “lots of checking,” especially with the blood pressure and pulse. The participants also stated that heart cases are stressful because of the life and death situations that occur and because the surgeons are not “as pleasant” as the surgeons who perform other cases.

Consequently, the aforementioned cases can take an emotional toll on the CRNAs. A case in point, Chuck said he did not think about how anesthetizing children would affect him until he started working at Southeastern Pediatric Hospital.

Patient deaths. Nurse anesthetists view death as a natural part of the life cycle. No matter what the circumstances surrounding a patient’s passing, they still regard it as a great loss. Often times, it is the nurse anesthetist’s responsibility to disconnect the patient from the life-

¹³ Refer to Appendix H.

¹⁴ Refer to Appendix H.

giving anesthesia machine. No other profession can identify with such a tremendous onus!

Clarissa and Guy offer two powerful statements about the death of a patient, respectively:

The most difficult thing for me is when a patient dies on the table, and I have to reach around to the anesthesia machine and turn it off. Because with the flex of a wrist to that oxygen and turning that machine off, I know that that person's life—physical life—is gone. A lot of emotions run through me when I do that because I know that I have terminated that person's oxygen supply. (Clarissa).

I think one of the hardest ones are the donor cases that we have to do because we have to keep them alive while they're harvesting the organs. Then we just turn everything off and have to watch them die. You feel helpless because you can't do anything, and there's no reason to try and do anything because they're donating their organs so somebody else can live. But yet you can't save them. (Guy).

Death is part of the life span. Nineteen (95%) of the anesthesiologists stated they have experienced the death of a patient, while only one revealed she has never had a client die. The extent of a death being stressful depends on whether it is anticipated or unanticipated. For instance, if a patient dies after presenting to OR with extensive motor vehicle injuries, this is not as stressful as if a client who is undergoing a routine procedure has a cardiac arrest and dies. Marlene defined an acceptable death as a "patient [that] has a situation that is likely terminal and doing the last ditch thing [she] can to save the patient." Of the 19 that stated patients have died under their care, 17 (89%) of them said they have experienced expected patient deaths. However, the loss of a patient, especially that of a child or young person, or even an unexpected death, can elicit additional feelings of stress. Chuck, a CRNA that describes himself as a "low-stressed kind-of guy," acknowledged in his interview that "losing a baby one month ago with a heart problem was stressful . . . The stressful ones are the ones you've wrestled death with." Irene feels the same way as Chuck: "I've only seen two deaths on the OR table, and they were both devastating to me. There's nothing worse than losing a young, innocent child." Those nurse anesthetists that have not experienced the death of a child emphasize with colleagues that have. Mayo says, "I pray in my lifetime I never see a child die under an anesthetic," while Holly states, "I've never had a patient die, but I would imagine that would be the worst thing that I would absolutely ever have."

The literature supports the feelings of stress these nurse anesthetists have about a dying patient. Toft and Anderson (1981) examined the causes and effects of nursing stress in the hospice, surgery, oncology, medicine, and cardiovascular hospital units among RNs, LPNs, and Nursing Assistants (NA). Data reveal that the “major sources of stress experienced by nurses were similar, regardless of the unit. Nurses on all of the units reported stress most frequently as a result of . . . a dying patient” (p. 640-641). RNs experienced more stress than any of the other nursing groups studied. In my career, I have had to care for dying patients—some old, some young. Although I consider it a privilege to be there for them and their families in those last moments, witnessing someone die leaves a lasting impression. Even though Toft and Anderson did not investigate this phenomenon among CRNAs, death does have a profound impact upon them, especially those deaths that are unexpected.

Unexpected deaths are identified as particularly stress inducing. A patient succumbing to an embolus or not awakening from an anesthetic are examples the participants gave. Of the 19 anesthetists who stated patients have died under their care, 14 (74%) revealed they have experienced unexpected client deaths. Booth (1998) studied how nurse anesthetists reacted to the untimely or unexpected death of patients in the OR. There are straightforward reasons as to why unexpected deaths are stressful for CRNAs:

First, sudden deaths in the operating room are usually unexpected. Second, intraoperative deaths are associated, rightly or wrongly, with human error. Third, these deaths are sometimes the outcome of a therapeutic medical intervention and, in the case of the CRNA, a nursing intervention went awry. Fourth, CRNAs are often active participants in terminating life support measures for young organ donors once their organs have been harvested. Fifth, they may have to anesthetize patients for whom a do not resuscitate (DNR) order has been written that may or may not have been rescinded for the perioperative period. Finally, CRNAs may also be directly responsible for the death of a patient because of an error in their clinical judgment or their delivery of incompetent or cavalier care. (Booth, 1998, p. 51).

Booth is correct in his comments about the death of a patient in OR usually being deemed an anesthetic death. My dissertation research supports this notion. For instance, Derek states, “Today, there’s blame for everything. There’s just a tremendous amount of finger-pointing today. People do it in the profession. Certainly the media does it, and that makes it a problem.”

A patient dying is stressful enough for the CRNA. Additionally, they have the burden of disconnecting their patients from an anesthesia machine that supplies oxygen and all the other means that maintain life. Furthermore, if a death is untimely, the nurse anesthetist may get blamed for it happening. To boot, society and the media have no inkling as to what the CRNAs struggle with related to a patient's passing.

Although the CRNAs believe that a patient living in pain should not have their life prolonged by unnecessary surgeries just because the family members wish it, life is considered precious. Fortunately, each individual I interviewed stated death was not a common occurrence. Rather, the nurse anesthetists acknowledge that encountering death is almost inevitable. According to them, those that do not have a patient die on the table during their careers are blessed. Even though a CRNA may not experience a patient-related death, client complications are inevitable.

Patient complications. The operating room can be an uncertain place. Complications can arise at any moment. Primarily, a difficult intubation was identified by the CRNAs as causing stress relating to the potential for complications. An intubation is “insertion of a tube as into the larynx or trachea through the glottis for entrance of air” (Davis, 1993, p. 1015). Without a successful intubation, the patient has no airway. That airway must be managed—maybe because long-acting paralysis drugs or medications to stop the patient breathing on their own might already have been given. Sometimes a difficult intubation is due to a patient being dentureless and their face caves in. During observations, one nurse anesthetist at Southeastern stated that she had a difficult intubation because a mentally challenged patient ate and drank the night before surgery and vomited upon tube insertion. Any number of factors can contribute to this complication. Additionally, laryngospasms (i.e., spasms of the laryngeal muscles) are also stressful. Barbara¹⁵ notes that “children’s airways are tenuous, and it’s hard to ventilate them.” Thus, if a patient experiences a laryngospasm, they will need to be re-intubated, which may be even more difficult the second time around.

Client-care related stressors (i.e., patient complications, death, and specific surgical cases) have been discussed. Although the anesthetists feel they can skillfully handle these situations in a professional manner, the CRNAs, to varying degrees, still describe them as

¹⁵ See Appendix H.

stressful. Patient-related stressors are just the tip of the iceberg: The next focus of conversation will be the administrative stressors.

Administrative Stressors

Administrative stressors include all other stressors relating to the work life of a nurse anesthetist that does not pertain to patient care or co-worker relationships. Five major categories fall under this heading: workload, production pressure, staffing issues, work schedule, and miscellaneous-type stressors.

Workload. The CRNAs feel they are under a mountain of surgical cases and paperwork, which contributes to a heavy workload. According to Forrest¹⁶, the anesthetists at Southeastern Pediatric Hospital are performing over 11,000 cases per year, compared to 4,400 cases 11 years ago, with the same number of CRNAs on-staff. Mark, Forrest's peer, figures that to be around 900-950 cases per anesthetist annually. Southeastern serves a relatively big metropolitan area and has nine operating rooms—one of which is reserved for EGDs and colonoscopies only. Zsa Zsa cited that their small community hospital, which has 5 ORs, averages around 4,000 cases per year. Therefore, the five CRNAs that work there do about 800 cases annually. However, the workload varies from day to day. Each participant might do anywhere from one long case (e.g., heart bypass) to 20 short cases (e.g., dentals, tonsillectomy) in a day. Comments used by the participants to describe their workload: stable, (fairly, really, or very) heavy, tremendous, doable, a burden, and tough. Again I will cite from the Toft and Anderson (1981) study of the 122 hospital nurses they investigated related to occupational stress. Their subjects not only reported that the death and dying of a patient was stressful but workload was, too.

Moreover, paperwork responsibility only adds fuel to the fire. Although not addressed significantly in the interviews, I did observe that charting and filing the paperwork does require a lot of time from the anesthetists. The MDAs have to come in the OR to sign off on some paperwork; the CRNAs have to sign the paperwork, hand the documents over to the recovery room nurses after the patient is transported, and then file any duplicate copies. Two pieces of paperwork they have to maintain includes an anesthesia charge sheet and patient care sheet. Maintaining the paperwork adds to the stress because the anesthetists are already pushed for time to complete their caseload. Unnecessary paperwork only slows them down. Derek says:

¹⁶ Refer to Appendix H.

The paperwork is probably more difficult. If it was just anesthesia, it would probably be a lot easier. It's like three or four forms that follow every patient. We have a lot of duplication . . . When you're doing this rapid turnover, the hardest thing [to do] is drag the paperwork along. If it was just putting people to sleep and waking them up, that would probably be a piece of cake . . . I think that's probably the hardest thing about anesthesia today is keeping up with paperwork that's not very useful, like charge sheets. Their argument is definitely understandable. However, as a researcher, I am inclined to see two sides of the coin regarding this paperwork business. True, it is a nuisance. I remember the days having to stay late after working the evening shift to complete patient charting. Not an easy task to accomplish, especially when you are tired from working a double shift. On the other hand, the participants want others, namely the public, to know about anesthesia and what they do on the job. Even though the anesthetists view themselves as clinicians, the paperwork is a reliable forum for documenting the types of responsibilities they perform on a daily basis. In fact, it is an effective means to verify part, not all, of their occupational obligations. The paperwork is a Catch-22 for the participants.

Production pressure. Production pressure, a term coined by Zsa Zsa, refers to the pressure the nurse anesthetists are under to turn over their rooms. From the time the CRNAs walk through the hospital door, they feel the crunch to finish their patient cases and get the next one going. Says Mary Ann:

I dislike the most about my job is the pushing of the cases. After bringing patients back from the recovery room, there's always somebody to do. I like to spend a little more time with my patients before I start. I hate to rush; I don't like to be pushed. I can turn them over faster than anybody. The hospital is also thinking about the money, too. This is common to every hospital—get the patients in, get them out.

Mary Ann is not the only one that feels that way. Fourteen of the 20 (70%) CRNAs mentioned in their interview that they encounter production pressure stress. Lindsay¹⁷ concurs with Mary Ann:

They're [the CRNAs] rushed to get started on the next case before they're ready. You have a limited amount of time that you can get ready before everybody starts tightening

¹⁷ Refer to Appendix H.

up on you to get it done. So therefore, that's a big stressor here because we are very fast paced.

I got to witness this stressor in the operating room the first day of observations.

7-1-02 Day 1 of Observations

0730 After the patient is brought in, the bp cuff is put on. The CRNA talks to the patient, placing EKG leads on him and then a mask over his face to give the anesthesia. The RN holds the patient. She starts the IV while the CRNA tapes the eyes shut and intubates. The CRNA then places a head roll under the patient's head.

0740 Surgeon shows me the tonsils and adenoids (T&A). CRNA is charting and drawing up meds (narcotics for nausea and swelling). The CRNA sits in a chair while charting. Forrest comes into the OR and introduces himself to me.

0747 T&A is over. CRNA removes tape, suctions remaining blood from the mouth, detaches tubes, and rearranges bed. She calls recovery to say the patient is on his way.

0753 CRNA gives report to recovery room RN and finishes charting.

0800 OR is getting ready for another patient. . .

The above excerpt delineates the production pressure the nurse anesthetists are speaking about. Within 30 minutes a surgery is complete, and within 13 minutes a CRNA wakes a patient up, transports the client to the recovery room, gives a status report, and prepares for the next case. Most of the time, the CRNAs would wake a patient up, give report, and start the next case within five minutes, if a complication did not present. Consequently, I had to hustle to keep up with the CRNAs. Jane explains it this way: "Well, the only person that they always look to is the person anesthetizing that patient because that is the only variable in the room that can change. We are one CRNA. We turn over our own rooms." Bret¹⁸ acknowledges this stressor: "They feel the pressure to turn over quickly. They verbalize concern over the patients—afraid they'll make a mistake and injure the patients. I see it, and I agree with it."

Production pressure is also experienced while CRNAs make pre-op rounds. Usually, a nurse anesthetist completes a somewhat detailed pre-anesthetic evaluation within five minutes. Irene reflects on the pace of pre-ops:

¹⁸ See Appendix H.

I've been running around from one floor to another and going back to see patients who I checked on to begin with and going to check lab work. To me, that's stressful just because I'm afraid I'm going to miss something because there's so many patients to see . . . [The hospital] doesn't see the stress in having people hurry you along to turn your room over: "Hurry! Come on! We've got another surgeon coming!"

Why the rush in turnover and during pre-op rounds? Simple: the heavy workload. Because the hospitals, its surgeons, and management staff are scheduling (or allowing) numerous surgeries, the nurse anesthetists are forced to comply and churn out one patient after another from the operating room. Also, the insurance companies are pushing for more outpatient surgeries, which naturally increases the workload of the anesthetists. Therefore, the heavy workload and production pressure are intertwined.

Staffing issues. A lack of staff and inability to take breaks and days off are subsumed under this third administrative stressor. Eight (40%) of the nurse anesthetists voiced the concern that there are not enough CRNAs on the job. These eight classified their department as being short-staffed by at least one, maybe two, position(s). Even Irene, who works at Southeastern, says that their facility is tightly staffed, even though all positions are filled. Therefore, not having adequate staffing compounds the stressors the anesthetists already feel related to turning over their rooms and carrying their workload. As a result, bathroom and lunch breaks are few and far between. When asked what she disliked about her job, Jane immediately stated: "Not being able to break or use the bathroom when I need to!" One day during observation, Chuck came into the OR and asked Jane if she would like a break. Jane enthusiastically replied, "I hadn't had one, but I need to go pee!" Hilda put it another way: "You feel like you're out on the desert by yourself, and nobody [is] around to give you a lot of assistance. In a lot of cases, that's true. There's nobody available to relieve you." Ultimately, inadequate staffing becomes an issue because the nurse anesthetists must work harder to complete the OR schedule and meet acuity levels. Working harder means having little or no breaks, which can be even more stressful after working a full day. Besides, the nurse anesthetists are also afraid to call in sick because that will mean more work for their peers because of the inadequate staffing. The hospitals and management expect too much from the nurse anesthetists given the nature and high accountability of their job.

Schedule. The fourth work-related stressor is that of the anesthetist's schedule. Even though their schedules vary from week to week, the median number of overtime hours worked a week was 18. Also, the full-time anesthetists assume five to eight days of call per month. They do not mind taking their fair share of call and overtime. What is stressful for them is the uncertainty of the schedule: They do not know when their day will end. Four (20%) of the CRNAs mentioned that the surgeons like to over-book on cases, which carries their schedule to later in the day. Simply, they are not guaranteed a specific time off from work. Moreover, the participants tend to shy away from scheduling appointments (e.g., dental, haircuts) or time with family after work. Missing time with family is difficult for them. For instance, Chuck told me during a case that it was his child's birthday and that he hoped he got off on-time so he could be with her. I witnessed on several occasions nurse anesthetists being told two or three extra cases had been added to their docket for that day. Susan¹⁹ identifies just how stressful long hours can be for the anesthetists:

If they take call today and tonight, they're on call till 7:00 am. A lot of days they have to work the next day, too. Even if we worked all night, they're still responsible for cases the next day. They take three-day weekends—Friday, Saturday, Sunday. It's always an issue.

Moore, Kuhrik, Kuhrik, and Katz (1996) conducted a survey on 336 acute care nurses perceived job stress after a downsizing. The results showed that the greatest stressors came not only from workload and unpredictable staffing but also from scheduling, as well. Although none of the nurse anesthetists are experiencing a downsizing, they are still exposed to the scheduling stress that Moore et al. subjects felt.

Of further interest, the CRNAs that work part-time or are inactive (n=6) stated they do not feel as stressed as they once did when laboring full-time, taking call, and working overtime. Jody says that emergency-type cases would be the culprit of her working overtime or call, but since going to a part-time schedule, her stress level has been reduced. Clarissa acknowledges that practicing in another arena of nursing that operates on banker's hours is "enjoyable."

Miscellaneous administrative stressors. Three extraneous stressors that cannot be appropriately assigned to the previously mentioned administrative stressors have been positioned within this section. Although identified to a lesser degree by the participants, these stressors are

¹⁹ Refer to Appendix H.

entitled to an honorable mention at this time. The first involves meeting government regulations for protocol and procedure. After all, the government can close a facility if their requirements are not specifically met. Zsa Zsa mainly voiced this concern, which is mentioned in her profile. Second, having only a one-day orientation at a new place of work before giving anesthesia can cause stress. Adjusting to a new facility takes time, and not having adequate orientation adds to one's jitters when starting somewhere fresh. Finally, the potential for lawsuits is extant in the profession. Anesthesia and midwifery are the two specialty areas in which nurses are likely to be sued the most by their clients. These topics may be revisited in Chapter Six when discussing the recommendations.

Interpersonal Relationships

The third clinical-practice stressor involves interpersonal work relationships. Work connections, in general, are a perceived stressor for the anesthetists, whether it is between the CRNAs and the MDAs (i.e., management), the CRNAs themselves, or other OR personnel. The actual relationship between CRNA job stress and interpersonal work connections will be discussed in detail later as relating to the fourth research question. For now, a dialogue on the anesthetists' identification about their work connections being stressful is sufficient.

Anesthetists vs. anesthesiologists. The anesthetists appreciate the expertise of the anesthesiologist and having that support system in place in case a patient complication arises. As mentioned earlier, the participants do not hesitate to call on an MDA when assistance is needed, such as the case between Jane and Zack regarding the LMA insertion. Nevertheless, the proverbial, age-old conflict between the anesthesiologists and nurse anesthetists exists: nothing new or surprising there. The conflict, dating back well over 100 years ago when anesthetists started providing anesthesia care, relates to the responsibilities anesthetists can assume (American Association of Nurse Anesthetists, 2002, on-line). Anesthetists see themselves as well-educated and clinically prepared, while the anesthesiologists have argued that CRNAs have crossed the line from nursing into medicine. Both groups, to this day, seek to maintain the integrity of their profession by campaigning for "turf" rights. This dissertation research does not seek to solve these issues. However, it does bear this brief mentioning so the reader is informed about the underlying contention that is present between the two groups. An example of how this relationship is stressful: the MDAs are perceived as assuming more of a supervisory role and not anesthetizing as much as they could (or should). The participants view themselves as the

workhorses, while the physicians may do one or two cases when they are not lounging in the break room. Consequently, the anesthetists feel that there is not enough MDA appreciation about their hard labor. Hilda and Derek, who worked as solo anesthetists for years, stated that the MDA-CRNA relationship was not a stressor for them because they worked by themselves, and they liked it. The literature supports the feelings Hilda and Derek have about independent practice. As covered in the literature review, Kendrick (2000) states that according to the 1990 “Human Factors Inventory Survey” of 5,955 CRNAs steered by the AANA, “The [anesthesia] group that reported the highest stress worked in the university/hospital setting. Additionally, CRNAs reporting the lowest stress levels were those who practiced alone” (p. 115-116).

