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Workplace Violence Pervasiveness in the Perioperative Environment: A Multiprofessional Survey

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Background: Workplace violence in health care has gained attention with its rising incidence and its impact on patient safety and clinician well-being. Legal and regulatory organizational requirements related to workplace violence are broadening, including updated Joint Commission standards. Although workplace violence surveys have been administered across health care settings, the few that have focused on the perioperative environment have predominantly been single-profession surveys.

Methods: This cross-sectional, prospective survey focused on perioperative care was conducted by the Anesthesia Patient Safety Foundation using simultaneous convenience sampling across professional societies representing anesthesiologist assistants, certified registered nurse anesthetists, physicians, and registered nurses. Descriptive statistics were used to summarize responses, and multivariable regression was used to model the odds of experiencing or witnessing physical or nonphysical workplace violence. Open-text entries were analyzed using thematic analysis.

Results: Of 4,662 survey respondents, 3,645 (78.2%) reported some form of workplace violence: 1,446 (31.0%) experienced physical workplace violence, 1,718 (36.9%) witnessed physical workplace violence, and 3,226 (69.2%) experienced nonphysical workplace violence. Fewer than half (49.8%) of the respondents experiencing physical workplace violence and fewer than one third (31.4%) of the respondents experiencing nonphysical workplace violence felt that the "situation was addressed and resolved to their satisfaction."

Conclusion: Workplace violence is commonplace and reported by all perioperative professionals. There is a pressing need for actions at multiple levels to respond to and eventually eliminate perioperative workplace violence, preventing harm to both patients and staff.

Health care workers are at increased risk of workplace violence. The Joint Commission defines workplace violence as "an act or threat occurring at the workplace that can include any of the following: verbal, nonverbal, written, or physical aggression; threatening, intimidating, harassing, or humiliating words or actions; bullying; sabotage; sexual harassment; physical assaults; or other behaviors of concern involving staff, licensed practitioners, patients, or visitors."[1(p.1)] They have established updated workplace violence standards within the environment of care, human resources, and leadership sections effective January 2022. These updated standards include that a hospital performs an annual analysis of its workplace violence program, establishes processes to monitor, reports and investigates incidents, takes actions to mitigate and resolve risks, and provides ongoing education and training.[2]

In 2016, people working in the health care and social assistance industry in the United States were found to disproportionately experience workplace violence; they constitute approximately 13% of the total workforce but reported 60% of workplace violence incidents. In 2020, this number had increased to 76%.[3,4] Despite their high incidence, it is widely presumed that incidents of workplace violence are underreported for many reasons, including a health care culture that regards workplace violence as routine and an inherent part of the job.[5]

Looking particularly at nonphysical workplace violence or incivility and beyond health care to industry as a whole, there is a concerning upward trend over time. Porath conducted a series of global surveys across more than 25 industries, showing that individuals experienced incivility monthly at 50% in 2005, 55% in 2011, 62% in 2016, and 76% in 2022.[6] Porath's studies highlight how such experiences erode cognitive processes, leading to a negative impact on performance, creativity, and work effort. Similar studies in the health care environment have shown that incivility and rudeness can critically affect a team's communication and information-sharing during crisis simulations.[7–9]

Both physical and nonphysical workplace violence can adversely affect workforce engagement, retention and recruitment, burnout, and physical and mental injury.[10,11] Recent studies have shown that more than one in five physi-

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cians reported experiencing mistreatment in the previous 12 months, and these experiences were linked to an increase in burnout with a dose-response relationship.[12] Workplace violence also has a ripple effect on measurable patient outcomes, including hospital-acquired infections, medication errors, and standardized mortality ratios.[13]

Workplace violence surveys have often focused on emergency departments and psychiatry wards, which are considered high-risk areas for such incidents. Few surveys have explored the prevalence of workplace violence in the perioperative setting, where the controlled environment might be assumed to be less susceptible. Still, the perioperative setting is marked by time pressure, high stakes, and the need to coordinate care across multiple professions. In 2011 a survey of certified registered nurse anesthetists (CRNAs) found an 80% prevalence of workplace aggression.[14] A 2019 survey of surgical residents identified a 50% prevalence of nonphysical workplace violence.[15] In 2018 we conducted a survey of anesthesiologists, revealing a 20% prevalence of physical violence and 69% prevalence of nonphysical violence.[16] Survey results from the Association of American Medical Colleges (AAMC) in 2022 demonstrated that anesthesiology faculty, both women and men, had the highest proportions of reported sexual harassment experiences among 27 medical specialties within the past 12 months.[17]

