

Workplace Aggression: Assessment of Prevalence in the Field of Nurse Anesthesia

Amelia Sakellaropoulos, CRNA, MS

Janine Pires, CRNA, MS

Donna Estes, CRNA, MS

Donna Jasinski, CRNA, PhD

The purpose of this study was to assess the prevalence of workplace aggression in the field of nurse anesthesia. A second focus was to assess the negative impact of aggressive behavior and how it affects the work environment of Certified Registered Nurse Anesthetists (CRNAs). Data analyses from the Workplace Aggression Research Questionnaire revealed that CRNAs experience verbal, active, and direct aggression more frequently than physical, passive, and indirect aggression. For all types of aggression, CRNAs indicated that supervisors are the most likely perpetrators, followed by coworkers. Female CRNAs experience aggression in the workplace more often than did male CRNAs, with

the largest percentage of incidents occurring against CRNAs 21 to 39 years old. A significant positive correlation exists between the level of workplace stress and experiences of verbal, direct, and active aggression. Qualitative data were consistent with the quantitative data, and converging patterns of verbal, active, and direct aggression emerged as the aggressive behaviors reported most frequently by CRNAs. Two additional key themes, patient safety and oppression, also emerged from the data.

Keywords: Abuse, harassment, threatening behavior, workplace aggression.

Workplace aggression is a serious issue that is on the rise and is a cause for great concern because of its broad range of consequences, which include a negative work environment and reduced employee well-being. Characteristics of aggression in the workplace include physical abuse, verbal abuse, sexual harassment, bullying, interpersonal conflict, and threatening behavior.¹⁻³ Behaviors that contribute to workplace aggression are backstabbing, negative criticism, lack of support, unwillingness to help out, social undermining, and isolating an individual.¹⁻³ The National Institute for Occupational Safety and Health reports that 1 million workers are assaulted each year.⁴ According to estimates of the Bureau of Labor Statistics, 2,637 nonfatal assaults on hospital workers occurred in 1999—a rate of 8.3 assaults per 10,000 workers.⁵ This rate is much higher than the rate of nonfatal assaults for all private-sector industries, which is 2 per 10,000 workers. (Note that the preceding data refer to all assaults by all individuals and, therefore, include assaults by employees and people other than employees.) In 2000, data showed that 48% of all nonfatal injuries from occupational assaults and violent acts occurred in healthcare and social services.⁵ Most of these incidents occurred in hospitals, nursing and personal care facilities, and residential care services.

Aggressive workplace behaviors can have adverse affects on healthcare workers, which can lead to increasing job stress, low morale, job dissatisfaction, and

strained working relationships and can also influence attitudes toward patients.³ Studies about workplace aggression are numerous. Very little evidence exists, however, about whether Certified Registered Nurse Anesthetists (CRNAs) experience the types of workplace aggression that other professionals experience. The purpose of this study was to assess the prevalence of workplace aggression in the field of nurse anesthesia. A second focus was to assess the impact of aggressive behavior and how it affects the work environment of CRNAs, if aggressive behavior exists in the CRNA workplace.

The framework for this study was the Neuman and Baron Theoretical Model of Workplace Aggression (TMWA; Figure).⁶ Neuman and Baron⁶ contend that workplace aggression arises out of a complex integration of social, situational, and environmental factors. Although the TMWA defines workplace aggression as a concerted effort by individuals to harm others with whom they work or the organizations in which they are presently or were previously employed, it asserts that the greatest percentage of work-related aggression occurs between coworkers (44.5%) as opposed to retaliatory action taken against a supervisor or subordinate.⁷

The relationship between what individual people feel and perceive has a significant impact on creating aggression between coworkers. The perception that one has been treated unfairly or been forced to suffer frustration at the hands of another can fuel anger and the desire to retaliate; however, hurt feelings and frustration might not