I can see the anesthetists’ viewpoint by what I witnessed when observing and then interviewing the anesthesiologists. The MDAs really have no awareness about how arduous the CRNAs advocate for the patient in the operating room, even though the anesthetists are educated and prepared to work independently. Normally, anesthesiologists are not present during surgery because they are supervising several anesthetists at once or are giving anesthesia themselves. Thus, their attention is diverted either to three to five ORs or to working an individual case. For instance, at day three of my observations, Zack had been in and out of Jane’s room more than what was normally the custom. Jane jokingly referred to Zack as “the social butterfly.” It was obvious that Jane was not used to an anesthesiologist appearing in her room that many times when a case was progressing as anticipated. Additionally, during the interviews, I frequently heard the MDAs state relating to CRNA stressors and their coping mechanisms, “I don’t know,” or “I can’t answer that question.” These responses, or lack thereof, helped to confirm what the CRNAs have been stating all along about relationship stressors encountered with MDAs. In support of the anesthetists, Bret²⁰ affirms in his interview: “They [the CRNAs] feel they do a higher volume of work than we do and that we’re not as sympathetic as we could be . . . Do I add to the nurse anesthetists’ stress? Yes, I do. They probably feel frustrated by me.”

CRNA vs. CRNA. As viewed through the lens of a nurse anesthetist, the division of labor is not always fairly distributed between the CRNAs. This unequal labor distribution places work relationships on somewhat shaky, if not stressful, grounds. The younger anesthetists perceive the older anesthetists as receiving the lighter cases. Jane stated:

²⁰ See Appendix H.

The “older” CRNAs are given the easier or slower turn over rooms . . . When the assignments are made, the MDs always say, “Well, don’t give her these stressful ones. Don’t give her the little bitty babies because the anesthesiologists don’t feel good about her taking them.”

On the other hand, the older ones think their younger peers receive favorable treatment, as cited by Sandra, “You may have a part-time person that is a young pretty girl who flirts with the staff anesthesiologist who makes out the schedule, and he shows her favoritism.” Furthermore, the “older” anesthetists consider themselves more long suffering than their younger male and female peers. They view the younger ones as having a mentality that they are in the profession for the money and will leave when the job becomes too stressful. However, I should reiterate that half of the anesthetists see themselves retired in a decade, while the other half plan on staying in the profession. They have no plans to leave and start fresh in another discipline.

Secondly, the females perceive the males as belonging to the “Good Old Boys Club” that the male doctors are members of. As a result, the male anesthetists are seen as receiving a lighter schedule and therefore, they are treated more like doctors than CRNAs. Holly, Hilda, Jody, and Mayo all voiced concerns about the “Good Old Boys Club.”

Holly: “Men are always given the best deals . . . The males do the male-bonding thing.”

Hilda:

At Fort Bragg, there were eight men and [myself]. I was the only female. You think there wasn’t discrimination there? . . . The first day I was supposed to have three days to process in. So, they [the men] decided they weren’t going to give me my three days to process in. So, I gave anesthesia the first day I was at Fort Bragg. I did an emergency appendectomy.

Jody:

It used to be where the women seemed to get all the hard cases, and the guys got to go home early and had the slack cut. It was pretty obvious that the male anesthetists were babied before the merger.

Mayo:

I think the male MDs look out a little more for the other male nurse anesthetists. They’re not quite as hard on them. I don’t think they are. I like the men, and I like working with them. But they’re more comrades.

As a result, this “Good Old Boys Club” creates for the female staff extra work because of the inequality of work assignments. The same stressor is true for both the older and younger anesthetists. Incidentally, none of the anesthetists at Southeastern Pediatric Hospital voiced concern about the “Good Old Boy” phenomenon; however, I did witness a conversation noteworthy between a physician and male CRNA.

7-2-02 0645 Hours Day 2 of Observations

Mark and I just finished doing two pre-ops. We are out in the hall and a physician stops to chat. The surgeon asks how Mark is and if he has been golfing lately. The two act like they are buddies. The MD suggests they go golfing and fishing soon.

By the way, conversations like this were not observed between the female anesthetists and male or female MDs.

Lastly, yet to a lesser degree, relationships with locum tenens or temporary hires were perceived as stressful. Locums are identified as causing stress because they do not pull as much of a workload as the permanent staff anesthetists.

Anesthetists vs. surgeons. Interpersonal connections with surgeons can prove stressful at times. During observations, Irene shared that the attitude of the surgeon can make or break a case, and whichever surgeon she is working with often determines what kind of day she will have. I heard from almost all the CRNAs at Southeastern that there was this one particular surgeon that I needed to observe in order to understand the relationship stressor. Having done so, I now understand fully what they were saying. The surgeons I observed, not all of course, but at least three of them displayed capricious tendencies. One minute, they are nice and thanking the staff; the next minute, they are cursing or telling inappropriate jokes. Below is an OR conversation I recorded in my field notes:

7-3-02 0703 Hours Day 3 of Observations

Surgeon: “I appreciate you all starting early.”

Technician: “You’re welcome.”

Surgeon: “Now, I’m ready! Could you straighten this [the table sheet]?”

Jane (CRNA): “Sure. Like that?”

RN: “Jane, you on-call today?”

Jane: “No. They didn’t have the assignments written up today, and I haven’t been back there.”

[The surgeon tends to mumble. He is older, tall, and thin.]

Surgeon: “You know that 2400 tube—I need it.” [The RN hands it to him, repeating the number he requested for the procedure.] “That’s not it, d*** it! It’s flat. S***! This is not it!”

[The surgeon walks around to the other side of the patient. The RN is looking for the size tube he wants. She has to go outside of the room to find it. The staff is staying calm. The RN walks back in with another tube.]

Surgeon: “It’s got a real flat surface on both sides.”

RN: “Yeah, that’s it.”

[Jane is quiet. Zack walks in, charting something at the anesthesia machine. The tech hands equipment to the surgeon].

Surgeon: “D*** it!” [He wants another instrument from the tech]. He then requests, “Ear drops.”

Tech: [asking the surgeon] “Do you want the same tube on the other side?”

Surgeon: “Please.”

[The surgeon and tech switch places to the opposite sides of the patient. I hear suction noises. Jane continues to hold the mask to the patient’s mouth, not saying much.]

Jane [to the technician]: “Do you see it?”

Technician: “Yeah, I see it.” [She looks at the instrument. I hear a radio commentary playing in the background].

Surgeon: “Suction.” [He suctions the ear. Sometimes the surgeon grabs tools from the tray. Jane turns the gas dials. The surgeon then talks about going on a boating trip].

Jane: [about his trip] “It’s a hard life—beer and bologna.”

Surgeon: “And fish.”

[At 0716 the BMT is complete]

RN: "You done?"

Surgeon: "Yeah."

RN: "Can you scoot a second?"

Surgeon: "Yeah."

RN: "Watch your leg. Have a safe trip. Drink a beer for me."

Jane: "Drink two for me."

In the same breath, the surgeon is thanking the staff and issuing forth curses. Although the staff tended to ignore the surgeons outbursts, like Irene said, working with some surgeons is more stressful than working with others. Derek testifies that the surgeons do not tend to act verbally abusive towards him because he is a "large man" and not "too many people look down on him." Conversely, the anesthesiologists at Southeastern Pediatric Center enjoy working cases with Jim²¹, a lackadaisical surgeon. During his interview, Jim states he tries to treat the anesthesiologists like "colleagues," and that he and the CRNAs have a "healthy relationship" as long as the "anesthesiologists do their job well." I can understand why the anesthesiologists would want to work with surgeons like Jim: he is non-threatening and appreciates the anesthesiologists' work, which keeps stress to a minimum.

Furthermore, relations with physicians can also be stressful for women due to the mindset of some MDs. Marilyn states, "I really feel that there's always that line: I'm the physician, and you're just a nurse." Marlene says a female MD has not criticized her, but the male MDs are quicker to disparage. Zsa Zsa states that surgeons criticize because "they don't really understand what anesthesia is, and they don't understand that even we [the CRNAs] have limits to some things . . . They need to be educated." Therefore, this dual conflict of RN vs. MD and male vs. female is a stressor for the women CRNAs. Consequently, the CRNAs have to continually prove their capabilities in the operating room--not only at being a proficient anesthesiologist but also an adept female.

Interpersonal conflict and administrative stressors. Although, I did not witness conflict per se among the staff at Southeastern Pediatric Hospital, ten (50%) of the CRNAs made it abundantly clear in their interviews that conflict with other hospital personnel, such as nurses,

²¹ Refer to Appendix H.

technicians, and management, can cause stress. This conflict relates to particular administrative stressors and client-care outcomes.

The main source of conflict results from the heavy workload and production pressure. Not only are the CRNAs under the gun but the surgical and nursing staff are, too. If the anesthesiologists' do not turnover their rooms fast enough, they are blamed, mainly by nursing service. Therefore, this creates tension between the two groups, which raises stress levels to an even higher plane. While relations with the surgical and nursing departments were described as "pretty good" or "cordial," mentioning this conflict between the two groups was apropos.

In some rare instances, conflict can be caused from particular patient outcomes. If a client were to unexpectedly die on the table or have a bad outcome (not resulting in death), the anesthesiologists state that their peers, the hospital, and society, in general, might be quick to blame them for that. The greater the job responsibility and independence, the greater the accountability level: Anesthesia surely fits the bill. As stated in Chapter Four, CRNAs enjoy the additional responsibility and independence and thus, greet patient challenges head-on. The blame co-workers and society place on CRNAs when they are unable to rescue patients from complication and death can be stressful. Due to this culpability, the anesthesiologists start to feel the "screws tightening and pressure in the back of the neck." Derek gives a good example of the blame-game:

I bring the patient in the recovery room—a very healthy guy—goes right down the tubes in front of me, and I have to re-intubate him and bag him and do all that stuff. He had a knee arthroscopy. I don't know why he did that; I didn't do anything wrong . . . But these people [in recovery room], I'm sure, are looking at me like, "Dr. Death over here." Consequently, conflict with others enters the picture when a CRNA is deemed careless or incompetent in their duties. Finger pointing increases the tension between hospital staff, especially if the anesthesiologist's credibility is on the line.

Thirdly, conflict with management over job benefits is a stressor. The CRNAs acknowledged that they are basically satisfied with their salary. Refer back to Table 4.1 for a breakdown in salary range. However, some concern was expressed regarding their benefits. For example, Jody said that her health insurance deductible went up to \$1,000 per family member and that was stressful for her and the family, especially when her husband had been out of work for months. Another stressor is that some of the CRNAs who had anticipated retiring soon had

to change their plans. Due to the downward slope in the economy and retirement investments losing money, the nurse anesthetists now anticipate working longer. When asked what they anticipate doing professionally in ten years, half said retired; the other half said working either full- or part-time. Management is aware of the anesthetists concerns and the stressors resulting from them. Forrest²² recalled in his interview that “the fights, the complaints, [and] the arguing, mostly about money or time off or benefits,” created conflict between the MDAs and CRNAs. Mark and Jane voiced that the anesthesiologists should not take more than their fair share of the money earned for the department. The point of contention is that the profit sharing is not seen as comparable as it could be between the anesthetists and anesthesiologists. Rather, the anesthesiologists should be reimbursed for their supervisory role, whereas the anesthetists should be reimbursed for their productivity role. The relations between the MDAs and CRNAs will be discussed in more detail later.

Lastly, another identified conflict stemmed from extraordinary circumstances, and it is one that nurse anesthetists do not deal with on a daily basis: the merger of two hospitals. Four (20%) of the participants experienced a merger almost four years ago. At that time, conflict arose between the two anesthesia groups that were merging. The four CRNAs were going to have to take a reduction in pay because the anesthesia group at the other hospital was buying out the anesthesia group at their hospital. The anesthetists had to fight to retain their current salary. Painfully recalling that time period, Jody reflects:

It was really bad there for the first year and a half . . . We felt like we had to prove ourselves all over. They didn’t have to prove themselves—the CRNAs—but we had to prove ourselves because we were not going to get the same salary . . . Everybody was very tense, very stressed-out.

Conflicts between staff members and the hospital are a stressor for the nurse anesthetists. An article by Ullrich and Fitzgerald (1990), who examined occupational stress among medical staff working on cancer wards, support these research findings. Their findings reveal that 26.5% of nurses, who showed the greatest stress levels of any of the staff members, reported that conflicts with colleagues cause them stress. Conflict can even affect working relationships. Exactly how the work relationships are stressful is the next subject of conversation.

²² Refer to Appendix H.

Inadequate Preparation For Surgery

A fourth clinical-practice stressor either involves the CRNA not having enough time to prepare for a surgery or a co-worker being derelict in his or her surgical duties. Due to the heavy workload and production pressure, the anesthetists feel as if they themselves do not have adequate time to prepare for their surgeries. Lori vocalizes that the rush to turnover the cases leaves “very little time to do that last-minute investigating of labs [and to] make sure there is blood available before starting a procedure.” Whereas, Marlene feels stressed when she has to float to the hospital when the clinic where she works at is not seeing patients for that day. The unfamiliarity with her surroundings creates the stress, and thus, prevents her from preparing for surgery adequately enough as another CRNA, who works there, might be able to. Marlene said, “I call it being jerked around. We’re sent to do something that you haven’t had time to prepare for, or to think about, or to find out about in advance.” Marlene reports that her stress level rises when floating to the hospital yet decreases when working in her usual clinic-based setting.

Being “jerked around” has another connotation, as reported by the participants. First, this term refers to when a fellow CRNA or MDA does not want to anesthetize for a particular surgery and crams their case into someone else’s room. Thus, an unfair division of labor, as discussed above under the administrative stressors, enters the picture once again. In addition, being jerked around can also mean that the anesthetists are moved from room to room or that extra cases are added to their room in order to accommodate a faster turnover rate for the OR, even though it might save just five minutes. Understandably, the addition of extra or unwanted cases can cause stress because the CRNAs are unprepared yet pressed to meet their already full schedules.

Secondly, inadequate patient preparation on the part of the CRNAs’ co-workers is another stressor. An example is when a client is sent to OR without being prepped for surgery. In other words, tasks such as a bowel prep or testing of a glucose level was not done, and the anesthetist is forced to fix the situation rather quickly in order to accommodate the surgery schedule. This only intensifies to their stress level. Recall again the scenario in the EGD room with a male CRNA:

July 12 Day 9 of Observations

1145 The patient is rolled in for an EGD.

1200 The CRNA says to the patient, “Hi, ya’.” Then, he proceeds to check on the IV. He flushes the IV, afraid that it is not working. He attempts to give a medicine and asks the patient, “Does that hurt when I push that in there?” She shakes her head no.

1203 The patient cries, “It’s burning! It’s burning!” The CRNA then begins to give anesthesia via a mask. He is mad about a blown IV being sent to surgery. He calls it “ludicrous.”

This anesthetist was infuriated because a patient was sent to OR for a procedure with a defunct IV still in her hand. I could see clearly myself that the IV had blown: it was edematous. Since the anesthetist was forced to start a new IV (this child was not an easy stick), the procedure took longer than anticipated, which slowed down the rest of the day’s schedule. Mainly, the CRNA was upset because of the lack of initial patient preparation and then having to correct an oversight that someone else should have caught sooner. The participants feel that inadequate preparation could be prevented if the OR scheduled was not so tight and if their peers were responsible enough with patient care.

Environment

After observing in OR for nine days, I have decided that the operating room is like a kitchen: There is never enough room and there are always too many people in it! Four anesthetists mentioned in their interviews that the operating room is a stressor in and of itself. They said that OR is a stressor because 1) they could not look outside because there are no windows, and that is depressing, especially in the wintertime; 2) too many personalities crammed into one room is like a hornet’s nest; 3) there is never enough room to maneuver in OR; and 4) the cold temperatures tend to aggravate any physical illnesses they might be feeling at the time.

Windowless operating rooms are stressful because the anesthetists cannot see outside. The already confining quarters seem even more stifling when there are not any windows. In addition, the absence of sunlight and outdoor air cause the anesthetists to feel “depressed,” especially during the winter months. Even though Southeastern Pediatric Hospital has windows in every OR, except the EGD room, the hospital is currently undergoing renovations. Rumor has it that some windows will be eliminated. When Jane heard that she said, “Oh, really? That will be weird!” So, even the concept of not having any windows in the operating rooms is not very appealing to the anesthetists.

One day I focused on the concept of “space” during the observation phase of this research. The anesthetists are right: there is never enough room to maneuver in the OR. The following passage from my field notes illustrates this point:

7-3-03 Day 3 of Observations in the EGD room

The EGD room has no windows and is cramped . . . All kinds of supplies are crammed in here: RNs desk with a computer; the anesthesia machine and medication cart; a stretcher for the patient to lay on; an IV pole; two biohazard cans; four stools; two video monitors; a wall with three shelves full of equipment and tools; a cabinet full of supplies; papers all over; and six people. Cozy!

The EGD room is a small room to begin with, but with the addition of six people and equipment, the room shrinks. Also, the anesthetists stated they do not like to do cases in the EGD room because of its environment; it does not have any windows and is cramped. Another case-in-point about the environmental stressors follows when I had the opportunity to observe the removal of a spleen:

7-5-02 Day 4 of Observations: the splenectomy case

0900 Preparation for the splenectomy case begins . . . Space is a trade-off at this point: people are changing places. The tech is out of breath from rushing around . . . One of the TV monitors is moved closer for the surgeons to see. Supplies are placed on the patient at the lower end of the OR table. The OR tech moves back and forth between the sterile table and surgeon #1. Suction equipment is hooked up next to the IV pole. Space is centralized at one point: the OR table.

0932 The temperature is colder in the OR room. There is an interaction of “actor and acts in space.” The video monitor is on: I see the enlarged spleen. Amazing! Two more med students walk in. Space is important related to the goal of a successful splenectomy. Space must be convenient and accommodating. There is human touch as instruments are exchanged. The CRNA is confined among the anesthesia equipment, OR table, IV pole, and wall. She sits in a chair with little room to move; however, she has ready access to the patient’s head. The patient’s head is covered with a drape. Jane goes under the drape and uses her nerve stimulator at the patient’s temple. The surgeon tells the RN he’s ready to tilt the patient. The RN operates the bed remote, tilting the bed to the right and down. She asks if that is okay. Now, this space looks complicated with all the equipment and people involved! Looking at the video, the patient’s space is confined [inside the body] and the surgeon is working within a small area. The RN finally got a chance to sit down. I just got the CRNA 500ml of LR in the warmer for her . . . Two med students and myself are observing.

1000 Jane stands up and puts a fresh bag of LR on the IV pole. A splenectomy is fascinating! This is my first time in seeing one. The surgeon has to be particular with the space due to the vital organs . . . The feelings of the actors are professional and calm.

1015 I have sat down next to the RNs desk. Another MD just walked in, introduced himself to me and shook my hand. He's looking at the monitor closest to the nurse's station. Two surgeons are manipulating the tools within close proximity of each other. The MD that walked in is standing between surgeon #2 and the suction machine.

1020 Another MD walks in: 11 people are in the room now. Jane cranes her neck to see the video behind surgeon #1. The spleen is about to be removed after being put in a plastic bag. All eyes are on the video! Wires are everywhere and take up space on the floor. . .