Internationally, 92.1% of operating room (OR) nurses surveyed across 26 hospitals in China reported experiencing workplace psychological violence.[18] In Australia 61.5% of perioperative nurses reported being exposed to workplace bullying with consequences of fatigue, exhaustion, anxiety, and sleeplessness and a descriptive correlation to increased burnout.[19] A Canadian research effort distributed a perioperative multiprofessional survey on disruptive behavior covering seven countries (including the United States) between 2012 and 2014. They found that up to 98% of clinicians reported witnessing perioperative disruptive behavior in the previous 12 months.[20]

With the exception of Villafranca et al.,[20] most perioperative workplace violence surveys focus on a single profession or on a small number of institutions. What is missing from the literature is a robust contemporary multiprofessional cross-geographic survey focused in the United States. As culture is a significant factor in behavioral expectations, a US–centric survey will help draw attention and provide new insights into the prevalence and impact of workplace violence in perioperative care. The Anesthesia Patient Safety Foundation (APSF) therefore conducted a survey in the summer of 2021 focused on the full perioperative team, including anesthesiologists, CRNAs, certified anesthesiologist assistants (CAAs), surgeons, OR nurses, and perianesthesia nurses. The aim of the survey was to gain a deeper understanding of physical and nonphysical workplace violence in the perioperative environment, to inform interventions and next steps, and ultimately to decrease workplace violence and mitigate its impacts.

METHODS

Ethical Approval and Reporting Guidelines

This prospective cross-sectional survey underwent review and received Institutional Review Board (IRB) approval as exempt from the Pearl IRB (Pearl IRB Review Number #21-DLIN-101). The consensus-based Checklist for Reporting of Survey Studies (CROSS)[21] and the Standards for Reporting Qualitative Research (SRQR)[22] were used to guide reporting results in this manuscript.

Survey Instrument

The 29-item survey (Appendix 1, available in online article) was finalized by a subset of the author team [D.M.L., J.A.L., L.J.R., B.D.G.] based on a review of the literature and clinical experience. Twenty-two of the questions were identical to those included in a previously published 2018 study.[16] Survey questions were vetted for face validity with a group of patient safety experts, the American Society of Anesthesiologists (ACS) Patient Safety and Education Committee, and the APSF annual conference planning subcommittee of board members. Eight of the questions focused on demographics.

Eligibility, Recruitment, and Distribution

Eligible respondents included any clinicians in the following groups, presented alphabetically: anesthesiologists, CAAs, CRNAs, OR nurses, perianesthesia recovery room nurses, surgeons, and surgical or anesthesiology technologists. Eligible participants indicated if they were currently a "clinician in practice, training completed" or a "resident/fellow/trainee." Participants practicing outside the United States were excluded for several reasons: The author team did not have access to international participants representing each eligible respondent type; cultural norms about workplace behavior were expected to differ across countries; and translation of the survey instrument into multiple languages was beyond the scope of the original project. Survey invitations were distributed by the following US–based professional societies representing each eligible respondent type, following the typical survey distribution procedures for each organization: American Academy of Anesthesiologist Assistants (AAAA), American Association of Nurse Anesthesiology (AANA), American College of Surgeons (ACS), American Society of Anesthesiologists (ASA), American Society of PeriAnesthesia Nurses (ASPAN), Association of periOperative Registered Nurses (AORN), Association of Surgical Technologists (AST), and American Society of Anesthesia Technologists and Technicians (ASATT). The survey was administered through the SurveyMonkey platform (anonymous collector and single response options activated) and was open from June 7, 2021, to July 19, 2021. Professional societies had the option to send reminders during the survey period. Precise denominator data were not

made available by the participating organizations, precluding determination of a survey response rate.