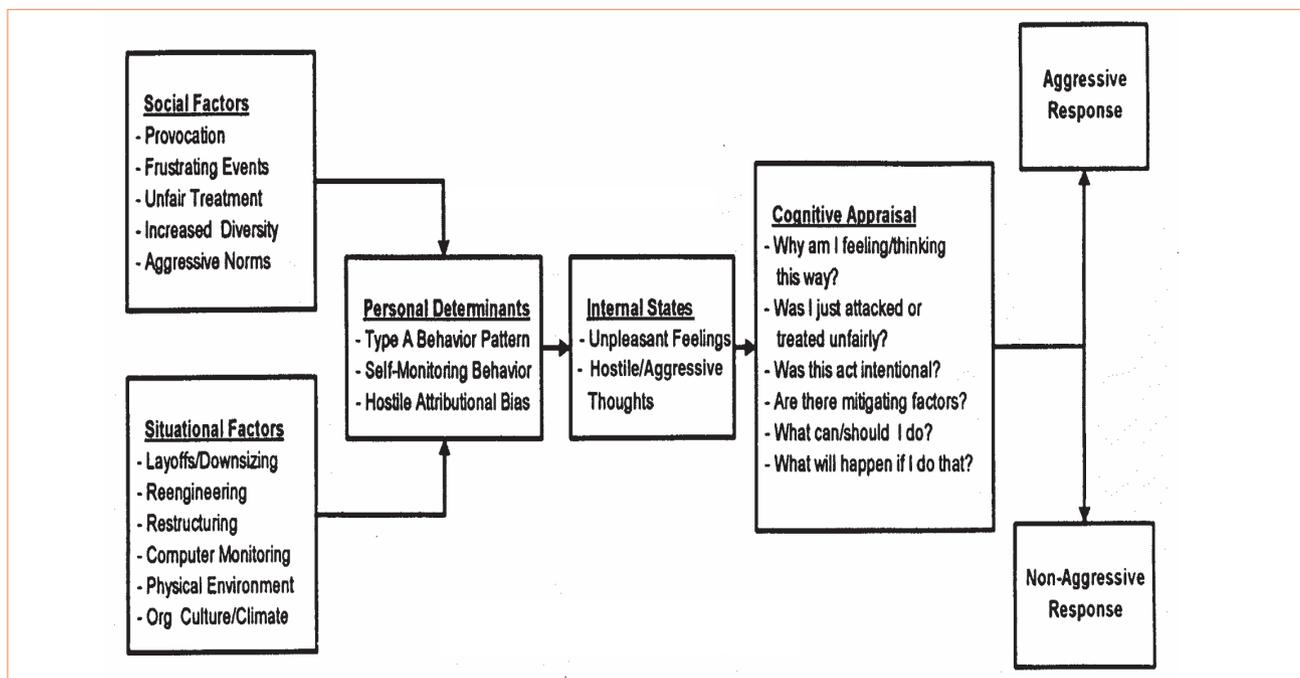


Figure. Theoretical Model of Workplace Aggression

Abbreviation: Org indicates organizational.

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lead a person to take action. People with self-monitoring behavior and social sensitivity tend to suppress negative feelings toward coworkers. On the other hand, people with type A behavior patterns, low self-monitoring attributes, and high reactivity to hostility will be more likely to express hostility toward others. The TMWA further posits that if the normative behavior within an organization accepts and condones antagonism, a workplace culture that permits or encourages aggression will readily flourish.⁶

The TMWA also incorporates situational factors and environmental circumstances in which workplace aggression may occur. Situational factors include any element of the situation that may contribute to stress or lead to an increased likelihood of aggression. Cognitive appraisal is cardinal to the stress and coping processes a person uses when confronted with aggressive behavior. It determines how an event is perceived and, therefore, acts as a key determinant of the outcome of the event. After initial exposure to an act of aggressive behavior, the person assesses whether the act was intentional or whether it could have been influenced by extenuating circumstances. Perceptions of malicious intent and the absence of explanations or signs of remorse may increase the likelihood of an aggressive response. What a person decides to do in response to a stressful event is largely determined by the person's acquired behavioral skills and, at the same time, is limited by the number of available responses to a given situation.^{8,9} Given the complexity of the cognitive

appraisal process, there are substantial opportunities for negative perceptions and probable aggression.

According to the TMWA theory, workplace aggression, whether overt or covert, can yield powerful psychological implications for CRNAs. The research questions that guided this study were as follows: (1) Do CRNAs experience workplace aggression? (2) What impact does workplace aggression have on CRNAs?