1038 The patient is tilted to the reverse-Trendelenburg (i.e., head-up) position to facilitate the spleen sliding into the bag. Jane was just relieved by Vanessa. Vanessa steps over the cords , knocking over a spray bottle to get to her workspace. Nine people are in OR now.

1045 I'm hungry and my bladder is full. Space is precious and valuable for all actors. There is occasional frustration with "bagging" the spleen (e.g., sighs and cursing by surgeon #1). . .

1130 The surgeons are still trying to bag the spleen. The RN tilts the patient to the left. There are feelings of frustration due to not bagging the spleen. Surgeon #1 curses. . .

1145 Jane relieved by male CRNA.

1155 The spleen is out. Surgeon #3 steps away and removes gown. Surgeon #1 steps away and changes gloves and gown. Patient is flattened and raised. Surgeons #1 and #2 remain on the case.

1208 Jane returns and gets a report from the male CRNA. He states he had to put a foam pad over the patient's head due to the surgeons leaning on it. The patient's headspace was compromised. CRNAs are very protective of the patient's head intra-op. . .

This scenario depicts several issues related to the OR environment. There is barely enough room to move around, especially for the CRNA. Space is a precious commodity. Furthermore, if a complicated surgery, like this one, is being performed and emotions run high at crucial times during the case, the confined OR space can make the situation worse. Tempers begin to flare, as evidenced by cursing. Additionally, the rooms I observed in were cold at times—64-degrees, for example. I had to wear a scrub jacket to stay comfortable the majority of the time.

Based upon the interviews and observations, I can understand how the environment is a stressor for the anesthetists. In fact, the environment is a breeding ground for stressors, just like a medium is for a bacterial culture in a petri dish.

Physical Stressors

Hilda and Mayo had forewarned me in their interviews that the job of an anesthetist is physically demanding. After all, both of them left the profession due to the wear and tear the stressors had on their bodies. Refer back to their profiles, if needed. I did not realize how physical the CRNAs job is until observing at Southeastern Pediatric Hospital. Everyday I observed either Jane, Mark, Irene, Vanessa, or Chuck craning their necks to see the monitors located on top of their anesthesia machines,²³ or bending over a patient for intubation, or lifting patients while transferring them to and from the OR table. They also do a tremendous amount of walking on their job: up and down the hall to and from the recovery room or during pre-op rounds from one floor to another. Guy attests to the fact of how physical the job is:

A lot of times, if you're in the OB department, you have to do things quickly. Sometimes you have heavy patients you have to move and change positions on quickly. We have gastric bypass patients who range from 300-600 pounds that you're having to move and deal with as far as intubations and moving them. Sometimes [we have] big back patients that you have to turn them over to put them to sleep, if they're doing what we call a 360—operate on one side and you turn them over and they have to operate on the other side. So, you try to keep all your lines straight and get them moved without injuring the patient. It's a little bit of work.

Not only is their job mentally challenging, but it is physically taxing as well. The nurse anesthetists identified six major occupational-related stressors, which are summarized in Table 5.2 on the subsequent page. A brief mention of the stressors the participants are encountering in their personal lives follow.

²³ Refer to Appendix F. Note how high the monitors sit on top of the anesthesia machine. Sitting or standing, this causes the anesthetists to crane their necks in order to look at the equipment that monitors the patient's vital signs and electrical activity of the heart.

Table 5.2. Summary of Clinical-practice Stressors

Perceived Stressor	Summary Description
Client-care related	Includes patient complications, death, and specific surgical cases (e.g., preemies).
Administrative	Involves heavy surgical cases and paperwork, schedule uncertainty, pressure to turnover rooms, staffing issues, and extraneous-type factors.
Interpersonal relationships	CRNA vs. MDA, other CRNAs, or surgeons; involves conflict relating to administrative stressors.
Inadequate preparation for surgery	CRNAs feel time crunch to prepare for surgery. If peers derelict with duties, that causes surgical set-backs.
Environment	OR is cold, cramped, and windowless housing diverse personalities.
Physical	Walking, bending, moving patients, and craning necks are physically challenging.

Personal Stressors

Nurse anesthetists are just like other people when it comes to life outside the operating room; they encounter issues and experiences no different from anyone else. Nineteen out of the 20 (95%) CRNAs stated they were encountering personal stressors outside their work milieu. Some of the stressors include: health issues, paying bills, moving from another part of the country, raising a family, a death or illness in the family, a divorce, identity theft, and financial concerns about retirement funds. When asked what were their thoughts at the termination of a work shift, the anesthetists stated that they were already thinking about their “second job” or what they needed to do after work. Mary Ann states, “You always have stress outside of anesthesia.” Guy comments: “There just seems like there’s only so much time to go around [and] not enough time to do everything. The physical problems add a little extra stress . . . I recently broke my hip out biking.” Irene says that her family keeps her busy: “Having two active children, a husband, two dogs, and an extended family are all stressors [she] deals with daily.” Furthermore, it is not uncommon that the anesthetists are encountering stressors outside of the work place. Still, the focus remains on the work-related stressors. As Pete²⁴ said:

²⁴ Refer to Appendix H.

They [the CRNAs] are really responsible for your life. Once you put your body on this bed, she's responsible for your life, not that doctor . . . I understand they're under stress because I've worked right with them 25 years. I know what happens.

This previous lengthy discussion of work-related stress begs the question: how do the anesthetists cope? This dissertation will now address that inquiry.

Research Question #3:

What are their coping strategies related to the perceived stressors?

As related to the second research question, the anesthetists certainly encounter notable stressors, and “unless CRNAs have significant coping skills firmly in place, any of these stressors may cause them to deteriorate physically, emotionally, or professionally” (Booth, 1998, p. 51). Fortunately, the 20 participants do possess several coping strategies designed to counteract the job-related stressors. Nine means in which the anesthetists deal with their perceived work-related stressors are discussed below.

Focusing on the Task at Hand—the Patient

Anesthesia requires that CRNAs remain task-focused. No matter what the situation in OR, the CRNAs tend to control their responses by focusing on the patient. Not doing so could jeopardize the client's well being. Fourteen (70%) interviewees stated that when they encounter a stressor, they remain calm. Mary Ann reports:

Most anesthetists are expected to deal with stress. We handle things very coolly. I don't think a lot of us go to pieces. If you start anesthesia school and you get in it, you either know you can handle it or you can't handle the stress. If you can't handle the stress, you just leave.

For instance, if the anesthetists encounter a patient complication (e.g., laryngospasm), an already perceived stressor, the anesthetists believe that it is part of their responsibility to stay calm and handle that stressor professionally. This behavior is accomplished by placing all mental and physical energies into the existing task and working with the rest of the OR team. The OR staff notice the calm behavior of the anesthetists. Barbara²⁵ says, “CRNAs are calm, cool, and collected. Anesthesia can pull those kids out of the weeds pretty quickly. It's impressive to watch them. They're very skilled. I haven't seen one of them frazzled.” Constance²⁶ continues

²⁵ See Appendix H.

²⁶ Refer to Appendix H.

along Barbara's train of thought: "We don't get into trouble a lot, but when we do, they [the CRNAs] are, without exception, equal to the situation." Whether or not the anesthetists are *feeling* calm is beside the point. They must demonstrate to the rest of the OR team that they are *acting* calmly. Zsa Zsa worded it best when she said about stress in anesthesia school: "I think as a student you're always acutely aware that you were being observed for your reaction to stress [and] how you handle stressful situations. So, you become pretty adept at hiding it, if not handling it." Therefore, the anesthetists transfer from anesthesia school to their practice ways they learned to deal with occupational stress; one method is to look and act pulled together. Interestingly, when I asked the anesthetists how they usually felt during a stressful situation, their responses would be, "I don't feel," or "I feel tense, but I hide it." At this time, I would like to remind the reader of the observation of the BMT procedure when the surgeon could not find the right tube and started cursing. The staff acted calmly towards his conduct the entire time as evidenced by carrying on with their duties. In fact, one of the Southeastern anesthetists, that I did not interview, stated that their job looks easy because they stay so calm.

Just Deal With It

Nike's slogan is "Just Do It;" the nurse anesthetists' slogan related to work stress is "Just Deal With It." In fact, a little less than half (n=8) of the anesthetists stated they have the mindset of "get over it" (i.e., the stress). For example, when the anesthetists have to do a certain case that tends to cause more stress than the other cases (i.e., critical care neonatal babies), they respond with "I just deal with it," or "I get over it." This attitude, which has become second nature to them over the years, was mainly learned in nursing and anesthesia training. As Marlene said: "I think frequently we don't put a finger on actually how stress is affecting us. Most of us have just been taught to suck it up and go on—not have any alternative way to deal with it." One day while observing Irene, I noted this phenomenon on OR:

7-8-02	1100 Hours	Day 5 of Observations
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The surgeon has been using sexual connotations in his conversation with the RN, techs, and CRNAs. The staff remains task-focused. The surgeon continues with the conversation, but the others act like it is water off a duck's back.

This coping mechanism is automatic to the anesthetists because they have been dealing with the job stressors for years. Guy states, “I guess you get used to dealing with the stresses over a period of time. You just go into automatic function. You know what you have to do in certain situations, and you proceed to do that.” This attitude probably relates to the number of years the participants have been practicing anesthesia, which range from 10 to 41 years. Fifty-percent of the participants have practiced between 21-30 years. Furthermore, if the participant sample was less experienced, their frame of mind might be different compared to the CRNAs in this research.

Internal Reflection

Six (30%) of the anesthetists revealed in their interviews that they practice internal reflection after feeling stressed. This internal reflection usually results from encountering the death or complication of a patient, or after being criticized by other staff members, especially a physician or CRNA. Internal reflection means that the anesthetists review their performance related to the moment in question. Chuck, for instance, revealed that he handled the death of a baby by reviewing what happened and determining what he did that might have affected the outcome. Then, he accepts it and goes on. Clarissa approaches her stressors a little differently from Chuck when practicing internal reflection:

I will beat myself up for about three days. It takes me about that long to think through it and deal with it. I’m very hard on myself—too much so When I say I’m hard on myself for about three days, by that, I mean introspection and thinking to myself maybe I didn’t deal with something the best I could have. How could I have dealt with that better in that regard?

In her interview, Vanessa also states she works through the situation yet “re-examines the circumstances and tries to learn from events.” Therefore, the anesthetists employ internal reflection via a variety of tactics that suits their needs. Mainly this coping technique is used as a means of self-assurance and professional development.

Spiritual Beliefs and Prayer

To a lesser degree but important nonetheless, five participants specifically mentioned that their spiritual beliefs and prayer help them cope with occupational stressors. Lori affirmed that she has strong Christian values, and when she feels herself getting angry regarding interpersonal conflicts, she steps aside and prays. Marilyn says she also uses prayer to cope:

When I get up every morning, I just say a little prayer that my guardian angel is with me all day and that I have the ability to think and make correct decisions. I've done that since I got out of anesthesia school. So, that's how I start my day, and my guardian angel hasn't deserted me yet.

Patient deaths or complications, two popular stressors identified by the participants, can take a toll on the nurse anesthetists if coping mechanisms are not adopted. Clarissa says that even while she is terminating a client's oxygen supply, she maintains a spiritual mentality by praying to "the Lord that [He] would receive this person's soul into [His] presence and to be with the family." Having a spiritual outlook related to occupational stressors gives the nurse anesthetists a sense of hope and thus, urges them on to continue within their practice. The spiritual coping mechanisms reinforce a positive attitude for the anesthetists.

Wong, Leung, So, and Lam (2001) examined the sources of stress on mental health nurses in Hong Kong. They also wanted to explore the functions of their coping techniques in order to measure the subject's stress levels. One of their hypotheses was that when confronted with high levels of stress, nurses who use positive instead of negative strategies would have better mental health outcomes. Interestingly, surgical and ICU nurses were among the 269 nurses investigated. Usually, CRNAs get their nursing experience in ICU before enrolling in anesthesia training since schools require experience in that arena. Anyway, Wong et al. discovered that direct action coping strategies were used most often, and positive thinking was the second most popular choice of coping mechanisms. "The findings of this study supported the hypothesis that the more positive coping strategies used, particularly positive thinking and help-seeking strategies, the better the mental health of nurses, in terms of less anxiety, depression, and social dysfunction" (Wong et al., 2001, p. 15).

Internalization

Five (25%) of the anesthetists mentioned that they internalize, initially, their perceived stressors—at least until a more appropriate time presents itself to deal with those stressors. Priding themselves on professionalism, the CRNAs cope with immediate job-related stressors by "just dealing with it" as practiced by internalization. Hilda, Marlene, Clarissa, Mayo, and Jody all confessed that this coping mechanism is what gets them through the stressors in the short-term. What about the long-term, though? Initially, internalization is effective, but it does not meet the therapeutic needs of the anesthetists. In fact, it can become detrimental for those

relying on it. Mayo said, “I more or less internalized. I guess that’s why it’s made me so sick. I tried to maintain a calmness.” Therefore, one of two scenarios happens after a CRNA internalizes: a) they continue to internalize and become burnout and physically ill, just as in Mayo’s situation (and as Selye hypothesized); or b) they progress to another, more apparent, coping mechanism: verbalization. Darcy²⁷ states, “There are times, of course, when that [stress] builds and builds, and they can be verbal . . . to those around them.”

Verbalization

Utilizing verbalization as a coping mechanism is preferred among the anesthetists, with 12 (60%) attesting to the fact. Verbalization assumes various forms. One method of verbalization involves talking about the stressors, either with co-workers, management, or family and friends. Mark, Laura, and Holly confess that they used to get angry with others, but as they have become more experienced and mature, they realize that anger is not the most efficacious way to deal with stress. Whereas, Lori reports that she talks over her work-related stressors with “her husband until nauseated.” Other forms of verbalization include crying, albeit very rare among the anesthetists. Laura, for example, reported that she has cried only twice in her 24-year career. Moreover, extreme stressful work situations, such as the death of a patient, might elicit tears.

During observations, I noted that the male anesthetists are freer with their use of language. First, they are more open to curse compared to the female CRNAs. Secondly, they are more apt to speak their mind about their fellow CRNAs. The following scene occurs immediately after Zack taught Jane about the LMA insertion on a pediatric patient.

7-3-02 1340 Hours Day 3 of Observations

Chuck relieves Jane for a break after she said she had not had one but needs one. Mark walks in to chat with Chuck. Mark says that he saw Jane just now. Chuck replies, “It sounds as if she needed a break.” Then Chuck vocally impersonates Jane, “She said she hadn’t had one [a break], but that she needs to go pee.”

Consequently, verbalization, no matter what the form, is a popular way for anesthetists to ventilate about the stressors they encounter on the job. This method of coping makes sense

²⁷ Refer to Appendix H.

related to the literature. Perez and Perez (1999) studied 1,504 CRNA students about their perception of student stress of anesthesia programs and the use of stress management programs and open-door policies extant in anesthesia schools. “Ventilation of frustrations to fellow classmates and reliance on personal support systems were the most frequently used methods of coping” for 98% of the subjects (Perez & Perez, 1999, p. 84). It is apparent that verbalization is an avenue of coping with stressors for student-CRNAs, which is then carried into their practice, as supported by my research findings.

Asking For Help

Nurse anesthetists realize their limitations and work within those boundaries. If a situation arises that they are unsure about, the participants are quick to ask for help from their co-workers.

7-5-02 Day 3 of Observations

0727 I am down at the MRI room with Vanessa.

0740 The radiologist is helping the CRNA set-up for the MRI. Vanessa says, “They’re [the anesthesia machines] are relatively new at the hospital.” The CRNA moves around to the machine to set-up, reading the monitors. She’s not afraid to ask for help—this environment is unfamiliar. It’s the first MRI she’s done at [Southeastern Pediatric Hospital], but she has done some before at another hospital.

Since Vanessa was unfamiliar with the MRI anesthesia machine, she did not hesitate to ask the radiologist for assistance. Although independently minded and capable, the CRNAs do not have any misgivings about calling for an MD when feeling stressed from a particular surgical circumstance. Lori states that she is “not shy about calling for help—from an anesthesiologist [or] another CRNA.” It seems that when a patient-related or work relationship stressor is shared with peers, the greater the ability to cope.

Use of Humor

The use of humor was observed as a tool to cope with job-related stressors more so than it was mentioned in the interviews. The nurse anesthetists employ humorous comments and jokes to help them get through a stressful situation or day. For example, one day Jane was told that she would have three more extra cases to do that day (i.e., scheduling stress). She laughed while replying, “Well, I can only do one at a time.” At a separate event, I observed that Mark

came into Jane's OR and good-naturedly teased her about two additional cases coming into her room: Jane laughed. Therefore, humor and laughing provide an outlet for work stressors, especially those related to workload, production pressure, and scheduling.

A second type of humor is also prevalent among the anesthetists that I observed on several occasions: the use of sarcasm. Their type of sarcasm is not caustic, but it is totally honest. This particular use of humor was most apparent when directed at me:

7-5-02 Day 4 of Observations

0615 I arrive on-site at the hospital

0640 The CRNAs are discussing in the hall with two MDAs about a patient regarding a BMT and how to best handle the case. A CRNA offers to help another CRNA till her cases start. An older CRNA approaches me [one I did not interview] as I was taking notes and says, like a drill sergeant, "Don't just stand around. Get to work."

I later decided to use humor with this CRNA (she seemed rough around the edges). The next morning in the hall, I told her I was now ready to intubate my first patient. She actually cracked a smile.

The most popular lines I heard, without even soliciting advice or opinion, during my research tenure at Southeastern Pediatric Hospital were: "There's no stress around here," or "The nurse anesthetists don't have any stress." Technicians, RNs, and the physicians, especially, would say that. There were a couple of instances when I heard that from the anesthetists, as well.

7-8-02 Day 5 of Observations

0818 The patient is brought in. It seems like the staff like younger patients and talk to them using "kid" language.

0823 The tech is getting the equipment ready and starts cursing because a piece is missing. Irene comments on the patient's rotten teeth: "Isn't it disgusting. He's going home with the same rotten teeth."

0835 The surgeon begins the operation. He says, “There’s no stress in his room.” Irene giggles. Irene says it does matter which surgeon is in the room. The surgeon tells me I should go to a trauma center to see stress. Irene says sarcastically, “There’s no stress in here.”

Derek recalls his sardonic sense of humor:

I remember I’ve worked with anesthesiologists in the past who personified this attitude [of blame] that I’ve talked about, and that is, they’ll say, “What did you give them [the patient]?” Now, my standard response is, “A toxic dose.” I used to get defensive and try, “Well, I did this”—give a very reasonable answer. You were trying to be defensive. Now I just go, “I killed them.” They look at me, and they realize the way they just asked me the question would put somebody on the defensive. I just go on the offense with it now.

Based mainly upon observations, the anesthesiologists use humor as a means of coping with stress. More importantly, the flavor of that sense of humor is what is of interest, and the predominant flavor is sarcasm. Perhaps the anesthesiologists are not aware of its prevalent use as I am, but observing through fresh eyes, the sarcasm was very apparent. I recall how “quick on your toes” a person has to be when working in the operating room. It is almost expected for anesthesiologists and the other staff members to have the next best comeback line. Frankly, I found that emotionally tiring. It seems as if the coping mechanism itself could qualify as a stressor! For instance, I would frequently get teased about being a TV investigative reporter going under cover at the hospital, looking for skeletons to expose. After hearing that more times than I could count, I finally told everybody that it took them a long time to recognize me as a famous reporter from Dateline, and that I was disappointed they did not recognize me sooner. Hence, the use of humor relieves occupational stress twofold: 1) it genuinely makes people laugh; and 2) it is a means of verbalizing concerns in a more serious manner without being totally mordant or brusque with others. Sarcasm is an acceptable means to voice concerns because others see (and use) it as humor and not complaining per se.