Data Analysis

For quantitative data, we used descriptive statistics to summarize responses to survey questions. We developed a multivariable logistic regression model for each of two binary outcomes: witnessing or experiencing either physical violence or nonphysical violence. Model covariates included gender, age cohorts, region of the United States, race, and ethnicity. Statistical significance was defined as $p < 0.05$. Adjusted odds ratios and 95% confidence intervals were calculated. The analysis was generated using SAS 9.4 (SAS Institute Inc., Cary, North Carolina).

Qualitative data comprised open-ended survey question responses. The objective of the qualitative data analysis was to add context and explanatory depth to the quantitative findings and to highlight potential limitations of closed-ended survey questions to inform future research. The qualitative data analysis was directed by an author with expertise in multiple qualitative data analytic traditions [M.L.F.]. To analyze qualitative data, we used an inductive approach that combined features of qualitative description[23] and codebook-based thematic analysis.[24] Specifically, two authors with expertise in perioperative clinical care [D.M.L., M.L.F.] reviewed all the responses from open-ended questions to develop a codebook reflecting concepts present in the data. After the initial codebook creation, the coding team [D.M.L., M.L.F., Y.X.] met multiple times to discuss the evolving codebook, code definitions, and emergent themes. One author, a medical student [Y.X.], coded all the data using the codebook and grouped the codes into larger themes. The other two members of the coding team [D.M.L., M.L.F.] independently coded a random 20% sample of the data to ensure consistent coding. Interrater reliability was not calculated, as all data were coded by a single person. Code frequencies are not reported because open-ended responses were not provided by all respondents, obscuring the meaning of code frequencies. Coding was conducted using Microsoft Excel (Microsoft Corp., Redmond, Washington).

RESULTS

Quantitative Findings

We received 4,662 survey responses across various perioperative professions (Table 1). Respondents had the option to choose multiple clinical practice locations; 79.3% practiced in the OR, and 52.4% practiced in the pre/post procedural areas. The primary geographic practice location of the respondents was spread evenly across the country. Of those who responded, 34.6% were male, and 82.2% were within the age range of 35 to 65 years.

Overall, 3,645 (78.2%) respondents reported at least one form of workplace violence—experiencing physical violence, witnessing physical violence, and/or experiencing nonphysical workplace violence. Of the 4,662 responses, 31.0% reported experiencing physical workplace violence, 36.9% reported witnessing physical workplace violence, and 69.2% reported experiencing nonphysical workplace violence (Table 2).

Table 1. Survey Respondent Demographics

Primary Role	*n*	%
Anesthesiologist	1,881	40.3
Resident/fellow in training	101	2.2
Certified registered nurse anesthetist	384	8.2
Certified anesthesiologist assistant	184	3.9
Physician surgeon	108	2.3
Registered nurse in the pre/post anesthesia care unit	985	21.1
Registered nurse in the operating room	949	20.4
Anesthesia technician	17	0.4
Surgical technician	11	0.2
Other advanced practice clinician	42	0.9
Practice Location (select all categories that apply)	**#**	**%**
Operating room and/or procedural room	3,697	79.3
Pre/post anesthesia care unit (PACU)	2,444	52.4
Chronic pain management	207	4.4
ICU	349	7.5
Primary Geographic Practice Location in United States	**#**	**%**
Northeast	984	21.1
Midwest	1,107	23.7
South	1,581	33.9
West	990	21.2
Gender (optional)	**#**	**%**
Man	1,492	34.6
Nonbinary	14	0.3
Woman	2,809	65.1
Age in Years (optional)	**#**	**%**
< 35	391	9.2
35–45	1,010	23.7
46–55	1,117	26.2
56–65	1,374	32.3
> 65	368	8.6

Notably, only about half of occurrences of physical and nonphysical violence (54.8% and 50.8%, respectively) were formally reported, and very few (5.8% and 5.1%, respectively) resulted in time away from work. When respondents were asked if they felt that the "situation was addressed and resolved to their satisfaction," 49.8% of those who experienced physical workplace violence replied "yes," whereas only 31.4% of the respondents who experienced nonphysical workplace violence replied "yes" (Table 2).