Methods

Following institutional review board approval and permission from the survey tool authors, the prevalence of workplace aggression in the field of nurse anesthesia and its impact on CRNAs was measured using the Workplace Aggression Research Questionnaire.¹⁰ The research tool is designed to identify an employee's exposure and response to workplace aggression. Part I-A includes 6-point Likert scale questions (1-65) and asks respondents to indicate how often (never to daily) they have been subjected to a behavior in the workplace and, if so, who was most responsible for the behavior. Question 66 is an open-ended question asking respondents to provide any other information. In part I-B (questions 67-83), respondents are asked which factors they think contributed to any or all of the experiences reported in part I-A. The questions in part I-B consists of dichotomous (yes/no) type questions. In part I-C, respondents are asked to respond to 2 Likert scale questions (85 and 86) regarding stress. The second section of the tool, part II (questions

87-98), is composed of demographic-type questions.

Neuman and Keashly¹⁰ reported the research tool reliability based on data obtained from a sample of respondents working for the US Department of Veterans Affairs during a 2-year period from November 2000 through November 2002. The reliability α for all survey tool items, based on complete data from 6,044 respondents, is equal to .95.¹⁰

The CRNA participants were randomly selected by the AANA Research and Membership Service departments from 30,168 active members. To be eligible for random selection, the CRNA had to be a member of AANA and actively practicing as a full- or part-time nurse anesthetist. The mailing was sent to 700 CRNAs. The CRNAs received the research tool accompanied by a cover letter and self-addressed, stamped, return envelope. The packets containing these materials were sent to the subjects by the researchers via the US Postal Service. Respondents had 3 weeks to return the tool to the researchers. A postcard reminder was sent to CRNAs who did not return the tool by the stated deadline.

Data analysis was conducted by using the Statistical Package for Social Sciences program (SPSS 15.0, SPSS Inc, Chicago, Illinois). The Pearson correlation coefficient and Fisher exact test were used to determine if relationships existed between specific variables and workplace aggression. In addition, a χ^2 analysis was performed to examine demographics and the expected prevalence of workplace aggression.

Results

The mailing to the nationwide sample generated a return of 205 surveys yielding a 29.3% response rate. The majority of the participants were female (62.9%), older than 50 years (49.5%), and white (91.3%). Most reported their job category as professional (98.5%), have been working for their organization for 1 to 5 years (38.5%), had no supervisory responsibilities (83.8%), and indicated that their primary workplace was located in a city with a population greater than 50,000 (63.6%). Table 1 gives the demographics of the sample.

To determine CRNAs' experience with workplace aggression, 205 responses to 60 questions describing aggressive behaviors were categorized on a Likert scale from 0 to 6 (Table 2). CRNAs ranked verbal (90.2%), active (92.2%), and direct (91.2%) aggression as occurring more frequently than physical (82.9%), passive (80.9%), and indirect (82.9%) aggression. In addition, for all types of aggression, CRNAs indicated that supervisors (58.4%) are the most likely perpetrators, followed by coworkers (36.6%).

The first research question was further examined by using the Pearson χ^2 and Fisher exact test to determine whether any significant relationships exist between the 6 subscales of aggressive behavior and the demographic

Demographic Variable	Results ^a
Gender	
Female	129 (62.9)
Male	76 (37.1)
Age (y)	
20-29	3/192 (1.6)
30-39	41/192 (21.4)
40-49	53/192 (27.6)
50-59	71/192 (37.0)
60+	24/192 (12.5)
Racial/ethnic background	
African American	4/195 (2.1)
Asian/Pacific Islander	4/195 (2.1)
White	178/195 (91.3)
Hispanic	3/195 (1.5)
Latino	1/195 (0.5)
Native American/Alaskan Native	0/195 (0.0)
Other	5/195 (2.6)
Level of supervisory responsibility	
None	166/198 (83.8)
Team leader	12/198 (6.1)
First line supervisor	6/198 (3.0)
Manager	13/198 (6.6)
Executive	1/198 (0.5)
Facility size (No. of beds)^b	
< 50	17/111 (15.3)
50-249	39/111 (35.1)
250-999	55/111 (49.5)
Time at current employer	
< 6 mo	7/195 (3.6)
6-11 mo	16/195 (8.2)
1-5 y	75/195 (38.5)
6-10 y	38/195 (19.5)
11-15 y	14/195 (7.2)
16-20 y	23/195 (11.8)
21-25 y	11/195 (5.6)
> 25 y	11/195 (5.6)

Table 1. Demographic Data for 205 Survey Respondents

^aData are given as number (percentage) or, when the number is not 205, as number/total (percentage).