Personal Hobbies

All the CRNAs participate in hobbies outside of work, and what a variety! Their hobbies include: gardening, golfing, reading, sewing, fishing, boating, exercise (of all kinds), running, church, music, travel, family, animals/pets, shopping, eating, photography, scrap-booking, and antiquing. The list goes on! Of interest, 18 (90%) of them report that their particular hobbies

help them when they are feeling stressed. Chuck and Clarissa emphatically stated that they do those activities because of enjoyment, not to reduce on the amount of stress. When feeling stressed, these two anesthetists report sitting in their recliners or laying on the couch and “vegging out.”

All of the anesthetists mentioned that they participate in some sort of outdoor activity, whether that is gardening, horseback riding, water sports (e.g., skiing, wakee boarding boating), camping, fishing, and bicycling. Long and Pfifferling (1986) write that activities that promote the well-being of a CRNA include a regular relaxation schedule, mind and body stretching, personal credo or religious philosophy, and comfortable alone-time. From what the anesthetists reported, it sounds as if they are doing as Long and Pfifferling suggest. In fact, I hypothesize that the anesthetists enjoy outdoor activities because of the OR environment they work in all day. The OR is cramped, windowless, cold, and full of sickness and conflict; thus, the anesthetists want to stay outdoors during their spare time. This point will be discussed in more detail later.

The various coping mechanisms that CRNAs employ to combat work-related stress have been discussed. Of additional interest is their view regarding the use of in-services to deal with stressors found on the job. When asked in the interview whether they think their employer should offer an in-service on stress-reduction measures, half of them said no; half of them said yes. The ones who said no felt “It was a hypocritical waste of time;” “That the management didn’t understand their stress;” or “That the management ignores [their] problems.” In addition, they also said, “I’ve heard all that stuff before;” or “I de-stress after work with my buddies.” Those who believe an in-service would be helpful said, “For some it would be helpful;” “That it would be helpful if enforced or done on a continual basis;” or “It wouldn’t hurt.” Perhaps Lori summed it up best when she said about her employer holding an in-service on stress-reduction: “If they just addressed the causes of stress, it would be much better than having an in-service telling us how to relax after they stress us.” Table 5.3 provided on the following page summarizes the coping tactics CRNAs employ to deal with stressors.

Table 5.3. Summary of Coping Strategies

Coping Strategies	Summary Description
Focusing on the task at hand	Remains task- and patient-focused and exhibits a composed demeanor.
Dealing with it	Stress considered part of the job; deals with it professionally.
Internal reflection	Reflecting on clinical performance; used for professional development and affirmation.
Spiritual beliefs and prayer	Incorporation of Christian values and prayer into anesthesia practice.
Internalize	Short-term means to deal with job stressors, yet detrimental if used over the long-term.
Verbalization	Includes mainly talking, getting angry, and rarely crying.
Asking for help	Used if feeling overwhelmed or when unfamiliar with equipment or a technique.
Use of humor	Includes telling jokes, teasing, making funny comments, and use of sarcasm.
Personal hobbies	Wide-variety of pastimes used, but not used by all.

Research Question #4:

What is the relationship between CRNA job stress and interpersonal work connections?

I think the participants would want this next piece to begin on a positive note since 14 (70%) of them stated if they had to do all over again, they would have still chosen anesthesia as a profession.

A Team Approach

While making observations at the Southeastern Pediatric Hospital, I instantaneously noticed the teamwork that was in place on behalf of the patients. The splenectomy case is the best example recorded in my field notes of teamwork:

7-5-02 Day 4 of Observations: the splenectomy case

0900 Preparation for the splenectomy case begins . . . Labs are being taken; people are moving around, and making phone calls. The MDA is in and out. Set-up is taking a while, and the staff is rushing around. The surgeon is helping even! The bed is raised and tilted. Lights on. Jane put the patient on a ventilator. Space is a trade-off at this point: people are changing places.

The tech is out of breath from rushing around. Two MD students are in and out, doing what the surgeon says. The RN says, “Excuse me” to various persons in the room. The RN is helping puts gowns on the surgeons: she tries to keep from touching the sterile gowns with the rest of her body. One of the TV monitors is moved closer for the surgeons to see. Supplies are placed on the patient at the lower end of the OR table. The OR tech moves back and forth between the sterile table and surgeon #1. Suction equipment is hooked up next to the IV pole. Space is centralized at one point: the OR table.

0932 The temperature is colder in the OR room. There is an interaction of “actor and acts in space.” The video monitor is on: I see the enlarged spleen. Amazing! Two more med students walk in. Space is important related to the goal of a successful splenectomy. Space must be convenient and accommodating. There is human touch as instruments are exchanged. The CRNA is confined among the anesthesia equipment, OR table, IV pole, and wall. She sits in a chair with little room to move; however, she has ready access to the patient’s head. The patient’s head is covered with a drape. Jane goes under the drape and checks out her nerve stimulator at the patient’s temple. The surgeon tells the RN he’s ready to tilt the patient. The RN operates the bed remote, tilting the bed to the right and down. She asks if that is okay. Now, this space looks complicated with all the equipment and people involved! Looking at the video, the patient’s space is confined [inside] and the surgeon is working within a small area. The RN finally got a chance to sit down. I just got the CRNA 500ml of LR in the warmer for her . . . Two med students and myself are observing.

1000 Jane stands-up and puts a fresh bag of LR on the IV pole . . . The MD is helping Surgeon #1 on the procedure via verbal instruction. Surgeon #1 is not new to being a surgeon. Surgeon #2 holds for Surgeon #1 the body parts so Surgeon #1 can get to the spleen easier . . . The feelings of the actors are professional and calm.

1015 I have sat down next to the RNs desk. Another MD just walked in, introduced himself to me and shook my hand. He’s looking at the monitor closest to the nurse’s station. Two surgeons are manipulating the tools within close proximity of each other. The MD that walked in is standing between surgeon #2 and the suction machine.

1020 Another MD walks in: 11 people are in the room now. Jane cranes her neck to see the video behind surgeon #1. The spleen is about to be removed after being put in a plastic bag. All eyes are on the video! Wires are everywhere and take up space on the floor. One MD left the room and another answers the phone. All 3 surgeons are working together to “bag” the spleen while still inside the body.

1038 The patient is tilted to the reverse-Trendelenburg (e.g., head-up) position to facilitate the spleen sliding into the bag. Jane was just relieved by Vanessa. Vanessa had to step over the cords and knocked over a spray bottle to get to her workspace. Nine people are in OR now.

1045 Space is precious and valuable for all actors. There is occasional frustration with “bagging” the spleen (e.g., sighs and cursing by surgeon #1). . .

1130 The surgeons are still trying the bag the spleen. The RN tilts the patient to the left. There are feelings of frustration due to not bagging the spleen. Surgeon #1 curses. . .

1145 Jane relieved by male CRNA. All 3 surgeons are hovered over the patient in a triangle shape. The tech is at the head of the patient.

1155 The spleen is out. Surgeon #3 steps away and removes gown. Surgeon #1 steps away and changes gloves and gown. Patient is flattened and raised. Surgeons #1 and #2 remain on the case.

1208 Jane returns and gets a report from the male CRNA. He states he had to put a foam pad over the patient's head due to the surgeons leaning on it. The patient's headspace was compromised. CRNAs are very protective of the patient's head intra-op.

1220 Nine people are in OR now. When staff uses the phone, they step out into the hall. RN and tech are counting instruments.

1244 Surgery is over. Jane reports to the surgeon patient's intake and output and estimated blood loss during surgery. The RN and tech clean the room. They think they did "good."

1300 Jane gives verbal report to the recovery room nurse.

It seemed as if the actors worked in perfect synchrony to bring about a good patient outcome. Everyone did their part, and as a result, the surgery was a success with minimal stressful feelings (Although there was some cursing during the procedure related to difficulty bagging the spleen). I clearly remember the mood of the operating room that day: it was one of teaching, learning and solidarity.

The interviews with the CRNAs confirmed what I witnessed in the OR that day. The anesthesiologists mentioned in the interviews that if the OR personnel begins a case with a team approach mentality, then the stress is greatly reduced and the work becomes worthwhile and pleasurable. Sandra stresses: "If you have residents and circulating nurses and scrub people who do their job, it's very rewarding, relaxing, and fun work. If everybody does their job like they're supposed to, it's enjoyable." Recall the stress Marilyn encountered during an emergency case involving the ruptured spleen in a young man:

The minute I would turn the anesthesia agent up, his blood pressure would bottom out. So, you're giving lots of versed along the way so he doesn't remember, but you've got this balance. You know you have a blood pressure of 50—that's not acceptable. What am I going to do to have this patient survive but yet not remember what's going on?

Marilyn went on to remember that the OR staff working together helped her get through what she perceived as a very stressful case, and at the end of the case, they gave each other “high five’s.” Interdisciplinary collaboration and OR staff performing to their capabilities not only reduce the stressors of the workload and cases, but it can enhance the job. As Molly²⁸ reiterates: “We all have to be a team in order to get those cases done.” A research study conducted by Gaskey (1985) found that 99% operating room nurses described the CRNAs as “extremely competent and vital members of the surgical team” (p. 167).

Production Pressure, Workload Stress and Interpersonal Relationships

As stated earlier in this chapter, production pressure and workload are major stressors the CRNAs identify with. In addition, the anesthetists recognize that the RNs and surgical technicians are also under the same pressures to turnover rooms and meet patient quotas. Relations between these two groups and the CRNAs are strained when the technicians and nurses, in particular, start to assume the roles and responsibilities of the advanced practice nurse in order to sustain productivity levels. Mayo remembers, when she was practicing, that the RNs and surgical technicians would remove anesthesia equipment from the patients before the anesthetists were ready to escort the clients to the recovery room. Holly also states that her co-workers would “frequently pull a patient off the table before they’re even awake and extubated.” The participants view the techs and nurses as over-stepping their boundaries into their turf because the techs and RNs are not trained in the same capacity as the CRNAs. Hilda and Lynn attribute this over-stepping of behavior to “professionally jealousy.” Anesthesia is seen as the surgical wildcard because the client turnover rate depends upon the response of the patients to the anesthesia treatment. Therefore, the CRNAs must often advocate for the patient--more so than the techs or nurses can, which leads to professional jealousy. Irene says that “some nurses are easier to work with; some are them are not; some of them want control of the room; . . . some of them want things done their way.” In fact, 50% of the anesthetists state in their interviews that they have either noticed the RNs assuming roles they should not or that relations between the two departments are strained due to the workload and production pressures. Hamric et al. (1996) record that

The division between nurse anesthesia and nursing service has occurred in many practice settings in which CRNAs are responsible to the hospital rather than to the nursing

²⁸ Refer to Appendix H.

administration. With time, the breach between nursing and nurse anesthesia has narrowed considerably. (p. 441).

Great strides have been made to close the gap between nursing and anesthesia; however, the continual bombardment of rapid and excessive patient turnover continues to cause a rift between the two groups. Kendrick (2000) believes that “problems with interpersonal relationships can either cause stress on the job or be a result of job stress” (p. 117). Data in this research lead me to believe that the latter is true: the heavy workload and rapid turnover rate creates dilemmas within interpersonal work connections—more specifically, between the CRNAs and nursing and technical staff.

Politics and Workload

As mentioned earlier, relationships (and even alliances) that the CRNAs form with other staff persons can generally be stressful for the anesthetists. As described by the participants, the male CRNAs might buddy up to the male doctors or vice versa (i.e., The Good Old Boys Club); or a female anesthetist may bat her eyelashes or another may complain about being too old to do cases just to get an easier work schedule. Six (30%) of the participants said that politics is involved in how the division of labor is distributed among their anesthesia group. They are disturbed with how politics has interfered with the workload assignments. Vanessa does acknowledge the presence of politics in healthcare: “There’s politics within the operating room [among] the nursing staff, and there’s politics [among] the surgeons, and then there’s administrative politics.” The participants are distressed that some of their co-workers are willing to participate in the political game just to get a lighter workload and schedule. As a result, the ones who cannot or will not play this game are assigned tougher and longer cases, thus escalating the stressors they already feel from the original workload. Furthermore, the unwillingness of management (i.e., MDAs) to address the concerns about the workload and division of labor only intensifies the stressors.

Inadequate Management and Staff Conflicts

It is essential to remind the reader that the historical association between anesthetists and anesthesiologists is, to say the least, unsteady. There is a fundamental adversarial relationship between the two groups. With that said, one-third (n=6) of anesthetists thought that there was inadequate supervision on the part of the management staff, especially from the MDAs.

Incidentally, these are not the exact same six that voiced concerns about politics as it relates to workload assignments.

Generally, the people who are head of the department are doctors, and they are not good with management-type issues. They may be excellent doctors, but as far as interpersonal relations, sometimes they're the worst at it because it's a control factor. (Clarissa).

This lack of supervision causes staff conflict (i.e., perceived CRNA stressor) to thrive because departmental problems are not addressed. Hilda emphatically states: "It was a very heavy workload, most of the time. You had very little support from the anesthesiologist, if any. Any problems that came up, you'd better pretty well solve them yourself." However, Derek says, "It's very difficult to talk about the problem with the problem person. People do not want to be told they're the problem." Therefore, the anesthesiologists must make a choice: a) continue on with their present course of working the heavier cases all in the name of politics, or b) voice their concerns to the management or administration of the hospital. Choice 'a' could potentially lead to mental burnout and physical deterioration if no effective coping strategies are in place, as evidenced by Mayo's testimony. However, choice 'b' is probably the more popular choice given that CRNAs cope with their stressors via verbalization. When asked if they could approach management about problems or concerns in the department, seven (36%) gave a flat-out, "No." Of the thirteen (65%) that said they could approach management with concerns, four (31%) stated that the management would not listen or do anything about their concerns. Therefore, 45% (n=9) of the total participants felt they could approach management with a problem and have it addressed; whereas, 55% (n=11) said voicing concerns is fruitless either because the management does not have an open-door policy or they turn a deaf ear to complaints.

So, I decided to analyze which of the participants felt they could go to management and have their voice heard. Here is the breakdown of the nine that responded in the affirmative: two males who work at different facilities; four females and one male who practice for the same organization; and two females who work for the same hospital but in different practice settings. Thus, more than half (n=5) of those nine work for the same institution, which leads me to conjecture that the administration at a particular institution is exceptional in their understanding of staff troubles. In other words, the management's approachability about concerns is institution-dependent. Interestingly, the three anesthesiologists responsible for administrative duties

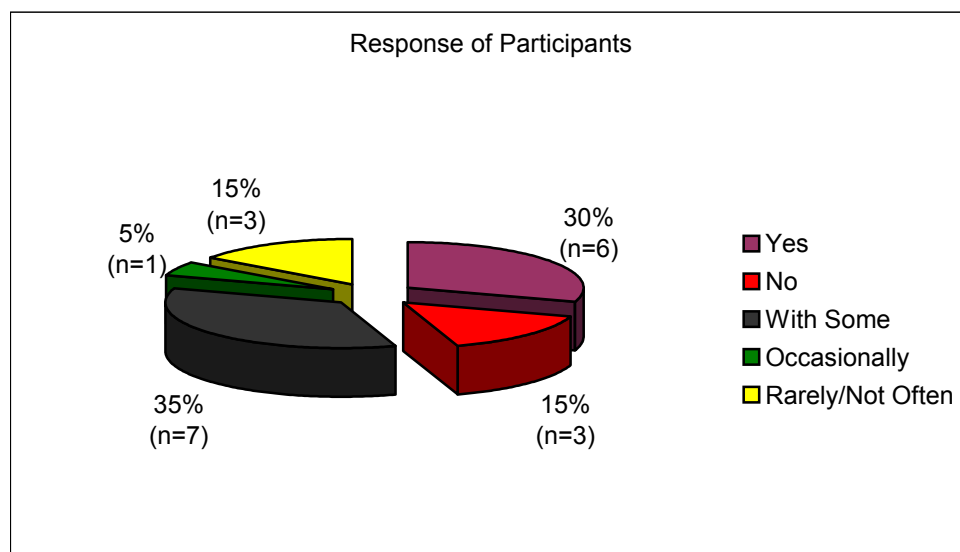
felt that they could approach upper-level management or that their peers could approach them with concerns.

What about those who believed they could not approach management, or if they did, their concerns were not regarded? Here is the breakdown of the thirteen that responded in like manner: two females who practice at the same hospital; three females and one male who work for the same facility; two women who are employed at the same hospital; and three females who formally work for the same facility. Six of the 13 (46%) participants work for the same umbrella organization but at different facility locations. However, two CRNAs stated that verbalization of concerns to the management might even make a situation worse because they would then be labeled as rabble-rousers. To conclude, the attitude of the administration to deal with work issues relates either positively or negatively to staff conflict. One institution addresses concerns forthrightly, thus keeping staff conflict (i.e., a perceived CRNA stressor) to a minimum. Whereas another institution, that has various work sites located in the south, does not make a habit of tackling employee troubles, which enhances the staff conflicts encountered on the job.

Socializing with Peers and Work Relationships

After discussing the aforesaid results to the last research question, one might be curious to learn whether or not the nurse anesthetists socialize outside of work with their peers (i.e., MDAs, RNs, OR techs, or other CRNAs). Figure 5.1 delineates in pie graph form the socialization predispositions of the anesthetists.

Figure 5.1. Socialization Tendencies of CRNAs



Six (30%) anesthetists acknowledged that they do try to make a point of socializing with their peers outside of work, especially at hospital functions. They feel it is important to show support for their facility. In addition, these same participants assemble with other CRNAs to attend a play, baby or bridal shower, go to the beach for a weekend, or out to dinner. Mary Ann says that she “thinks spending time together outside of work reduces conflicts that you’ll have at work.” Jim²⁹, the surgeon, says that he socializes with CRNAs at work because he “considers them friends.” One person (5%) stated she occasionally mingles with her co-workers outside of the hospital environment as her schedule allows.

Fifteen-percent (n=3) stated they do not socialize outside of work at all with hospital employees, while another 15% (n=3) said they rarely attend gatherings with their co-workers. These six participants would rather spend time with their families, especially those that have young children. Mark said each CRNA that he works with leads a different life outside of the hospital.

Interestingly, seven (35%) of the anesthetists said they socialize with *some* of their peers after work. These seven are particular about those in which they chose to spend extra time with. Furthermore, these same seven desire friendship diversity; thus, they tend to socialize at church or with neighbors. Simply, they do not want to “talk shop” outside of the hospital confines. Clarissa explains:

I have many professional friends. I don’t generally hang out with a lot of nurse anesthetists because I see them at work. I have one or two close friends in anesthesia that I do see frequently . . . Normally, the people I socialize with are not people I work with, and that’s intentional . . . I need some diversity . . . I don’t want to be just hanging around nursing and nurse anesthesia people all the time. I want to hang out with people of different backgrounds and cultures and occupations.