The most common source of physical workplace violence (both experienced and witnessed) came from "patient or patient family member/friend" (experienced 66.7%, witnessed 57.2%), followed by "a physician in my perioperative environment." In contrast, the most common source of nonphysical workplace violence came from "a physician in my perioperative environment" (51.2%), followed by "patient or patient family member/friend" (34.1%) (Figure 1).

Table 2. Experiencing Workplace Violence and Receiving Workplace Violence Training: Overall Survey Responses

	Physical Workplace Violence (% Yes)	Witnessing Physical Workplace Violence (% Yes)	Nonphysical Workplace Violence (% Yes)
Experienced or witnessed physical violence, or experienced nonphysical violence	31.0	36.9	69.2
Reported incident to supervisor, human resources, hospital, leadership, and/or law enforcement	54.8	--	50.8
Resulted in time away from work	5.8	--	5.1
Felt situation was addressed and resolved to their satisfaction	49.8	50.2	31.4

	Training (% Yes)
Received training on de-escalation of a threat in the workplace	53.4
In the last 24 months, received de-escalation training of a threat in the workplace	70.4
Received training on what to do during an active shooter (e.g., Silver Alert) threat in the workplace	70.9
In the last 24 months, received training on what to do during an active shooter threat in the workplace	78.6

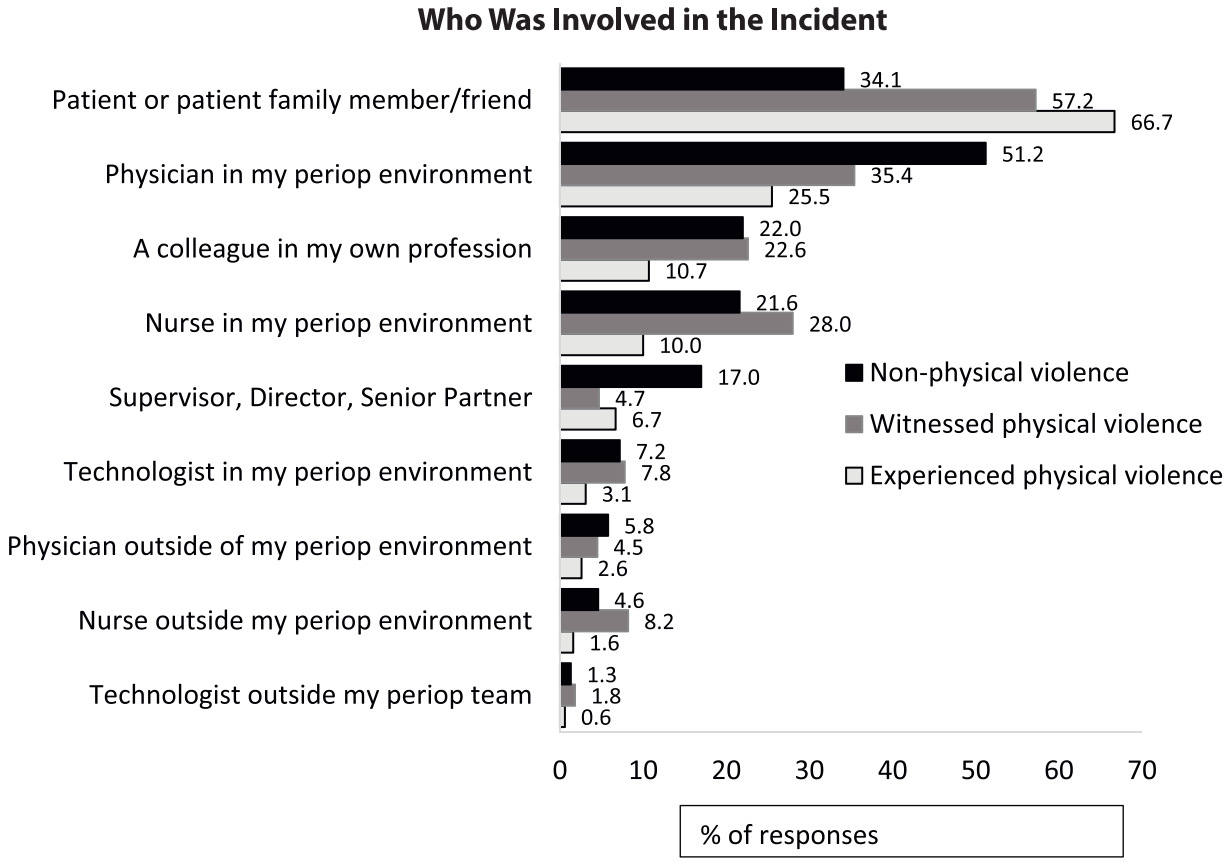


Figure 1: This bar graph shows survey responses to the question, "Who was involved in the workplace violence incident?"

The prevalence of workplace violence among survey respondents was high across all professions, with physical violence ranging from 16.3% to 53.9%, witnessed physical violence ranging from 21.2% to 50.7%, and nonphysical violence ranging from 51.4% to 78.4% (Figure 2). Particularly concerning, 13.7% reported nonphysical violence occurring monthly, 9.8% experienced it monthly to quarterly, and 7.6% encountered it quarterly. Notably, some respondents indicated in their written open text that they experience nonphysical workplace violence daily. In total, almost a third of the respondents experiencing nonphysical violence experience it at least quarterly (Figure 3).

Statistical analysis showed a higher adjusted odds ratio for women reporting experiencing nonphysical violence