^bSome data are missing.

variables. A significant relationship ($P < .05$) was found between gender and verbal aggression ($\chi^2 = 5.2$; $P = .02$), between gender and active aggression ($\chi^2 = 5.2$; $P = .02$), and between gender and passive aggression ($\chi^2 = 4.0$; $P = .04$); the effect size (mean = .15) was small. Results indicated that female CRNAs (mean, 106 [89.1%]) experienced verbal, active, and passive aggression in the workplace more often than did male CRNAs (mean, 63 [83%]; Table 3).

Behavior	No. of Questions	Sample Size	No. (%) of Respondents Who Experienced Aggression	Scale Reliability
Verbal	40	204	184 (90.2)	.942
Physical	20	205	170 (82.9)	.802
Active	43	205	189 (92.2)	.935
Passive	17	204	165 (80.9)	.879
Direct	45	204	186 (91.2)	.935
Indirect	15	205	170 (82.9)	.855

Table 2. First Research Question Results: CRNAs Experiencing Workplace Aggression

Behavior Gender	Number	Percentage Within Gender
Verbal	184	
Male	68	89
Female	116	89.9
Physical	170	
Male	60	79
Female	110	85.3
Passive	165	
Male	58	76
Female	107	82.9
Active	189	
Male	66	87
Female	123	95.3
Direct	186	
Male	68	89
Female	118	91.5
Indirect	170	
Male	59	78
Female	111	86.0

Table 3. Workplace Aggression Experienced by Gender^a

^aThere were 76 male respondents and 129 female respondents.

Another significant relationship ($P < .05$) occurred between age and active aggression ($\chi^2 = 7.9$; $P = .049$); the effect size is small. The results demonstrated that regardless of age, most CRNAs (92.2%) in this sample experienced active aggression in the workplace. The largest percentage of active aggression occurred against CRNAs aged 21 to 39 and decreased with increased age (Table 4).

Consequently, for this sample, regarding aggressive behaviors and demographic variables, the following were found: (1) Female gender is associated with more incidents of workplace aggression. (2) Active aggression is encountered by CRNAs of all ages, yet the greatest percentage occurred against CRNAs 21 to 39 years of age. There were no significant relationships ($P > .05$) between aggressive behavior and the following demographics: job category, level of supervisory responsibility, bargaining unit status, size of city of primary workplace, facility size, length of work at present organization, length at present

Age Group (y)	No. (%)
20-39 (n = 44)	44 (100)
40-49 (n = 53)	50 (94)
50-59 (n = 71)	53 (75)
60+ (n = 24)	20 (83)
No age reported (n = 13)	12 (92)

Table 4. Percentage of CRNAs Experiencing Active Workplace Aggression by Age

job, ethnic diversity of workplace, and ratio of men to women in the workplace.

To examine the impact of workplace aggression on CRNAs, respondents rated 2 statements: (1) "I feel tense and stressed on my job." (2) "Work is a source of stress for me." The Pearson correlation coefficient was performed to determine if a significant relationship existed between CRNAs' stress at work and the positively correlated independent variables: verbal, active, and direct aggression. There was a significant positive correlation ($P < .001$) between "feeling tense/stressed at job" and verbal, direct, and active aggression ($r = 0.45$, $r = 0.43$, and $r = 0.41$, respectively). In addition, the second statement, "Work is a source of stress for me," was positively and significantly correlated ($P < .001$) with CRNAs' experience with verbal, direct, and active aggression ($r = 0.38$, $r = 0.37$, and $r = 0.35$, respectively). Relationships among workplace aggression and stress are depicted in Table 5. There was a significant correlation ($P < .001$) between workplace aggression and the level of agreement to workplace stress. The higher the scores on verbal, active, and direct aggression scales, the higher the rating on workplace stress and feeling stressed.