The nurse anesthetists gave personal reasons for socializing or not socializing with their peers outside of work. Is there a pattern as to who will socialize and who will not? Is there a relationship between the socialization tendencies found in the interpersonal work connections and job stress? Three of the seven who socialize with their peers outside of work, even occasionally, used to work together. However, there are not any distinct patterns: the data does not lean either way about this subject. More research might illuminate this particular topic. On

²⁹ See Appendix H.

the other hand, there is one interesting point. Two of the male CRNAs said they do not socialize outside of work with their peers. At first glance, it seems that the male anesthetists would socialize with the MDs and other male co-workers outside of work due to the Good Old Boys Club; however, club membership might just be a phenomenon reserved for the hospital atmosphere. Again, more research is warranted, especially since my investigation did not seek to study the socialization affinities of nurse anesthetists.

All four of the research questions have been answered. A dialogue about the emerging themes is now apposite, as presented at the beginning of Chapter Six.

Chapter 6
DISCUSSION:
FINDINGS, RECOMMENDATIONS, AND
CONCLUSIONS

“Anesthesia is a changing field--everyday. That’s one reason it’s more challenging. . . It’s always evolving. We’re always having to learn new things, and that’s one of the things that keeps you still interested in it.”—Jody, CRNA

Accurately depicting the experiences of the nurse anesthetists related to occupational stress is a challenge; however, my researcher responsibilities extend beyond that. Sandelowski and Barroso (2002) state that qualitative research also entails making the “findings discernible to the diverse audiences for whom they are intended, including researchers and practitioners” (p. 219). Anesthesia certainly has broad appeal, especially related to nursing, medicine, university settings, pharmaceutical companies, patients, and the public and media. Therefore, a discussion of the findings in thematic form is apropos, followed by a presentation of the concept map based upon research findings and the thematic discussion. Afterward, drawing conclusions and mentioning recommendations will ensue.

Findings: A Thematic Discussion

Six major themes surfaced relating to the research questions.

1. The role of being an attentive, reliable co-worker alleviates the antagonism found within OR relationships.

As identified in Chapter Five, a perceived stressor for the anesthetists is conflict with other staff members. If the CRNAs have a team-member approach regarding patient care, conflict with peers is not as prevalent. The literature supports this theme. Recall Gaskey’s (1985) study of 79 OR nurses and their views of nurse anesthetists. The study sought to identify factors that might shape OR nurses opinions about CRNAs. Gaskey (1985) found that 99% (n=78) agreed with the survey statement that CRNAs are vital to the surgical team. In addition, the subjects described CRNAs as “assertive, personable, cautious, methodical, sincere, and sociable,” as well as able to accept input from other staff persons (p. 165). Consequently, if the anesthetists’ welcome comments from other staff and are attentive to patient care, then the co-workers view them as valuable. This, in turn, helps to alleviate conflict among peers.

Sometimes work conflict is unavoidable. As a result, the anesthetists are creative when preventing interpersonal conflict at work. Derek has a unique approach when considering his peers. He brings a compact stereo to work and incorporates music into the OR milieu. Derek testifies that his music “soothes most savage beasts,” especially James Taylor-type songs. When selecting melodies to play in the OR, Derek considers the surgeon’s tastes, as well as the rest of the OR staff. He notices that his co-workers sense his attentiveness regarding music selection and that they appreciate it.

2. Maintaining open lines of communication is an effective way to address concerns and prevent staff conflict.

Work-related stress can inhibit communication among employees. Kendrick (2000) conducted a study that compared and contrasted stress levels between 66 student and 15 practicing CRNAs. Findings indicate that there is a discrepancy in communication between CRNAs with varying stress levels. Thus, stress affects communication negatively. Also, these findings substantiate the notion that CRNAs with high stress levels communicate less efficaciously (Kendrick). My participants realize that maintaining open lines of communication addresses concerns more successfully. In fact, 14 (70%) of the participants stated that they prefer to communicate with their co-workers in order to prevent an incident from happening, if at all possible. Likewise, the anesthetists feel that they will not be labeled as a troublemaker if issues are dealt with before rather than after-the-fact. An example that best illustrates this idea is when Sandra talks about avoiding conflict with a physician over patient treatment:

If a patient is really very, very sick, I might go to the anesthesiologist and say, “How do you want to handle this?” This is your best plan before you start the case, and [I] say, “What do you think is the best way to manage this patient? His ejection fraction is 40%. You think we ought to put an arterial line in? You think we ought to put a Swan-Ganz in?”

As mentioned earlier, one way of coping with work conflict is for CRNAs to verbalize their concerns. After analyzing question 16 of the CRNA interview guide, 16 (80%) nurse anesthetists said they would address the issue with the co-worker attacking them either during or immediately after the case at a more appropriate time. In addition, the CRNAs are open to listen to the co-worker, if that person is respectful to them. Fourteen (70%) of the anesthetists consider themselves capable enough to handle a peer that is degrading their professional ability. Along

with feeling angry (n=19, 95%) and concerned (n=18, 90%) about any inappropriate behavior on the part of their co-workers, the majority of anesthetists would also feel upset (n=14, 70%) yet brave (n=11, 55%) and clear-minded (n=11, 55%) enough to confront their peer. The literature supports this finding. Cavagnaro (1983) examined job stressors, professional satisfactions, and methods of coping with stress among Critical Care Unit nurses and CRNAs. She found that maintaining open communication lines between nurse anesthetists and other health care professionals is essential since CRNAs interact with “many other departments” (Cavagnaro, 1983, p. 293). Although the anesthetists consider themselves capable of handling conflict with a co-worker by communicating their concerns to that person, they would rather prevent conflict with a peer by establishing open lines of communication from the get-go.

3. Among the CRNAs, occupational-related stressors create concern for patient safety.

Workload, production pressure, and the CRNA shortage all cause the anesthetists to push to finish cases. The CRNAs compare it to being on an assembly line. This pace that the anesthetists constantly work under do not provide adequate time, for example, to review a patient’s history before they are brought into surgery or to spend enough time in the recovery room with a client post-operatively. Even the pre-operative rounds are hurried, with usually one pre-anesthetic evaluation being completed in five minutes. Forty-four percent and 33% of CRNAs reported in a research study that inadequate staffing and overtime and patient overload causes stress, respectively (Cavagnaro, 1983). Whether it is during the pre-, intra-, or post-operative phases of surgery, the anesthetists are concerned that they will overlook important factors related to the care of their patients. Sicker patients, tighter HMO regulations, and increased outpatient surgeries have only generated additional concern among the anesthetists for patient safety. The AANA says that “managed care is constantly pursuing cost-cutting efforts” and relying more on anesthetists to suppress the escalating costs of health care (American Association of Nurse Anesthetists, 2001, on-line). Consequently, about 65% of surgeries are conducted on an outpatient or same-day-admission basis (Hamric et al., 1996). Thus, the pressure the anesthetists feel is very real. Derek says:

More emphasis [is] on speed over quality. [There is] less concern for the person as a whole and more concern with just getting the procedure done so we can move on to the next one . . . There’s more emphasis on getting the cases done than there is necessarily on the overall quality of care.

The anesthetists are capable of providing excellent services at a reduced cost far below the MDA. In fact, according to Hamric et al. (1996) “there is an 88% role overlap in the practice of nurse anesthetists and anesthesiologists as evaluated by experts in both fields” (p. 426).

However, the participants do not hesitate to voice concerns that the administrative stressors can affect patient care. After all, they see that their first responsibility is to the patient.

4. Interpersonal work relations cause more stress than any of the other perceived job stressors.

Even though stress originates from patient-related situations, a heavy workload or production pressure, the participants feel that job relationships are more stressful. Stressors within interpersonal work connections assume various appearances. The first includes the MDs’ attitude. Jane shares that the stance of the physician is “the biggest stressor for [her]—not the work.” Marilyn and Lori both say that the doctors use the line “we’re here for the patient” as an excuse to over-book on cases. Moreover, they feel that physician appreciation is lacking where case performance is concerned. In her interview, Mayo says that the anesthetists need more support and kindness from the MDs, as well as “just a little bit more feeling and compassion—that [they] can go the extra mile, [they] can do the extra job and feel appreciated.” Therefore, a physician’s superficial concern for patients and a lack of appreciation for the anesthetists’ work can be stressful. Secondly, work associations are stressful when co-workers do not perform their duties. Sandra reveals “the situation of interpersonal relationships with people dropping the ball probably causes [her] more stress than anything else.” Thus, professional laziness and patient inattention on the part of their co-workers causes relationship stress for the anesthetists. Thirdly, politics lends itself to relationship stress at work. Clarissa states that “the main number one thing [she] dislikes is politics. [She] doesn’t like it. [She] is a clinician—strictly a clinician.” Work politics among the anesthetists themselves is stressful because the division of labor lacks fairness. Hilda describes these relationships as stressful because of “all the in-fighting and backbiting . . . [It was] like a doggy-dog [world]” at her last place of employment. As mentioned in Chapter Five, the younger CRNAs feel the older ones get the lighter cases and vice versa, or that the male CRNAs are assigned easier cases than the females because of their association with male MDs. Lori says that no matter what the age or gender of an anesthetist, those who labor hard are continuously assigned the cases that others are not. Hence, these three specific work relationship stressors subtract from the role of the clinician that the anesthetists assume; whereas the other perceived stressors do not take away from their clinical duties and

responsibilities. Perhaps this is the reason interpersonal work conflict is more stressful than the other identified stressors.

The literature does record similar findings among other anesthetists and nurses. Cavagnaro (1983) reports that both anesthetists and Critical Care RNs in her study identified interpersonal job-related conflicts as a stressor. In another study of 499 nurses working in AIDS care, “the most frequently identified specific sources of stress . . . were staff conflicts [at 11%] (Kalichman et al., 2000, p. 3). Imai (2001) examined work-related factors that lead to low self-esteem in 552 RNs. Forty-six percent, 29.2%, and 17.2% of RNs reported dissatisfaction regarding relationships with doctors, superior officials, and colleagues, respectively. Conversely, Dairian and Cuddeford (1994) convey in their study of 46 CRNAs practicing in rural Nebraska that “experiencing positive CRNA/surgeon relationships” is a component of job satisfaction.

5. Engaging in personal hobbies assists the CRNA in coping with work-related stress.

All 20 anesthetists stated in their interviews that they engage in a variety of hobbies, some of which include: exercise, gardening, sewing, reading, traveling, church activities, family, and music. Eighteen (90%) of the 20 CRNAs reported that their personal hobbies help them cope with job-related stressors, while two (10%) stated they participate in activities for enjoyment, not to reduce their stress levels. Rather, these two anesthetists will watch TV or sit in a recliner (i.e., “veg out”) when feeling stressed. What works for some does not necessarily work for every single individual. Nevertheless, participating in outdoor functions is important to the anesthetists after being inside the majority of the day; all the anesthetists acknowledged participating in outdoor activities after work. Outdoor activities assist the anesthetists in dealing with the environmental stressors of the job, especially those reporting that personal hobbies help them cope. The reader may recall from Chapter Five that the environmental stressors include: 1) CRNAs could not look outside because there are no windows, and that is depressing, especially in the wintertime; 2) too many personalities crammed into one room is like a hornet’s nest; 3) there is never enough room to maneuver in OR; and 4) the cold temperatures tends to aggravate any physical illnesses they might be feeling at the time.

Referring back to the study of CRNAs and Critical Care RNs, Cavagnaro (1983) stated that her participants reported a variety of personal methods to deal with stress: socializing with co-workers, developing peer support group, spending time with family, yoga/physical exercise,

relaxing with friends, and involvement with church-related functions, civic organizations, and professional groups. So, there are some similarities between my anesthetists and Cavagnaro's anesthetists. In addition, calling in sick and taking mental health days were of more concern to the RNs than the CRNAs as a means of coping. Interestingly, my participants believe they cannot afford the luxury of taking sick or mental health days because of the administrative-related stressors and obligation they feel towards their co-workers. Thus, these particular coping strategies identified by Cavagnaro's subjects, especially the RNs, are not available for my participants to utilize. To conclude: it appears that those anesthetists who reported using hobbies to cope with work-related stressors feel less stressed when participating in those activities; this is especially true when they utilize those hobbies to deal with the environmental pressures the operating room can pose.

6. The nurse anesthetists' work lives are not as stressful as their personal lives.

This is a surprising turn of events related to my research. Twelve (60%) participants specifically mentioned that their personal life is more stressful than their work life. The personal stressors mainly stem from family-related issues, which include: taking care of an ill family member; a spouse being out of work; going through a painful divorce; experiencing the death of a family member; and having difficulties with children. Other lesser-known stressors are identity theft, moving out-of-state, and basic life responsibilities. According to Holmes and Rahe (1967), as depicted in the Social Readjustment Rating Scale, a divorce and death of a close family member rank as number two and five, respectively, as the most stressful life encounters. Also, change in the health of a family member, and change in living conditions (i.e., moving) rank eleventh and twentieth-eighth, respectively, out of a list of 43 life experiences. Even though not all the participants specifically stated they felt their personal lives were as stressful as their work lives, all 20 of them recently have had or are undergoing major life stressors, as indicated by the Social Readjustment Rating Scale. Lori shares:

I think my stress is not work-related. When I go to work, I just have to do one thing at a time. But when you have a family, there's always meals and laundry. That's my stress—coming home and feeling the need to have everything done and ready and be there for everybody, which I find little time for me.

Interestingly, the participants view work as a reprieve from their personal lives. Anesthesia is something they know how to do well; whereas, life can deal blows that one is not necessarily prepared for. Zsa Zsa worded it this way:

I think that's the thing that worries me more than anything is that you can do one thing well, but you can't do everything well. I know I do anesthesia real, real, real well. In fact, sometimes I look forward to going to work because I know I'm on my turf. I know I'm where I control things and do things well. I'm at the top of my game. Outside of anesthesia, life is more stressful for me because I don't have answers, and I don't have formulas for things like family. Sometimes I don't have enough time for them. I don't know of anybody who can do it all the time and be everything to everybody.

Ullrich and Fitzgerald (1990) substantiate these research findings. They established, in their study of 91 nurses working on oncology wards, that the nurses' private lives were strongly linked to physical complaints, such as headaches, irritability, tiredness, and neck and shoulder pain. "One major correlate of physical distress amongst nurses thus lies partially beyond the work situation, in the nurse's private life. Somatization is likely if life outside work fails to relieve stress generated by the job" (Ullrich & Fitzgerald, 1990, p. 1014). Therefore, the personal stressors for the cancer ward nurses proved more stressful than the occupational-related ones—as is the case with nurse anesthetists.

Concept Map

The concept map is located under Appendix I. The first circle depicts the six work-related stress categories identified by the participants, which were discussed in detail in Chapter Five. Coping strategies are employed by the anesthetists either during or after encountering job-related stressors. Examples of coping strategies CRNAs might use include: humor, internal reflection, relying on spiritual beliefs and prayer, staying focused on the task at hand, internalization, asking for help, and engaging in personal hobbies. As coping mechanisms are utilized, the stressor categories can divert into one of two directions. One circle represents positive consequences and the other negative consequences. These consequences are mentioned either in the above thematic discussion or in Chapter Five related to the fourth research question. The negative outcomes include concern for patient safety, which results from the work-related and inadequate surgical preparation stressors. Staff conflict consists of the second half of the "negative circle." As aforesaid in the previous chapter, staff conflict is an outcome from work-

related, environmental, and interpersonal relationship stressors. From there, the anesthetist must cope successfully with the negative ramifications; if not, the CRNA must leave the profession or otherwise face mental and physical deterioration. On the other hand, three positive effects from the perceived stressors follow: 1) OR staff pulls together for the good of the patient (i.e., teamwork); 2) the CRNAs demonstrate reliable and attentive behavior to their peers in order to alleviate stress; and 3) the anesthetists verbalize and communicate their concerns in order to address the negative consequences resulting from the perceived stressors or prevent further staff conflict. When positive ramifications are experienced, the anesthetist copes successfully with the perceived job-related stressors. It is imperative to emphasize that the employment of coping mechanisms to combat occupational-related stress occurs throughout the process. This concept map highlights that job related stress and coping mechanisms are intertwined, not separate entities occurring on a linear plane.

Recommendations and Implications

Before highlighting systemic problems and suggesting potential solutions, recommendations by the participants themselves about how to manage occupational stress deserve recognition.

CRNA Recommendations

It is only fitting to mention the participants' advice on stress management since they are the ones speaking from experience. The CRNAs offered recommendations to both novice- and student-anesthetists about coping with job stress. These recommendations are listed below as bulleted points, using the words of the anesthetists. Afterward, implications about this research will be discussed as viewed by the researcher.

- "Let stress slide off your back like water."
- "Work four to five years at the toughest hospital, and then do what you want to do."
- "Separate work from your personal life: Don't take it home with you"
- "Do your best and be honest with yourself about your capabilities."
- "Do something for yourself to relax."
- "Expect stress: Some of it is helpful to stay focused."
- "Learn about the different personality types that are in anesthesia and learn yours."
- "Allow time to become good enough."
- "Stress improves over time, and you deal with it better as your practice grows."

- “Don’t over-react to others’ opinions.”
- “Exercise.”
- “Have a support group, especially with other CRNAs.”

Twelve tangible suggestions on how to handle job-related stress were offered by the participants themselves. Passing on jewels of wisdom to other CRNAs and student-anesthetists is important for them. Learning to cope successfully with occupational stress is only half the battle. Nursing is experiencing certain impasses that need to be addressed in order to alleviate the anesthetists’ stress levels.

Dilemmas and Solutions

This next section will discuss systemic quandaries and potential resolutions related to job stress and anesthetists. This study’s findings as well as the existing literature will substantiate any recommendations made. Limitations of this research and recommendations for future studies will follow.

Shortage. The nation is in dire need of Certified Registered Nurse Anesthetists. According to the AANA’s 1998 Workforce Survey, 35% of participants quoted an upsurge in the number of available CRNA positions, versus a 20% rise a year earlier. “Forty-three percent of the nurse anesthetist managers reported open positions for CRNAs within their departments, ranging from one to 12 available jobs. Fifty-nine percent of the respondents were actively recruiting CRNAs” (American Association of Nurse Anesthetists, 2002, on-line). Across the nation, the current nurse anesthetist shortage is greater than 5,000 (Johnstone, 2002). The CRNA shortage is further compounded by managed care. Health Maintenance and Preferred Provider Organizations are turning to anesthetists because of their ability to cut-costs yet provide professional, responsible care. Nurse anesthetists “administer approximately 65% of the 26 million anesthetics given to patients each year in the United States. CRNAs are the sole anesthesia providers in nearly 50% of all hospitals and more than 65% of rural hospitals” (*Shortage of Certified Registered Nurse Anesthetists Limits Availability of Health Care*, 2002, on-line). With over one-third of anesthetists approaching retirement age, there will be less of those who are qualified to fill their shoes (Beutler, 2001). Sixty-percent of my participants were aged 50 or older. Feeling the crunch to perform with less staffing, the shortage is acknowledged as a stressor by the participants. Before the anesthetist shortage can be assuaged, the shortage of RNs must first be addressed; the two are irrevocably linked. Based upon my own nursing

experience, this research, and the literature, recommendations about how to address the nursing shortage and consequently the CRNA shortage, will now be proposed.