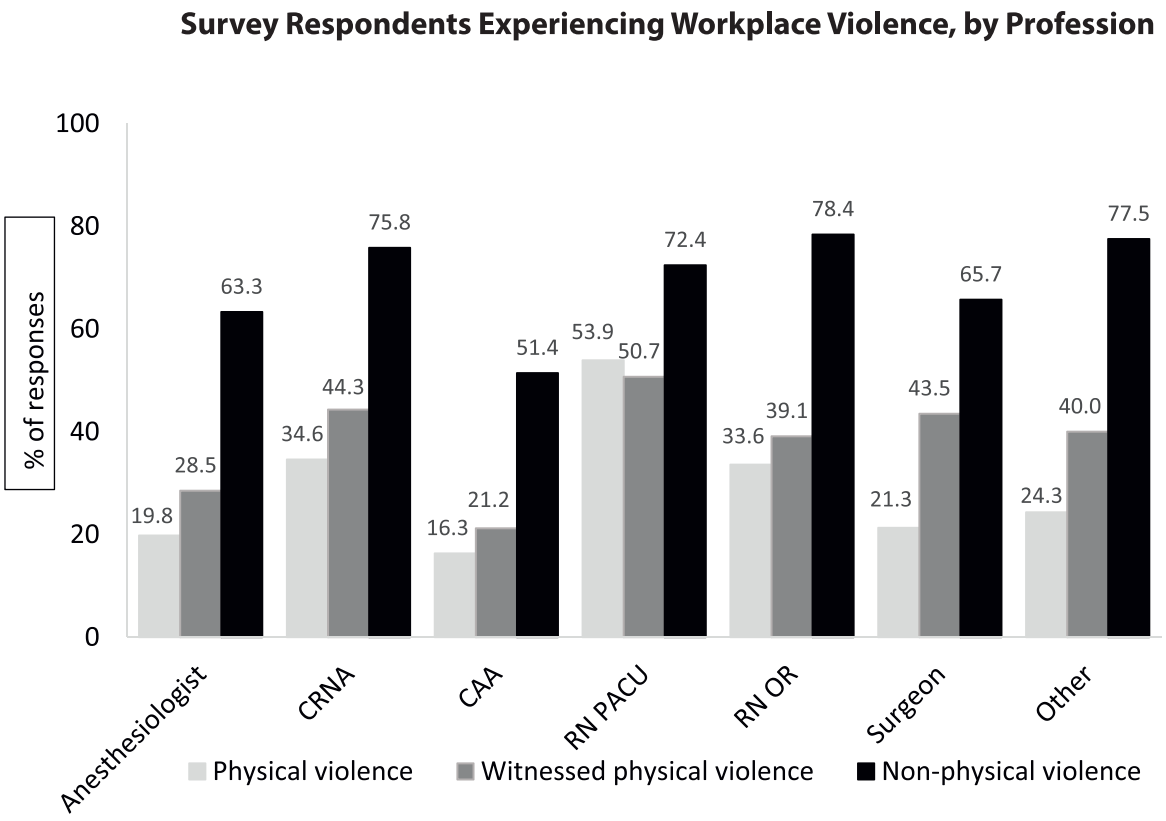


Figure 2: This bar graph shows the percentage of survey respondents experiencing workplace violence, by profession. CRNA, certified registered nurse anesthetist; CAA, certified anesthesiologist