• *Qualitative Data.* The research tool included 3 open-ended items that directed the subjects to list any "other" behaviors they have experienced in the workplace. The response data were evaluated by using qualitative content analysis. Through careful reflection on emergent themes, the essence of the respondents' experiences surfaced. Three key aggressive behavior themes emerged from the free-response written data: verbal, active, and direct aggression.

Of the 81 written responses, 22 CRNAs reported ex-

Variable	N ^a	r	P
Feel tense/stress at work	196	0.85	< .001
Verbal	204	0.45	< .001
Active	196	0.41	< .001
Direct	196	0.43	< .001
Work a source of stress	196	0.85	< .001
Verbal	204	0.38	< .001
Active	196	0.35	< .001
Direct	196	0.37	< .001

Table 5. Effect on CRNAs and Level of Agreement With Workplace Stress

^aThere were 205 survey respondents; values less than 205 indicate that stress was not reported.

periences with verbal aggression (Table 6). The following quote is an example of the category “verbal aggressive behavior”: “verbal abuse daily from a very unstable military anesthesiologist in charge; he had the classic Dr Jeckle and Mr Hyde personality disorder; he continues to abuse people, but, thank God, it’s not me.” Responses from 15 CRNAs were categorized as “indirect aggressive behavior.” This category developed from responses such as “ostracism,” “not being relieved for breaks,” and “older CRNAs being given bad assignments or made to feel incompetent for ‘old-fashioned’ ways, although [their practice is] safe.” The third category, “direct aggressive behavior,” was developed from 9 responses. Examples include “an [anesthesiologist] harasses me daily”; and “prolonged work hours so superior can escape his home life and sex addiction; this abuse of power was extremely detrimental to the entire staff, both mentally (anguish and despair) to physically exhausting; the superior and the subordinate were involved and the whole department suffered.” The remaining 32 responses did not fall into aggressive behavior categories and were coded to identify common threads. Two other major themes emerged: patient safety and oppression.

A key finding from analyses of the qualitative data was that 21% of respondents (n = 17) indicated that workplace aggression may have an effect on patient safety. The following quotes convey this: “The illusion of improved patient safety within anesthesia practice has allowed an environment to develop whereby we are not respected in the OR [operating room] (or similar settings).” “The ‘time out’ is a rare moment of decorum and respect for our patients, yet selfish behaviors abound.” “Surgeons play inappropriate music in the OR (vulgar lyrics, excessive volume).” “[I have] been encouraged to perform an anesthetic procedure on a patient which is unsafe for that patient.” “[I have been] rushed to extubate the patient before the patient was ready.” “[I have been] encouraged to perform [an] anesthetic procedure on a patient (ie, spinal, epidural, blocks) which was refused by that patient.” “Most surgeons and

Theme or Category	Number	Percentage of Total
Verbal aggression	22	27
Indirect aggression	15	19
Direct aggression	12	15
Patient safety	17	21
Oppression	10	12
Work environment	3	4
Aversion	2	2

Table 6. Qualitative Results From 81 Responses to Open-Ended Questions

anesthesiologists care about money and don’t have the patient’s best interest as the primary focus.” “It is the CRNA’s responsibility to protect the patients, even from the surgeons and [anesthesiologists] if need be.... Stand your ground and protect the patient.”

The second key concept developed from responses was categorized as oppression. CNRAs’ responses (n = 10 [12%]) were analyzed, and the following quotes convey a possibility that oppression may have a role in workplace aggressive behavior: “[There is] no opportunity for advancement in field or to be able to get a ‘good’ evaluation and possible raise in pay unless achieving close to impossible goals; good job/safe patient care is expected, not positively reinforced or recognized.” “CRNAs are made to feel incompetent by [physicians’] remarks about them without foundation for it and made to feel they cannot work without [physician] supervision.” “Administration is less likely to defend their staff against problem physicians (supervisors) and customers (patients). All they care about is their PR [public relations] image and marketing.” “Surgeons get away with awful behavior and expect everyone to ‘deal’ with it (temper tantrums, yelling, blaming).”