First, the recruitment of RNs is instrumental in tackling the CRNA staff predicament. In order to accomplish increased RN numbers, nursing must become a more appealing profession—to a variety of individuals. Clarissa stated in her interview “the faces of nurses should reflect the population.” Nursing is no longer a white woman’s profession; such thinking reflects Dark Age mentality. Caucasian females are entering other vocations that offer more rewards than nursing does. Moreover, additional male and minority women practicing within the discipline would “enhance the ability of nurses to give culturally competent care to all members of our diverse nation” (Wenzel & Williams, 2002, p. 1). Only five-percent of nurses are male, yet 45% of healthcare clients are men (Sullivan, 2002). What a gap! Luther Christman was a male nurse during the time females ruled the roost. This gentleman, now possessing a Ph.D., is currently advocating for an increase in the number of men in the profession. He states that if one-third of nurses were men, the U.S. shortage would be solved (Sullivan). Derek agrees with Christman:

Take a look at cops; cops make more money than nurses--as a rule [and] as a larger group. Why? Not because they’re worth more money, [but] because we pay men more money, and men won’t stand for a shortage of pay as women will. It’s hard to believe in this day and age, but it’s still true.

Derek hypothesizes that if more men were practicing nurses, the pay would automatically increase, which would then appeal to others to give nursing a second glance. At the same time, nurses should be compensated based on skill, experience, and schooling. They are highly educated individuals; salary and benefits should reflect that preparation. In addition, promoting upward mobility would be advantageous to anesthesia. For instance, a nurse working the medical-surgical floor should automatically receive adequate compensation based upon qualifications. Later, if the nurse transfers to a higher skilled unit, such as Intensive Care (ICU) or Critical Care (CCU), additional compensation should be offered. While working in ICU or CCU, interest in anesthesia may develop. Hopefully, the employer would be supportive of nurse’s efforts to become a CRNA via an educational loan or offering flexible work hours.

Even the government should be alert enough to know that federal intervention is needed to address the anesthesia shortage. Work-study programs, scholarships, and loans would benefit those who have a desire to enter anesthesia but cannot due to financial constraints. Zsa Zsa said:

[The] government needs to get off its behind and get people back in general nursing education from which we get our pool of candidates. They seem to be a little bit slow coming up with loans and educational incentives and programs to get people back to school . . . They need to give incentives for people to go into anesthesia school.

I would like to add parenthetically that as a Registered Nurse who has worked in geriatrics, I feel that recruiting nurses is only half the battle to winning this shortage; the other half involves retaining the current nurses. Along with receiving adequate pay and benefits, if an RN or anesthetist notices that their employer takes the time to offer in-services on stress reduction, they would feel more inclined to practice at that facility rather than look elsewhere. Sandra says that if her employer held an in-service on stress reduction that she “would at least know that they were concerned about [her] stress level.” Therefore, if management respects the nurses and their work, then they will find it easier to retain nurses.

The participants identified staff shortage as a perceived stressor, which in turn, it makes the workload heavier. While conducting observations, I could not believe the heavy workload and fast pace the CRNAs practice under. The reader may recall that pre-op rounds are completed within five minutes. Also, the CRNAs reported that they have done as many as 20 surgical cases in one day. Although production pressure and staffing issues are handled with professionalism, their job consists of too great a responsibility to continue performing under the existing circumstances. Unless concrete measures are taken to fill vacant positions, the future of healthcare looks daunting, especially for the patients. As mentioned in the thematic discussion, the workload, production pressure, and staffing shortage create concern for client safety among the CRNAs. In this line of work, the anesthetists cannot afford to make an error in judgment. That is why employers, the government, and even anesthesia schools need to take a proactive stance related to the CRNA shortage. The shortage can be alleviated via: 1) actively recruiting future RNs and anesthetists, as well as retaining current practitioners; 2) offering financial incentives to further education; and 3) opening-up additional anesthesia schools. If the CRNA shortage is solved, the administrative stressors might be virtually nonexistent. In turn, interpersonal staff conflicts would be abated. Of course, making this recommendation to address the shortage is easier said than done, but this problem cannot continue to be ignored.

Specific recommendations to combat the anesthesia and nursing shortage have been discussed and linked with other perceived stressors. Coping with job-related stress is the next concentration.

Coping with stressors. Facilities around the nation have an obligation to their anesthesia staff regarding stressors found on the job. According to the interviews, the developing pattern is that facilities want to see how long they can operate with the least number of anesthetists as possible, while pushing them to go as hard as they can. Perhaps that is the reason 50% of the participants feel that in-services about stress reduction at their work place is an oxymoron. Simply offering stress reduction classes does not negate the production pressures and heavy workload they feel under their employer. On the other hand, 50% of the participants feel that offering in-services on stress reduction would be helpful. However, these same participants feel that the employer should heavily promote the in-service. For example, the CRNAs suggest that the in-services require mandatory attendance, as well as adequate time be offered to the anesthetists to attend the meetings. Finding the time to be present at the classes is a challenge for the CRNAs due to their heavy workload and unpredictable scheduling. As perceived by the anesthetists, mandatory in-servicing and extra time would allow them and their peers the opportunity to learn about coping with job-related stressors. This, in turn, might alleviate conflicts between staff members (i.e., another perceived stressor). Cavagnaro (1983) writes that the “administrative levels within a hospital should accept some responsibility for providing programs designed to relieve stress” (p. 293). Besides in-servicing on stress reduction, adequate orientation for newcomers would prove useful. Instead of just “throwing” the anesthetists to the wolves the first or second day on the job, facilities should provide sufficient orientation to persons, protocol, procedures, and equipment, especially for those transitioning from school to practice, private to government, or government to private. Employers can assume a proactive approach when addressing the perceived stressors felt by the CRNAs because “interventions to help nurses identify the appropriate fit between coping strategies and specific sources of stress will likely yield the most favorable results in assisting nurses in the management of occupational stress” (Kalichman et al., 2000, p. 35). The previously stated CRNA recommendations about how employers can address work-related stress seem attainable.

There are steps anesthetists take to manage work-related stress; however, I underscore that this is highly individual and depends solely upon the anesthetist. First, the anesthetists are

educated to deal with patient- and administrative-related stressors in a task-focused manner. Staying attentive to the task at hand during times of pressure, emergency, or even sadness (e.g., patient death or bad outcome) is almost second nature to them. There is an expectation among CRNAs that they should demonstrate controlled responses during stressful times—more so for the benefit of the patient. Thus, maintaining professionalism and focusing on the task at hand--the patient--is a short-term means of coping with stress. Secondly, it seems that participating in outdoor activities helps those CRNAs who are affected by the environmental stressors of the job. Getting outdoors provides the breathing space that anesthetists need after being confined to windowless, cold, and crowded operating rooms. On the other hand, not all of the CRNAs who have hobbies use them to cope with work-related stress. Two of the anesthetists participate in hobbies for pure enjoyment—nothing more. When feeling stressed, they prefer to do nothing. So, hobbies may or may not help in strategizing successfully against work-related stress. Besides pastimes, the anesthetists use other means to cope: humor, internalization and verbalization of concerns, spirituality and prayer, and asking for help from others. The important point is that anesthetists find what avenue works for them when dealing with occupational stress and then use it to their advantage. Accordingly, it would be inappropriate of me to suggest that all CRNAs, for example, embrace a personal hobby to combat work-related stress. Remember, Clarissa and Chuck do not find pastimes helpful when dealing with stress. As Herman states, “There are a number of stress inoculation behaviors that [one] can adopt.” The data in this study support Herman’s suggestion: Mayo’s experience is a case-in-point. Mayo became physically and mentally burnout, especially due to the administrative and environmental stressors of the job. Mayo acknowledged that she basically internalized and thought she was dealing with the stressors but really was not. Her story emphasizes the need for facilities to offer in-services to their anesthetists about coping with stress. This might assist them in discovering what works best, on an individual basis, when encountering job stressors, especially for the novice or exasperated CRNA. In the least, doing so would make the anesthetists more aware of available options in coping with stress and then they can make an educated decision afterward. As mentioned previously, the participants were split about their employer offering stress reduction courses--50% thought it would be useful, while the other 50% did not. If facilities did offer stress reduction classes that worked around the anesthetists’ schedules, the CRNAs might see their employers as putting forth a good faith effort in understanding their perceived stressors.

Consequently, hospital management and anesthesia staff might work together to address the issues the participants mentioned in this study.

Limitations and future research. There are three methodological limitations to this study. Two of the restrictions deal with the participant sample. Although it was not the goal of this research to obtain a perfect sampling frame like that of quantitative inquiries, effort was made to include as many diverse groups that were available.

First, four out of the 20 participants were male CRNAs; thus, 20% of the interviewees were men. According to an American Association of Nurse Anesthetists survey, men compose 42% of the CRNA population on a national basis (2002). Hearty attempts were made at recruiting men anesthetists, and additional perspectives from this group would have been appreciated. Secondly, the participants have anesthesia experience ranging from 10 to 41 years. Even though that is a big gap, none of the anesthetists were fresh to the profession. All of them have the know-how and feel relatively comfortable in their work. Moreover, interviewing a CRNA just starting out or with less experience than the others would have shed new light on the study. The last limitation involves observation. It took six months to gain entry into Southeastern Pediatric Hospital—from the time of making the initial contact with management until the observation process was complete. I am grateful that this facility opened their doors to my research; it allowed me to fully understand the pediatric anesthetist's work-related stress. Nevertheless, observing at other facilities offering different anesthetic services would have illuminated the research further.

These three limitations can be chalked up to time availability. Admittedly, I could have used more time to supplement the sample or observe at another facility. These limitations will be remembered when conducting the next investigation involving CRNAs.

Specific ideas have emerged for future studies after reflecting upon this research. The first involves government and private sector workers. At first glance, it seems the participants working in the private sector feel they have better working relations than those practicing in a federal facility. In Chapter Five, it was mentioned that the resolution of staff conflict (i.e., a perceived stressor) is institution-dependent. Is there a relationship between interpersonal work connections and job-related stress specific to the type of facility an anesthetist is employed with?

Another idea for a future study involves concentrating on the perceptions of the older and younger CRNAs and their workload. It was mentioned during this study that a few of the

younger anesthetists felt the older ones are assigned the lighter cases; while some of older ones felt the younger ones acquire a lighter load. This begs the question: what is the connection between the age of an anesthetist and workload stress? Observing at various facilities would elucidate this topic further.

The women anesthetists voiced concern in this research that their male colleagues are assigned easier cases due to their relationships with male physicians and surgeons. Called the “Good Old Boys Club,” the existence of this phenomenon could be explored further via observations and interviews. What is the relationship between male CRNAs and male physicians? What is the relationship between female CRNAs and male physicians?

A fourth potential research investigation involves the locum tenens (i.e., temporary staff anesthetists). They were not interviewed for this study, albeit that was not intentional. Thus, it would be interesting to identify the locums perceived job-related stressors, and how they cope with those perceived stressors. How are the occupational-related stressors of the temporary staff alike and different from the staff that is permanently employed?

Finally, it would be interesting to pursue the socialization tendencies of the anesthetists. Refer to Figure 5.1. Six (30%) anesthetists acknowledged that they do try to make a point of socializing with their peers outside of work. Fifteen percent (n=3) stated they do not socialize outside of work at all with hospital employees, while another 15% (n=3) said they rarely attend gatherings with their co-workers. The nurse anesthetists gave personal reasons for socializing or not socializing with their peers outside of work. Is there a pattern as to who will socialize and who will not? What is the relationship between the socialization tendencies found in the interpersonal work connections and job-related stress?

Five specific ideas for future research investigations have been talked about. There is certainly not a shortage of potential qualitative studies related to the nurse anesthetist and occupational-related stress.

Conclusions

The shortage of CRNAs needs to be addressed in order to effectively deal with work-related stress, especially the administrative stressors. Anesthetists currently practicing in their field are under intense pressure to quickly turnover as many patients as possible. Anesthesia employers, as well as the federal government, need to offer financial and educational incentives to retain and recruit anesthetists in order to brace for the 33% of CRNAs that will be retiring in

the near future. In the meanwhile, there are tangible steps facilities can take to help reduce the stress levels of their anesthetists. Offering mandatory in-servicing about coping with stress and addressing staff conflict—that is advantageous to the anesthetists’ work schedules—would be a step in the right direction. In addition, providing adequate and thorough orientation for those anesthetists new to a facility or to the profession would be beneficial for all concerned. Furthermore, continued qualitative research is warranted to comprehend further the perceptions of nurse anesthetists about work-related stress.

Summary

Nurse anesthetists are critical members of the health care team. Hence, studying the occupational stressors of a CRNA is well worth the time, as cited in the literature review and this research. The purpose of this inquiry was to examine how job-related stress manifests itself among CRNAs regarding their ability to relate to their peers. Understanding the occupational roles and responsibilities of the CRNA, discovering nurse anesthetists perceived stressors on the job, and identifying coping mechanisms relating to those perceived stressors was my goal, along with describing the connection between stress and interpersonal job relations. Twenty CRNAs and 15 co-workers were interviewed. Observations and artifact data were also assembled to bolster the study and formulate data triangulation. After data collection, organization, and analysis, the research questions were answered and six themes were devised. These are visually represented via a concept map. The participants’ advice on how to handle stress and the dilemmas anesthetists encounter and solutions to address such predicaments were mentioned. Discussing the limitations to this study and future research proposals was also warranted.

I will always carry with me the vivid memory of that red sign boasting “NURSE ANESTHETIST ON CALL” suspended from the rearview mirror of that pale-yellow Oldsmobile. After traveling 2,796 miles to conduct 35 interviews and observe for 65 clinical hours, the point of view I had as a little girl about nurse anesthetists has matured. The understanding about the CRNAs’ perspectives regarding work-related stress has become ingrained into me, professionally and personally. In spite of this, it is impossible to completely understand an anesthetist’s work-related stress without first practicing anesthesia. Subsequently, it is my fervent hope and prayer that this dissertation has not only communicated each participant story exactly but that future researchers and practitioners can apply the outcomes to foster the profession further. Nursing owes it to their anesthetists to be vigilant to their needs and

perceived stressors. After all, “nurse anesthesia is the oldest advanced nursing specialty” (Hamric et al., 1996, p. 4). CRNAs have paved the way for RNs such as myself to pursue educational, research, and clinical endeavors. I would like to return the favor. Feeling renewed, I anticipate continuing on with future research involving Certified Registered Nurse Anesthetists.

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Appendix A

Virginia Tech

Informed Consent for the Participants in the CRNA Stress Research Study

Title: Occupational Stress and the Certified Registered Nurse Anesthetist

Investigator: Tristan R. Perry, RN

Thank you for taking the time to assist me with my dissertation research study. My name is Tristan Perry, and I am a student at Virginia Tech.

I want to know more about nurse anesthetists (CRNAs) and stress. Their job is a challenging one, and I want others to know what their job is like. I will be asking you some background questions about yourself and your job, along with some questions about coping with stress and relationships at your work. If you are a co-worker, I will be asking you questions about CRNAs and you working with them.

I will need to interview you once. The interviews should take no longer than 90 minutes. If we do run out of time, we can complete the interview later when and where convenient for you.

The risks in this research are minimal. You may feel uneasy sharing feelings about your work and stress. You may skip any questions that make you feel uncomfortable. While there is no guarantee of benefiting in this research, some participants may find it therapeutic to talk about their job and stress. Since this research will be reported in my dissertation and eventually in a professional journal, your participation will help others understand what the nurse anesthetist's job is like. You will not be compensated for participating in this research.

I will not release your name to anyone. During the interview, you can choose a false name for me to use in my study to protect your interests.

With your permission, I would like to take record all interviews. No one besides my committee members, who will grade my research project, will have access to these tapes. The tapes will be stored in a secure place. After the study is complete and all interviews are transcribed, I will destroy the tapes.

Your responsibility in this project includes that I must interview you. You are free to withdraw from this study at any time without penalty to yourself or by the facility you work at.

Your signature acknowledges your understanding of this project and your voluntary participation in this project. In addition, you acknowledge that you have not been compensated in any way prior to participating in this study. You have had all your questions answered.

Subject signature

Date

Should you have any questions about this research or its conduct, you may contact:

Tristan Perry at (540) 381-8566 or at metrn@earthlink.net
Investigator(s) Telephone/e-mail

Dr. Kerry Redican at (540) 231-5743 or kredican@vt.edu
Faculty Advisor Telephone/e-mail

Dr. Jerry Niles at (540) 231-5347 or niles@vt.edu
Departmental Reviewer/Department Head Telephone/e-mail

David M. Moore at (540) 231-4991 or at moored@vt.edu
Chair, IRB Telephone/e-mail
Office of Research Compliance
Research & Graduate Studies

This research project has been approved, as required, by the Institutional Review Board for Research Involving Human Subjects at Virginia Polytechnic Institute and State University, by the Department of Teaching and Learning.

<u>March 21, 2002</u>	<u>March 21, 2003</u>	<u>IRB # 02-144</u>
IRB Approval Date	Expiration Date	Approval Number

Appendix B
Southeastern Pediatric Hospital
Institutional Review Board

Application for Review of Research Involving Human Subjects In Accordance with
Assurance of Compliance of DHHS approved December 28, 1987, Revised: June 2001

Date Filed: March 25, 2002
Protocol Number: _____

I. Identification of Project

A. Title of Project or protocol

Occupational Stress and the Certified Registered Nurse Anesthetist

B. Local Project Director

Please note that Mrs. Perry is from out-of-state. She is the principle investigator of the research.

Tristan R. Perry, RN
1570 Sleepy Hollow Rd.
Christiansburg, VA 24073
540-381-8566

C. National Director or Co-Director

Not applicable

D. Intended Starting Date

July 1, 2002

E. Estimated Completion Date

July 14, 2002

F. Co-operating Institution, Agency

Virginia Tech:
Attn: Dr. Kerry Redican, Doctoral Chair
202 War Memorial Hall
Blacksburg, VA 24061
540-231-5743

G. Funding agency, Identification Number

Research funded by principle investigator, Mrs. Perry, for doctoral research.

H. Grant submission deadline

Not applicable

I. Copy of form 1572, IDE or IND number, if applicable

Not applicable

J. Budget

Not applicable

K. Description of any “finders fees” or reimbursements or benefits to persons finding or referring possible research subjects

Not applicable since this research is employing convenience and network sampling.

L. A copy of the Investigator Brochure, if provided to you

Not applicable

II. Objective of Project

The purpose of this qualitative research is to interview and observe adult participants who are Certified Registered Nurse Anesthetists (CRNAs). The majority of the participants will be women because the profession of nurse anesthesia consists of more women than men. I wish to study job stress and how the CRNA perceives and copes with that stress. I also wish to examine the roles and responsibilities of the nurse anesthetist and investigate the relationship between work related stress and interpersonal job connections. In order to study interpersonal job relationships, adult participants, who work with the CRNAs, will be interviewed. I want to know more about nurse anesthetists (CRNAs) and stress. Their job is a challenging one, and I want others to know what their job is like. Therefore, my research questions are:

- 1) What are the roles and responsibilities of the CRNA as they see them?
- 2) What are the CRNAs perceived stressors encountered on the job?
- 3) What are their coping strategies related to the perceived stressors?
- 4) What is the relationship between CRNA job stress and interpersonal work connections?

III. Description of Human Participants

A. Anticipated number of research participants

Although I would like to interview as many willing participants as possible, it is anticipated that approximately six CRNAs and six co-workers will be interviewed. However, no one will be turned away if they wish to be interviewed.