assistant; PACU, postanesthesia care unit; OR, operating room.

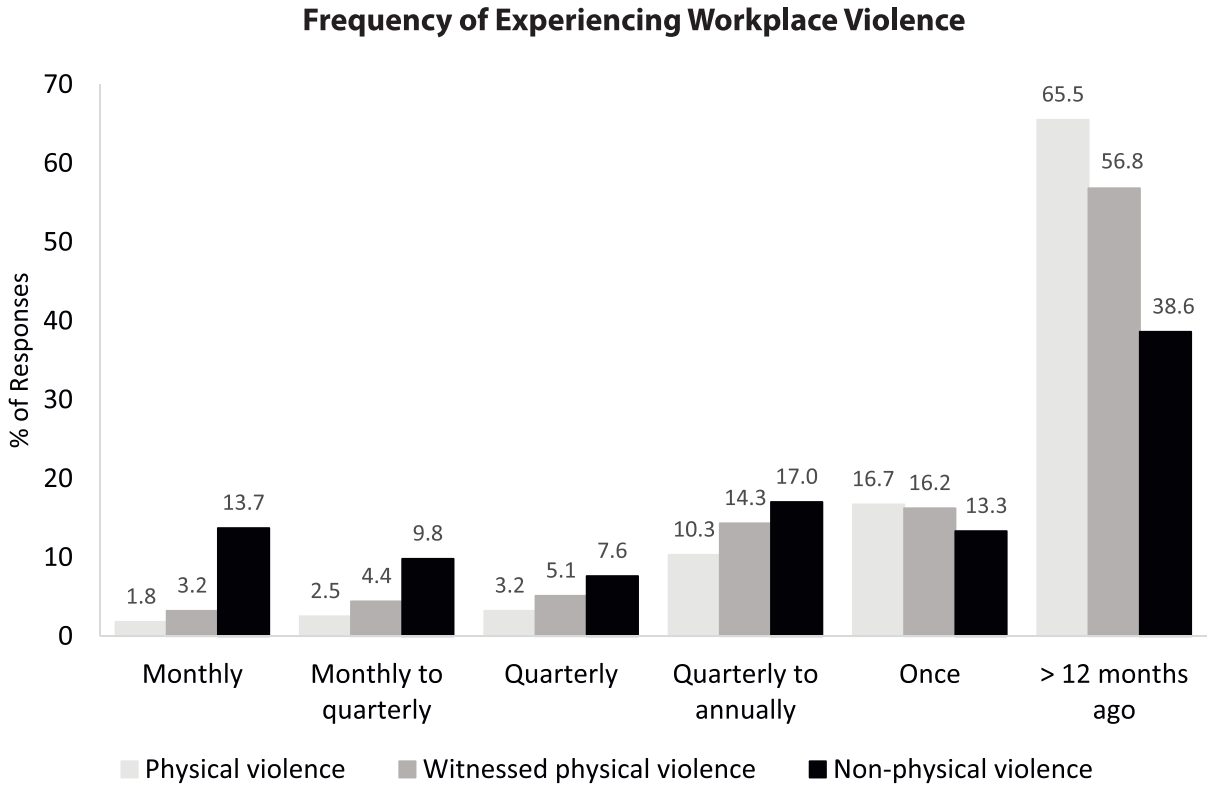


Figure 3: This bar graph shows the frequency of experiencing workplace violence. More than 30% experience nonphysical violence at least quarterly.