Overall, the results indicate that CRNAs are exposed to workplace aggression of varying degrees, particularly when gender and age are accounted for. A positive correlation exists between workplace stress and several forms of workplace aggression. Integration of qualitative and quantitative data adds to the understanding of relationships and causal processes of workplace aggression.

Discussion

The results of CRNAs’ experience with workplace aggression deviated from the findings of studies conducted by Baron and Neuman⁷⁻⁹ and Neuman and Keashly,¹⁰ who studied the prevalence of aggressive behavior within private, public, and hospital (except perioperative units) workplace settings. Through analysis of data gathered via the Workplace Aggression Research Questionnaire, Baron and Neuman⁷⁻⁹ and Neuman and Keashly¹⁰ found that work-related aggression is typically verbal, indirect, and passive and tends to occur between coworkers as

opposed to overt action taken against a supervisor or subordinates. In the present study, it was found that CRNAs experience abuse in the workplace; however, more women (93.0%) than men (63/76 [83%]) encountered mostly verbal, active, and direct abuse, not the verbal, indirect, and passive aggression found in the studies by Baron and Neuman⁷⁻⁹ and Neuman and Keashly.¹⁰ Most of the surveyed CRNAs (92.2%) experienced *active* aggression, regardless of age; however, the largest percentage of active aggression was directed against female CRNAs within the 20- to 39-year-old categories. Furthermore, the current study findings have indicated that supervisors, and not coworkers, are more likely to carry out the aggressive acts. We can surmise 2 significant issues from these results: (1) The operating room arena is highly volatile and does not function under the same protocols as that found in other private, public, or hospital work settings. (2) Young female CRNAs may be vulnerable targets trying to cope within this volatile environment.

The volatility within the operating arena is known and has recently been the subject of studies as an anomaly in workplace aggression. According to Allen,¹¹ disruptive behavior between surgeons and other members of the surgical team is frequent and overt and may be a major factor contributing to compromised patient safety and employee retention and health. Rosenstein and O'Daniel,^{12,13} Rosenstein et al,¹⁴ and Rosenstein¹⁵ examined the relationships among surgeons, surgical residents, anesthesiologists, CRNAs, student registered nurse anesthetists, and nurses during the preoperative, perioperative, and postoperative periods. They found that more than 75% of the respondents admitted to witnessing or being involved with disruptive behavior ranging from verbal abuse to physical and sexual harassment.¹²⁻¹⁵ Respondents also reported that such behavior was not occasional or random, but witnessed on a weekly basis with most of the disruptive behavior perpetrated by surgeons (75%) or anesthesiologists (64%). Disruptive behavior has been described as "yelling, disrespectful interaction, abusive language, berating others in front of peers, condescension, insults, abusive anger and physical abuse."¹⁶

Hospital administrators throughout the United States have been made aware of the accusations that some physicians and surgeons are abusive to other healthcare workers.¹³ In response, a movement by hospital administrators to curb disruptive behavior started in 1990 and resulted in the creation of a "corrective action" section in many medical staff bylaws in a provision known as the "disruptive physician" clause.¹⁷ It must be noted that hospital administrative action such as formulating corrective action clauses has done little to curb disruptive behavior and, indeed, the clauses are viewed by physicians themselves as "weapons of physician destruction," "treacherous traps,"¹⁷ and deterrents to patient advoca-

cacy.¹⁶ The results of research pointing to the deleterious effects of perioperative disruption are being brushed aside by members of the medical community with comments like: "I neither champion nor condone yelling in the OR...; on the other hand, we all need to remember the hospitals are for patients and there are times when surgeons may offend others inadvertently when advocating for optimal patient care."¹⁶

The significant positive correlation ($P < .001$) between feelings of increased stress and tension at work related to verbal, active, and direct abuse does not bode well for CRNAs and, in particular, for female CRNAs within the 20- to 39-year-old categories, who are most likely to be the target of abuse. Melchior et al¹⁸ found in a prospective longitudinal analysis that young working adults in high-psychological-stress jobs with concomitant high stress levels from excessive workloads or time pressures are experiencing major depressive and generalized anxiety disorders in increasing numbers. These young adults are at a 2-fold greater risk of psychiatric disorders than are peers with fewer job demands. Hickman¹⁹ posits that people who are targeted in the workplace experience increased job stress, resulting in job dissatisfaction, strained coworker-supervisor relationships, a negative mindset with lowered expectations, and a propensity toward acting out aggressively, thus perpetuating a cycle of organizational aggression.