B. Anticipated number of local participants

See above (A)

C. Criteria for selection and/or seclusion on a local level

Selection criteria are that the CRNAs be active practicing in their field, whether full-time, part-time, temporary, or PRN. Also, selection criteria for the co-workers include that they must work with the CRNA on a daily or weekly basis—enough to qualify for “frequent” contact with the nurse anesthetist.

D. Age

All participants must be over the age of 18.

E. Payment or incentives

The participants will not be reimbursed for their voluntary participation in the study, which is disclosed to them in the Informed Consent. In addition, no one will be compensated prior to the research investigation.

F. Other relevant data

Since nurse anesthesia is primarily a female-dominated profession, it is anticipated that the majority of CRNA participants will be female.

IV. Methods or Procedures

A. Uses of human participants

Participants will need to be interviewed (see “E” below), and some will be observed. The Director of Anesthesiology is aware of my intention to interview and observe. He has given his permission to do so, pending IRB approval.

B. Stresses to Participants

Physical: Not applicable

Psychological: The participants may feel uneasy sharing feelings about work and stress. They may skip any questions that make them feel uncomfortable.

Social: Not applicable

C. Experimental manipulations

Not applicable

D. Tests or measures

Not applicable

E. Interviews

See attached interview guides for CRNAs and co-workers. All participants will be interviewed once lasting no longer than 90 minutes. Though not expected, in case I find that a follow-up interview is necessary, this possibility will be included on the informed consent form. The interviews would be conducted at a convenient place agreed upon by the participants and myself. The interviews will not interfere with the daily work of the participants. Unless the participant objects, all interviews will be tape-recorded in order to preserve their words for data analysis. I, the principle investigator, will be the only one to transcribe the tapes. After the interviews are transcribed, the tapes will be destroyed. I will be the only one to have access to the tapes, except my dissertation committee, who will grade my research project. Also, the tapes will be secured in a safe place and labeled using pseudonyms only. If the participant wishes, I will return the tape to them after the interviews are transcribed. In addition, a transcription of each interview will be forwarded to the participant (i.e., member checks) in order to assure them that I understand accurately what they said in the interview.

F. Observations, photography, recordings

The head of the Anesthesiology Department, and his Administrative Assistant are making arrangements to have me observe a CRNA(s) in their natural work environment, pending IRB approval. It is anticipated the observations will last approximately one to two weeks. Tape recordings will not be used during the observations. Rather, I will need to take notes in order to accurately remember details. As mentioned above (see "E"), all interviews will be tape-recorded, unless a participant objects. In addition, I would like to take still photographs of anesthesia equipment or tools to serve as artifact data in my research. I do not intend to photograph Southeastern Pediatric personnel or patients.

G. Differences in treatment

1. Non-participants

2. Control group

3. Experimental group

Not applicable. This is a qualitative, not a quantitative, inquiry.

V. Specific Risks and Protections Measures

A. Risks to subjects greater than those encountered in daily life:

1. Physical: Not applicable
2. Psychological: The risks in this research are minimal. The participants may feel uneasy sharing feelings about work and stress. They may skip any questions that make them feel uncomfortable. Also, the participants are sacrificing their time to be interviewed.
3. Social: Not applicable. All participants will be assigned pseudonyms to protect their interests and confidentiality.

B. Means to evaluate risks

A participant is free to share with the researcher if they feel uncomfortable during an interview or observation. The participants are free to skip an interview question that makes them feel uncomfortable.

C. Means taken to minimize risks

1. Specific controls: The participant will select a pseudonym, in which I will use during the interview and in any written report. Moreover, any tapes will be coded using the pseudonym. Therefore, confidentiality will be of utmost importance. After the study is complete and all interviews are transcribed, I will destroy the tapes. No one else will be privy to the data except my dissertation committee. I am the only one who will transcribe the tapes. The data will be stored in a secure place at my home. If the participants wish, I will be happy to return the tapes to them.
2. Screening methods: Not applicable
3. Follow-up on residual effects: In addition, colleague checks will be employed in this research: I will provide the participants with transcriptions of their interview in order to assure accuracy in their statements. They will be free to modify any original statements, if they so choose.

D. Means to assure anonymity and/or confidentiality of subjects and/or data

As stated above, confidentiality is of the utmost importance. Methods that will be used to ensure participant rights and protection: using pseudonyms, storing the tapes in a safe place until the transcriptions are completed, the researcher transcribing the data, and destroying (or returning) the tapes after the interviews are transcribed. In addition, the hospital will not be referred to by name specifically in any publication.

VI. Benefits and Risks

A. Reasonableness of risks as related to anticipated benefit

While the participants will not be compensated for their voluntary participation, they may find it therapeutic to share their perspectives about job stress. There is no promise that the participant will find the study beneficial. However, the participant may contact me for a summary of the research results. Anesthesia and nursing may find the study beneficial because job stress, burnout, and a shortage of CRNAs are ever-present

concerns. If a project generates interest among professionals, then perhaps others will conduct more research, which in turn, would address occupational stress among nurse anesthetists more effectively. Publication of the study, as a dissertation and in a professional journal, would also make others keenly aware of the nurse anesthetist job roles and responsibilities. Thus, the researcher is reserving the right to publish the results of her dissertation in a professional journal. The benefits of this project outweigh any risks.

VII. Method of Obtaining “Informed Consent” from Subjects

A. Elements to be included in Informed Consent Form

1. A statement that the study involves research, an explanation of the purposes of the research and the expected duration of the subject’s participation, a description of the procedures to be followed. Identification of any procedures that are experimental is not applicable to this study.
2. A description of any reasonable foreseeable risks or discomfort to the subject.
3. A description of any benefits to the subject or to others which may reasonably be expected from the research.
4. A disclosure of appropriate alternative procedures or courses of treatment is not applicable to this investigation.
5. A statement describing the extent, if any, to which confidentiality of records identifying the subject will be maintained; where they will be stored; and who will have access to them.
6. For research involving more than minimal risk, this is not applicable to this investigation.
7. An explanation of whom to contact for answers to pertinent questions about the research and research subjects rights, and whom to contact in the event of a research-related injury to the subject; local contacts must be included.
8. A statement that participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled.

Please refer to Southeastern Pediatric Hospital Informed Consent Form.

B. The consent form includes no language through which a subject is made to waive, or appear to waive any of his/her legal rights, including any release of the institution or its agents from liability for negligence.

C. Procedure to be used in acquiring Informed Consent

1. Consent Form will be presented at the time of the interview by the principle investigator.
2. Any requirement for other personnel to be present
There is no requirement for other personnel to be present.

3. The forms will be stored at the investigator's home in a locked filing cabinet, in which they will be kept on-file for at least three years. The participants may request a copy of the Consent Form for their own personal records.

3. Forms are accessible to:

IRB members: for Southeastern Pediatric Hospital and Virginia Tech

DHHS and FDA personnel: All IRB records, pertaining to this research, may be reviewed by the FDA and DHHS.

Others: Mrs. Perry's Doctoral Committee Members, and the participants, if they so choose.

D. Copy of Informed Consent Form to be attached

Please see attached

E. Copy of Consent and/or Statement of Understanding (Assent) appropriate to age of research participant to be attached

Since the participants will be over the age of 18, a "basic" adult Informed Consent Form will be used. Refer to the attached Informed Consent Form. The Informed Consent includes a statement of understanding on the part of the adult participant about the research and that any questions they may have asked have been answered.

VIII. Qualifications of the Investigator

A. Required qualifications for investigator and/or assisting personnel to perform specific tasks

1. Special Training: Researcher holds BSN, MSN, and is completing her second year in doctoral school. She has taken three qualitative research classes, which are required for the Ph.D.: Qualitative Methods in Educational Research I, Qualitative Methods in Educational Research II, and Advocating for Social Justice in Qualitative Research. In addition, the researcher conducted a qualitative study on the Weigh Down Diet for a class requirement Spring 2001.

Mrs. Perry is currently working with the American Cancer Society (ACS) for the second year conducting program evaluations. For the past three semesters, the researcher has worked as a Graduate Teaching Assistant for Virginia Tech, in which duties entail lecturing about basic health principles to undergraduates and performing data analyses on health surveys. Mrs. Perry has worked as an RN in long-term care and community health in Virginia and Kentucky. Based upon her professional experience and schooling, the investigator feels comfortable working with and interviewing people, as well as observing CRNAs on the job.

2. Licensure: Researcher holds an active Registered Nurse License with the state of Virginia. A copy of this information will be provided to the Administrative Assistant before the research will begin.

3. Certification: Not applicable

4. Copy of current CV: Refer to attachment.

IX. Adequacy of Facilities to Support Research

A. Brief description of facilities to be used and an evaluation of their adequacy for the intended project.

The researcher will need a place to conduct private interviews with the CRNAs and co-workers, such as an office, conference room, etc. Arrangements will be made with the participants on where and when to conduct the interviews. In order for her to conduct observations, the researcher will need access to the nurse anesthetist's work environment, such as the operating room. Hospital protocol will be adhered to. For example, the researcher has documentation of her Tb and Rubella tests to provide Southeastern. As stated earlier, the anesthesia department is attempting to arrange the observations, pending IRB approval.

An evaluation of the facility's adequacy is not necessary. The intention of the research is not to evaluate. Rather, it is to interview CRNAs, their co-workers, and observe the nurse anesthetist on the job.

X. Responsibility of the Project Director

By compliance with the policies established by the Institutional Review Board of the Southeastern Pediatric Hospital, the Project Director subscribes to the principles stated in the Belmont Report and the standards of professional ethics in all research, development, and related activities involving human subjects under the auspices of the Southeastern Pediatric Hospital.

A. Approval will be obtained from the Southeastern Pediatric Hospital Institutional Review Board prior to instituting any change in the research project.

B. Development of any unexpected risks will be reported to the Chairperson of the Southeastern Pediatric Hospital Institutional Review Board.

C. A status report will be submitted at 12-month intervals or as requested attesting to the current status of the project.

D. Signed consent forms will be kept for the duration of the project and for at least three years after completion of the study.

Project Director _____
Name

Signature

Date

Co-Director Not applicable
Name

Signature

Date

XI. IRB Review

The application described above has been subjected to IRB review and has been approved.

Chairperson _____
Name

Signature

Date

Co-Director _____
Name

Signature

Date

Appendix C
CRNA INTERVIEW GUIDE

Background Questions:

Gender: M F

Age range: 20-30 31-40 41-50 51-60 61-70 >70

Marital Status: M S D W

Highest Degree Earned: Diploma in Nursing _____ BSN _____ Other BS _____
MSN _____ Other MS _____ Ph.D./Ed.D. _____

Years practicing nurse anesthesia: _____

Salary range: \$80,000-\$90,000 \$91,000-\$100,000 \$101,000-\$110,000 >\$110,000

Number of ORs in employing facility _____

Bed size of employing facility: _____

Work Status: Part-time _____ Full-time _____ PRN _____
Inactive _____ Temporary _____

Average number of work hours per week : _____

Estimated overtime hours per week: _____

Call days per month : _____

Anesthesia coverage at your facility currently: Fully-staffed _____ Short-staffed _____

* If short-staffed, how many positions are lacking _____

Questions:

1. For interview purposes, by what pseudonym, or false name, do you wish to be identified? _____
2. Describe your anesthesia background: education, work experience.
3. What prompted you to enter nurse anesthesia?
4. What types of cases do you like the best and why?
5. What types of cases do you dislike and why?
6. Please describe a typical working day.
7. What is your average patient load (surgical cases) per day? _____
8. What are the most enjoyable aspects of your job?
9. What do you dislike about your job?
10. What are your general thoughts and feelings as you begin a work shift?
11. What are your thoughts and feelings at the termination of a work shift?
12. Describe for me one of the most stressful situations encountered on the job?
 - a. What made it so stressful?
 - b. How did you handle it?

13. Do you feel that the division of labor is fairly distributed among all CRNAs?
Why or why not?
14. Tell me about how you usually deal with stressful situations. How do you usually feel during those times?
15. Of these following scenarios, is there a style that describes you (Circle the correct letter), and if not, how would you describe yourself?
- I seek gratification through a basic concern for the accomplishment of tasks and by the organization of people, money, time, and opportunity. I have a clear sense of having earned the right to be rewarded for success. If a person needs help on the job doing a new task, I would say: "Let me show you how to do that."
 - I seek gratification through a basic concern for the protection, growth, and welfare of others with little regard for reward in return. If a person needs help on the job doing a new task, I would say: "Let me do that for you."
 - I seek gratification through a basic concern for self-reliance and self-dependence. I sometimes need reassurance that things have been properly sorted out, put together, and thought through so that meaningful and logical order is achieved. If a person needs help on the job doing a new task, I would say: "I would rather do it myself."
 - I have a basic concern for group welfare, membership in the group, and flexibility of behavior to the end of achieving unity and coherence of group goals and undertakings. If a person needs help on the job doing a new task, I would say: "Let's do that together."

Why did you pick the style that you did?

16. You recently had an encounter with one of your co-workers after a difficult and long case. The co-worker starts to degrade your professional ability, using abusive, inappropriate language. First, how would you feel if this happened to you? Secondly, please select the word that would best describe how you would feel after such an encounter (circle below).

- How would you feel?
- circle your choice below:

Powerless	powerful
Angry	happy
Ashamed/embarrassed	proud
Fearful	brave
Worried	carefree
Confused	clear-minded
Anxious/upset	calm
Concerned	indifferent
Unappreciated	appreciated
Worthless	valued
Helpless	capable

Why did you pick the words that you did?

17. Given the above scenario with the co-worker encounter, what would your response be?
18. Tell me about your feelings and thoughts regarding the death (or dying) of a patient.
19. Tell me about your feelings and thoughts when encountering conflict with a physician regarding these issues: a) disagreement concerning treatment; b) receiving criticism from an M.D.; c) fear of making a mistake with a patient; and d) making a decision concerning a patient when the physician is unavailable.
20. Tell me about your feelings and thoughts concerning inadequate preparation related to the care of a patient.
21. Tell me about your feelings and thoughts regarding support opportunities at your facility. Do you feel you can share with other personnel your experiences and feelings, as well as talk about problems within your department?
22. In your opinion, does management support relations between the CRNAs? Among the CRNAs and other disciplines (e.g., surgeons, OR staff, pharmacy, etc.) you work with?
23. Do you feel you can go to management with problems or concerns? Why or why not?
24. Tell me about your thoughts and feelings concerning conflict with co-workers other than that of the management staff.
25. Tell me about the workload of your department.
26. Tell me about your feelings and thoughts concerning uncertainty regarding treatment in anesthesia, especially regarding the operation and functioning of specialized equipment.
27. Are there any resources at your work that offer stress-reduction measures? Conflict resolution?
28. Please describe any activities or hobbies you participate in on a regular basis (e.g., gardening, reading, traveling, sports, exercises, church activities, etc).
29. How often and when do you usually participate in these activities?
30. Do these particular activities help you when feeling stressed?
31. Do you usually participate in social activities outside of work with your co-workers?
32. Nurse anesthesia is a challenging and demanding profession, taking years of education. Where and when did you learn about how to deal with stressors found in nurse anesthesia? Did the instructors mention the need to adopt coping skills in anesthesia school?
33. Are there any stressors outside of your work that you're currently experiencing? What activities help you deal with those stressors?
34. Would it be helpful for you if your employer held an in-service about stress reduction techniques?
35. For the novice CRNA or the student-CRNA, what suggestions would you relate to them regarding stress in anesthesia?
36. What's your opinion of the CRNA shortage? Do you have any suggestions/solutions to address the shortage?
37. Compared to 10 years ago, how has your job as a CRNA changed, if any?
38. Where do you see yourself professionally in 10 years?
39. If you had to do all over again, would you have gone into nurse anesthesia? Why or why not?
40. For those who have left the profession only: What circumstances caused you to leave anesthesia? Would you ever consider returning to the field, if possible? Why or why not?
41. Is there anything not covered in this interview that you'd like to address?

Just in case further clarification is needed about this interview, would you supply a phone number, e-mail, or address where you can be readily reached? This information will be kept completely confidential. In addition, I would like to provide you with a copy of the transcription of our interview together in order to assure that I am accurate in what you are saying.

Appendix D
CRNA CO-WORKER INTERVIEW GUIDE

Background Questions:

Gender: M F

Age Range: 20-30 31-40 41-50 51-60 61-70 >70

Marital Status: M S D W

Educational Preparation: HS _____ Technical training _____ Bachelors _____
 Masters _____ Ph.D./Ed.D. _____ M.D. _____

Title: _____ Department: _____

Employing facility: _____

Number of OR s in employing facility: _____

Bed size of employing facility: _____

Work Status: Part-time _____ Full-time _____ PRN _____ Inactive _____

Average number of hours per work week : _____

Questions:

1. What pseudonym, or false name, do you wish to be called during this interview to protect your interests? _____
2. Please describe for me a typical working day. Please be specific about working with CRNAs.
3. What aspects of your job are enjoyable? Unenjoyable?
4. How would you classify your work relationship with the CRNAs?
5. Do what extent do you interact with CRNAs on the job? (e.g. daily, weekly)
6. How long have you worked with CRNAs?
7. What is your overall, general impression of CRNAs and the work that they do?
8. Please tell me about any work experiences with CRNAs that stand-out in your mind.
9. What type of stressors do you note CRNAs encounter on the job?
10. How do the CRNAs usually react to pressing situations?
11. Do you feel management supports relations between the CRNAs and other units? Why or why not?
12. What is your impression about the relationship between CRNAs and other units, particularly your unit?
13. Would it be helpful if the hospital held an in-service on stress reduction techniques, if they don't do so already?
14. Do you socialize outside of work with CRNAs?
15. Is there anything I haven't covered in this interview that you would like to tell me about?

Just in case further clarification is needed about this interview, would you supply a phone number, e-mail, or address where you can be readily reached? This information will be kept completely confidential. In addition, I would like to provide you with a copy of the transcription of our interview together in order to assure that I am accurate in what you are saying.

Appendix E

The Nursing Stress Scale

Directions: Below is a list of situations that commonly occur in a hospital. For each item circle how *often* on your job you have found the situations to be *stressful*. Please rank each item on a scale from 0 to 3.

0 = never 1 = occasionally 2 = frequently 3 = very frequently

Item

Factor I: Death and dying

Performing procedures that patients experience as painful	0	1	2	3
Feeling helpless in the case of a patient who fails to improve	0	1	2	3
Listening or talking to a patient about his/her approaching death	0	1	2	3
The death of a patient	0	1	2	3
The death of a patient with whom you developed a close relationship	0	1	2	3
Watching a patient suffer	0	1	2	3

Factor II: Conflict with physicians

Criticism by a physician	0	1	2	3
Conflict with a physician	0	1	2	3
Fear of making a mistake in treating a patient	0	1	2	3
Disagreement concerning the treatment of a patient	0	1	2	3
Making a decision concerning a patient when the physician is unavailable	0	1	2	3

Factor III: Inadequate preparation

Being asked a question by a patient for which I do not have a satisfactory answer	0	1	2	3
Feeling inadequately prepared to help with the emotional needs of a patient	0	1	2	3

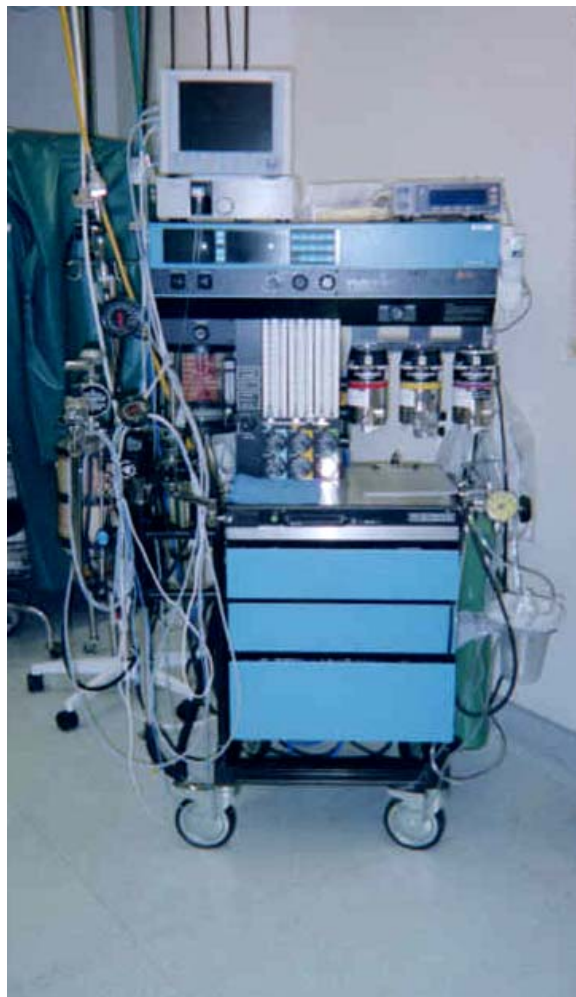
Factor IV: Lack of support

Lack of an opportunity to talk openly with other unit personnel about problems on the unit	0	1	2	3
Lack of an opportunity to share experiences and feelings with other personnel on the unit	0	1	2	3

Lack of an opportunity to express to other personnel on the unit my negative feelings towards patients	0	1	2	3
<u>Factor V: Conflict with other nurses</u>				
Conflict with a supervisor	0	1	2	3
Difficulty in working with a particular nurse (or nurses) outside the unit	0	1	2	3
Criticism by a supervisor	0	1	2	3
Difficulty in working with a particular nurse (or nurses) on the unit	0	1	2	3
<u>Factor VI: Workload</u>				
Breakdown of computer	0	1	2	3
Unpredictable staffing and scheduling	0	1	2	3
Not enough time to provide emotional support to a patient	0	1	2	3
Not enough time to complete all of my nursing tasks	0	1	2	3
Not enough staff to adequately cover the unit	0	1	2	3
<u>Factor VII: Uncertainty concerning treatment</u>				
Inadequate information from a physician regarding the medical condition of a patient	0	1	2	3
A physician ordering what appears to be inappropriate treatment for a patient	0	1	2	3
Not knowing what a patient or a patient's family ought to be told about the patient's condition and its treatment	0	1	2	3
Uncertainty regarding the operation and functioning of specialized equipment	0	1	2	3

Appendix F

Photograph 5.1 of Anesthesia Machine



Appendix G
Anesthesia Equipment

Photograph 5.2. Breathing Masks



Photograph 5.3. Endotracheal Tube (ETT)



Photograph 5.4. Laryngoscope



Photograph 5.5. LMA



Appendix H

Description of CRNA Co-workers

Barbara: She is a supervising RN working part-time at Southeastern Pediatric Hospital. Barbara has 15 years experience working with nurse anesthetists.

Bret: Bret is an MDA with six years experience working with anesthetists. He is currently employed at Southeastern Pediatric Hospital.

Constance: Constance is a soft-spoken OR nurse with over 20 years experience. At one time she thought about being a CRNA.

Darcy: Darcy is the nurse-educator for Southeastern and works daily with CRNAs. She works full-time, averaging 60 hours a week.

Forrest: A married male in his 40s, Forrest is a MDA at Southeastern Pediatric Hospital. He has worked with CRNAs for over 11 years on a daily basis.

GL: This gentleman in his 50s has worked with nurse anesthetists for 28 years. He works full-time at a small community hospital.

Gloria: This surgical technician has about 30 years experience working in the operating room. She classifies her relationship with nurse anesthetists as “excellent.”

Jim: This pediatric surgeon has worked with CRNAs for 10 years. He is soft-spoken and works about 70 hours a week. The times I observed Jim, it was apparent that he enjoys his job.

John: He is a surgical technician with two years experience in OR. John has a quiet demeanor.

Julie: She is a surgical technician with 25 years work experience with nurse anesthetists. Julie is married with children and works full-time at Southeastern Pediatric Hospital.

Lindsay: She works full-time as a surgical RN at Southeastern Pediatric Hospital. She has worked with CRNAs 27 years. Lindsay is married and in her 40s.

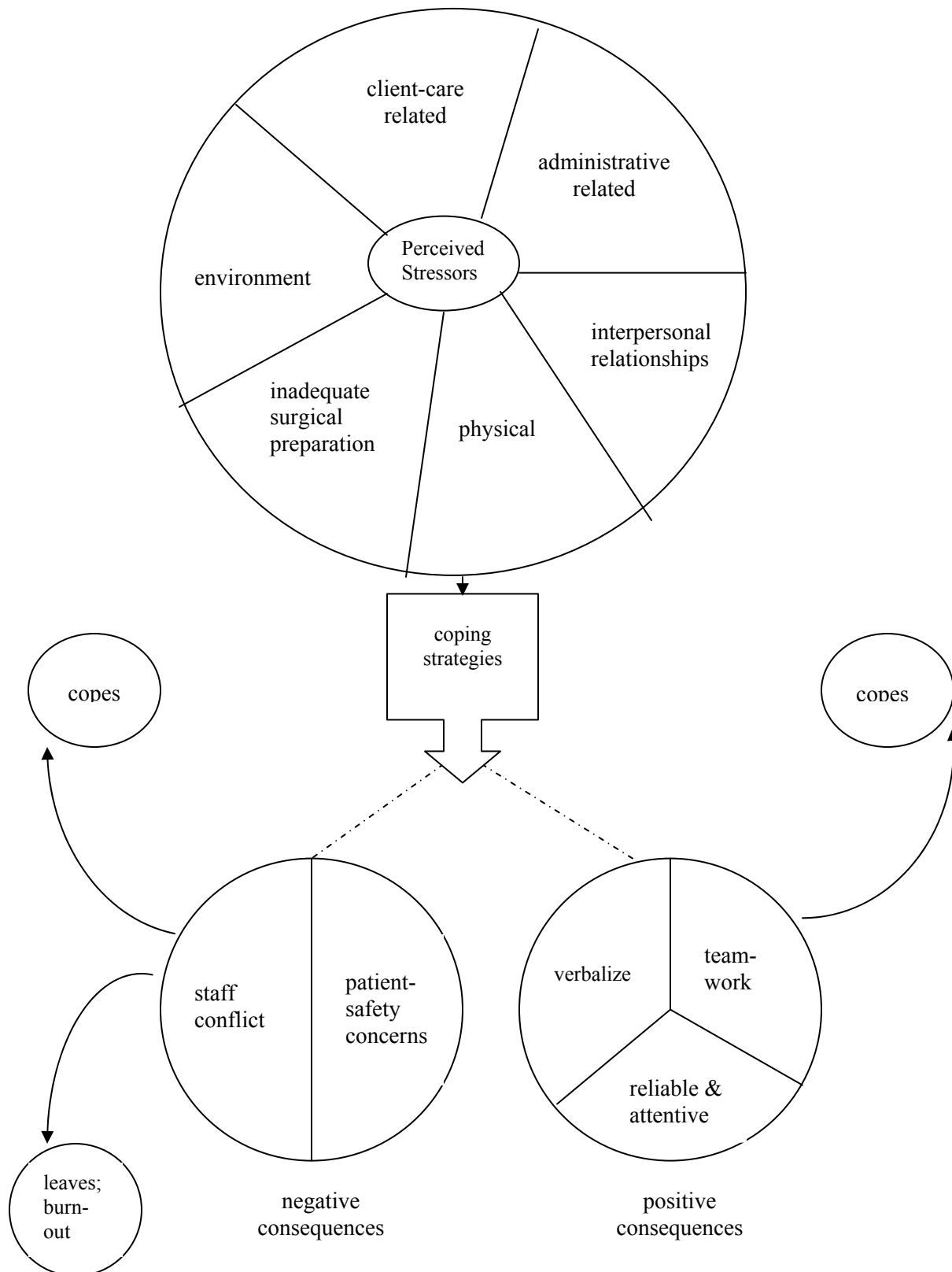
Molly: Molly works full-time as an OR technician for a hospital that provides outpatient surgical care. She has worked as a technician for close to 10 years.

Pete: At the time of our interview, Pete had worked with anesthetists for 25 years in OR. She is now retired and enjoys spending time with her grandchildren.

Susan: Susan works full-time as an OR nurse and 10 hours a week as a penitentiary nurse in NC. She has worked with CRNAs for 10 years and just recently applied to anesthesia school.

Zack: This single anesthesiologist has worked with CRNAs for six years. This participant works well with CRNAs and does not mind teaching them new procedures and techniques.

Appendix I
Concept Map



CURRICULUM VITAE

CAREER OBJECTIVE:

To become an active member in southwestern Virginia either by: a) instructing at a nearby college, b) working for local organizations implementing and evaluating community health programs, or c) utilizing advanced practice skills in other arenas of education, such as nursing or preventive health. Long-range goal includes publishing academic and dissertation material in a professional journal.

EDUCATION:

Virginia Tech—Blacksburg, Virginia

Graduated December 2002 with a Ph.D. in Curriculum and Instruction through the Teaching and Learning Department

Successfully defended dissertation research November 6, 2002

Honors and Accomplishments:

- Current GPA 3.97/4.0 index

University of Kentucky—Lexington, Kentucky

Master of Science Degree in Nursing awarded May 1999

Speciality: Community Health Clinical Nurse Specialist

Honors and Accomplishments:

- Cumulative Grade Point Average: 4.0/4.0 index
- Inducted as a member of Sigma Theta Tau (STT) International Nursing Honor Society April 1999. Continuing member in this organization

Western Carolina University—Cullowhee, North Carolina

Bachelor of Science Degree in Nursing awarded May 1996

Honors and Accomplishments:

- Cumulative Grade Point Average: 3.06/4.0 index
- Provided piano music for the Department of Nursing 1995 Recognition Ceremony
- Graduated cum laude (with praise)

University of North Carolina at Asheville—Asheville, North Carolina

Completed prerequisites for nursing program, 1992 to 1994

Honors and Accomplishments:

- Initiated into the Phi Eta Sigma Freshman Honor Society in 1994
- Cumulative Grade Point Average: 3.71/4.0 index
- Academic Dean's List, 4 semesters
- Represented the college on a missionary trip to the Ukraine in 1993 through the Baptist Student Union organization

CLINICAL & PROFESSIONAL EXPERIENCE:

Virginia Tech—Blacksburg, Virginia (January 2001 to May 2002)

- Worked as a Graduate Teaching Assistant for Dr. Richard Baffi of the Teaching and Learning Department for three semesters.
- Duties entailed evaluating graduate student presentations about health promotion programs and gerontological issues.
- Responsibilities included occasional lecturing for the undergraduate Personal Health class. Topics lectured on included tobacco use, immunity, and health consumerism.
- Conducted a phone assessment for local programs addressing youth prevention violence and suicide.
- Other duties entailed data analysis of Youth Risk Behavior Survey for Botetourt County for 2001. Data analyzed and charts created using Microsoft Excel.
- Other responsibilities included recruiting guest lecturers, administering exams, posting grades, and counseling students.
- Created surveys addressing parenting and youth behavior, and reporting survey results on Microsoft Excel in table and graph format.

American Cancer Society (ACS)—Roanoke, Virginia (January 2001 to June 2002)

- Hired as a consultant in conjunction with the Collaborative Evaluation Fellows Project through Virginia Tech. Worked with other doctorate students, and as a second-year doctorate student, assigning tasks to the first-year doctorate student.
- Duties included conducting 27 phone interviews of ACS personnel and various organizations that were trained in the Active For Life Worksite Health Promotion Program (AFL). Interviews were analyzed, coded and reported via graphs. Purpose of consultation was to conduct a process and outcomes evaluation.
- Presented AFL findings via a poster presentation at “Using Standards to Improve Practical Evaluation” Conference in Atlanta, Georgia June 12-14, 2002.
- Responsibilities entailed conducting 55 phone interviews of ACS volunteers for the Tell-A-Friend Program. Interviews were analyzed, coded and reported via tables and graphs. Purpose of consultation was to conduct a process evaluation of Tell-A-Friend in the areas of recruitment & training volunteer callers and coordinators, as well as the paperwork process.
- Presented findings via a poster presentation at “Using Standards to Improve Practical Evaluation” Conference in Atlanta, Georgia June 25-26, 2001.

Heritage Hall Nursing Home—Blacksburg, Virginia (October 1999 to April 2000)

- Worked as a Registered Nurse on evening shift providing skilled nursing care for a 40-bed gerontological unit. Supervised Nursing Assistant's and delegated responsibility and assignments to them.
- Nursing skills provided: administration of medications, performing invasive procedures (such as insertion of Foley catheters, nasogastric tubes, flushing of PIC lines), emergency care when needed, collecting lab samples, client teaching, and charting.
- Consulted with MDs, management staff, specialists (such as dietitians, physical therapists), and patients and their families to ensure appropriate and responsible care was provided.

- Completed paperwork in a timely manner. Some paperwork duties included patient charting, end-of-month reports, and behavioral reports for patients receiving psychiatric medication.
- Worked double shifts, overtime, and days off as well.

Breathitt County Health Department–Jackson, Kentucky (January 1998 to December 1998)

- Completed required clinical residency for M.S.N.
- Conducted health needs assessment of community.
- Created and implemented smoking prevention program for local schools.
- Worked extensively with the Director to ensure a successful needs assessment of community and to implement health program for elementary school children.
- Analyzed research data using the software package Quattro Pro. Reported results in academic papers.

Kentucky River Medical Center–Jackson, Kentucky (September 1996 to September 1997)

- As a Registered Nurse, worked when needed to fill-in for full-time nurses in various clinics throughout the local area.
- Assisted M.D. with variety of procedures, depending on type of clinic.
- Cared for pediatric and adult-aged patients.
- Typical duties included charting, administering medicines, client teaching, collecting lab samples, and obtaining patient EKGs.

Veterans Administration Medical Center–Asheville, North Carolina (May 1995 to December 1995)

- Worked as a Student Nurse Technician on the Cardiac floor.
- Assisted clients with activities of daily living, charting, giving and receiving end-of-shift report, aiding in client CPR, transporting patients to and from procedures, and monitoring and charting condition of clients who underwent cardiac catheterization.
- Performed technical skills such as wound care and insertion of Foley catheters, IVs and nasogastric tubes.

RESEARCH EXPERIENCE:

- May-September, 2002: conducted 35 interviews related to qualitative research dissertation on CRNAs and job-related stressors. The data was analyzed, coded, and themed. July 2002: observed for 65 clinical hours at a hospital for dissertation research.
- For a Cognitive Processes Course in the Spring of 2002, qualitative research of five meteorologists conducted on “Pattern Recognition and Weather Forecast Accuracy.”

CONTINUING EDUCATION:

- *Lifetime Weight Control: Patient Counseling*. 30 CECs earned October 2000 through Western Schools.
- Numerous self-study, one-hour CECs earned through “Education Design, Inc.” Some topics studied include: *Fluid Management in Hysteroscopic Surgery*; *Radial Artery Harvest for Coronary Artery Bypass*; *The Phenomenon of Pain: A Study Guide*;

Organ, Eye and Tissue Procurement; New Advances in Breast Biopsy; Electrosurgery: An Overview; and Topical Skin Adhesive.

- *Domestic Violence.* 5 CECs earned June 1999.
- *Health Assessment & Physical Exam.* 7.2 CECs earned Sept. 1997 sponsored by James H. Quillen VAMC, Johnson City, TN.
- *9th Annual Skin Care Workshop: Pressure Ulcers and Lower Extremity Ulcers.* 5.25 CECs earned May 1995 at VAMC in Asheville, NC.

PROFESSIONAL PUBLICATIONS:

- Perry, T., & Love-Norris, D. (June 2002). *Active For Life: Final Evaluation Report.* American Cancer Society: Mid-Atlantic Division.
- Baffi, C., Redican, K., Perry, T., & Salle, D. (September 2001). *Botetourt County 2001: Middle and High School Youth Risk Behavior Survey.* Virginia Tech: Blacksburg, VA.
- Evavold, S., Perry, T., & Baffi, C. (July 2001). *Tell A Friend Evaluation: Final Report.* American Cancer Society: Mid-Atlantic Division.
- Perry, T. (1998). *Smoking Prevention Program for Pre-K and Kindergartners.* Created for the Breathitt County Health Department and local schools. Perry, T: Author.
- Roberts, T. (1995). What you and your family should know about cardiac stents [brochure]. Published for VAMC, Asheville, NC. Roberts, T: Author.
- Roberts, T. (1993, November 13). Building friendships in the ukraine. *The Asheville Citizen-Times*, pp. 1C, 6C.

LICENSURE, CERTIFICATION AND SKILLS:

- Registered Nurse License, Virginia 1999-present, Kentucky 1996-1999.
- American Cancer Society training in Active For Life, a program encouraging people to be active in their workplace, November 2001.
- Adult CPR certified.
- Working use of WordPerfect, Quattro Pro Statistical Package, Power Point, Macintosh Supercard, and internet software.
- National Piano-Playing Auditions Local Member of Intermediate Class, certified by the American College of Musicians 1991-1992.

VOLUNTEER EXPERIENCE:

Five Mile Community Church—Jackson, Kentucky (Summers 1998 & 1999)

- Volunteer pianist and craft leader for Vacation Bible School.
- Taught Wednesday night Bible Study for seventh and eighth graders.

Reed Memorial Baptist Church—Asheville, North Carolina (June 1992 to June 1994)

- Volunteer pianist.

American Red Cross—Asheville, North Carolina (Spring of 1993)

- Volunteered to correctly label blood donations for shipment.

PRESENTATIONS:

- Poster Presentation “Active For Life Evaluation” June 13, 2002 for the American Cancer Society in Atlanta, Georgia.
- May 2002: Power Point Presentation to the National Weather Service in Blacksburg, VA. Research on “Pattern Recognition and Weather Forecast Accuracy” presented to staff meteorologists.
- Poster Presentation “Tell-A-Friend Evaluation” June 25, 2001 for the American Cancer Society in Atlanta, Georgia.

HONORS & AWARDS:

- Awarded First-place for the “Active For Life Evaluation” Poster Presentation, June 13, 2002.
- Awarded People’s Choice Award for the “Active For Life Evaluation” Poster Presentation, June 13, 2002.
- Awarded recognition plaque by American Cancer Society June 2002 for cancer control efforts through the Collaborative Evaluation Fellows Project.
- Awarded recognition plaque by American Cancer Society June 2001 for cancer control efforts through the Collaborative Evaluation Fellows Project.
- Hired by the American Cancer Society as a Fellows Participant.

ACTIVITIES/INTERESTS:

- Enjoys people, reading, hiking/walking, swimming, traveling, and playing the piano. Dr. Perry also enjoys the classroom setting.

Author's Note

Tristan Perry currently lives in Christiansburg, Virginia, with her husband of over six years, William, and their toy poodle, Nutmeg.