Young female CRNAs are most at risk for experiencing workplace aggression in the OR, and the fact that they are at the greatest risk for experiencing the negative effects of workplace abuse cannot be denied. What can explain the exceptionally large percentage of young female respondents who feel the brunt of aggressive behavior? Perhaps, younger women have a lower set point for what is perceived as abuse and report aggressive behavior sooner than do men or even their older counterparts. Johnson²⁰ sees a distinct change in work values and attitudes demonstrated as increasing stability through the progression from young to older adult that are expressed as confidence, savvy, skill, and problem-solving capabilities. Johnson²⁰ also notes that occupational aspirations, work values, and expectations involving coworker and supervisory relationships become more realistic over time.

Hickman,¹⁹ in studying victimization, suggested that men and women may be victimized equally, but women tend to report what they have experienced. Indeed, market researchers have found that men are notable non-respondents to paper, online, and telephone surveys.²¹ In addition, Hickman¹⁹ posits that women may be more sensitive "and/or aware of violations of relational contracts," but counters with the thought that women are also just as likely to externalize their own problems and blame others through some form of "reporting" to workplace authorities. Beugré²² argues that women's perceptions of "injustice in the form of workplace abuse" are followed

by moral outrage, anger, and resentment and can pave the way for some type of retaliatory response. This type of response has not been demonstrated by the young female CRNAs, and they are not involved in perpetrating aggressive behavior. On the contrary, as Rosenstein and O'Daniel¹² pointed out, CRNAs are the least likely to be involved in disruptive behavior in the OR. What is at risk is a vital group of professionals who may lack skills in conflict resolution and are at risk for experiencing mentally and physically manifested stress disorders, job dissatisfaction that ultimately leads to poor performance, and high job turnover.

Research has substantiated what has already been seen and acknowledged by hospital administrators: aggressive and disruptive behaviors between physicians and members of the healthcare team have compromised patient safety, created job stress, and contributed to negative attitudes, high job turnover, and feelings of powerlessness.¹²⁻¹⁵ Workplace aggression tends to occur when employees experience interpersonal injustice. Interpersonal injustice is described as employees' perceptions of being treated with a lack of courtesy, respect, and sensitivity by those responsible for carrying out medical procedures.²³ Interpersonal injustice is without dispute the most important causes of human aggression.²⁴ The qualitative comments expressed in the open-ended questions on the survey indicate that CRNAs are experiencing feelings of injustice. Fortunately, the professional demeanor of the nurse anesthesia community has prevailed, and aggressive behavior among CRNAs has not been prevalent according to the study results.

Conclusion

Although prior research has shown that CRNAs have witnessed abuse and are not major perpetrators of aggressive behavior, past studies have not examined whether CRNAs are the targets of abuse or the effect of abuse on job satisfaction and overall well-being. This study reveals that most CRNA respondents were exposed to aggressive behaviors. More young female CRNAs experience targeted verbal, active, and direct aggression and experience varying degrees of job stress and dissatisfaction. It is our hope that the results of this study heighten awareness and lead to efforts directed at decreasing these aggressive behaviors and promoting strategies to cope and avoid the negative outcomes within the CRNA profession.

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AUTHORS

Amelia Sakellaropoulos, CRNA, MS, is a graduate of Georgetown University Nurse Anesthesia Program, Washington, DC.

Janine Pires, CRNA, MS, is a graduate of Georgetown University Nurse Anesthesia Program.

Donna Estes, CRNA, MS, is a graduate of Georgetown University Nurse Anesthesia Program.

Donna Jasinski, CRNA, PhD, is the program director at Georgetown University Nurse Anesthesia Program, Washington, DC. Email: jasinskd@georgetown.edu.