Table 3. Physical and Nonphysical Violence Risk Factors

	Physical Violence			Nonphysical Violence	
Variable	AOR	CI		AOR	CI
Gender					
Man	1.00 (reference)		1.00 (reference)		
Woman	1.21	1.00–1.48		1.52*	1.28–1.80
Other	1.66	1.00–2.76		0.36*	0.22–0.58
Age Cohort (in years)					
< 35	0.92	0.66–1.27		0.85	0.63–1.13
36–45	0.98	0.79–1.21		1.06	0.86–1.30
46–55	1.00 (reference)		1.00 (reference)		
56–65	0.90	0.74–1.09		0.99	0.82–1.19
> 65	0.73	0.53–1.01		0.66*	0.51–0.86
No age	0.99	0.62–1.59		1.21	0.76–1.93
Practice Setting					
Operating room	1.00 (reference)	1.00 (reference)			
Pre/post anesthesia care unit	1.15	0.92–1.46	0.93	0.74–1.17	
Chronic pain/ICU	1.60	0.74–3.43	1.32	0.62–2.82	
Primary Geographic Practice					
Northeast	1.09	0.89–1.33	1.20	0.99–1.44	
South	1.00 (reference)	1.00 (reference)			
Midwest	1.23*	1.02–1.50	1.14	0.95–1.36	
West	1.25*	1.02–1.53	1.10	0.91–1.33	
Primary Role					
Anesthesiologist	1.00 (reference)	1.00 (reference)			
Surgeon	0.82	0.48–1.41		0.77	0.49–1.19
CRNA	1.52*	1.15–2.02		1.31	0.99–1.74
CAA	0.99	0.62–1.58		0.57*	0.40–0.81
Other AP clinician	0.98	0.46–2.10		2.41	0.97–5.99
Operating room RN	1.53*	1.23–1.90		1.51*	1.21–1.88
PACU RN	3.31*	2.53–4.33		0.78	0.60–1.02
Anesthesia or surgical tech	0.45	0.13–1.63		0.99	0.41–2.39
Resident/fellow in training	0.78	0.48–1.25		0.61*	0.42–0.88
Also Experienced					
Nonphysical violence	2.72*	2.26–3.28		N/A	N/A
Physical violence	N/A	N/A		2.71*	2.25–3.25
Witnessed physical violence	5.63*	4.86–6.51		2.19*	1.86–2.57

* Statistically significant.AOR, adjusted odds ratio; CI, confidence interval; CRNA, certified registered nurse anesthetist; CAA, certified anesthesiologist assistant; AP, advanced practice; PACU, postanesthesia care unit; N/A, not applicable.

(Table 3). There was also a higher adjusted odds ratio for those experiencing either form of workplace violence to experience the other form as well. Those who witnessed physical workplace violence also showed a higher risk of experiencing either physical or nonphysical workplace violence.

There was a statistically significant higher reported incidence of physical workplace violence among those living in the Midwest and the West. A higher adjusted odds ratio was also found for physical workplace violence among CRNAs, RNs in the OR, and RNs in the postanesthesia care unit (PACU). The higher adjusted odds ratio persisted for RNs in the OR experiencing nonphysical workplace violence. In contrast, there was a lower adjusted odds ratio for experiencing nonphysical workplace violence among individuals aged 65 years or older. Curiously, there was also a lower adjusted odds ratio for nonphysical workplace violence among CAAs and residents/fellows in training. Otherwise, no significant differences were found across age brackets, race, or ethnicity.

Qualitative Findings

We received more than 300 open-text comments in the survey. These comments were coded into 10 generalized categories and themes (Table 4): (1) perpetrators of workplace violence, (2) people experiencing workplace violence, (3) types of workplace violence, (4) barriers to reporting, (5) leadership/organizational response to workplace violence, (6) environmental/cultural contributors to workplace violence, (7) consequences for the perpetrator, (8) consequences for the victim, (9) changes in workplace violence over time, and (10) perceptions of workplace violence solutions. Respondents reported both individual instances of workplace violence and patterns over time ("I have been verbally abused my entire career starting as an intern and continuing for the last 40 years"). As shown in the quantitative results, members of the different professions surveyed reported that all professions (for example, nurses, physicians, CRNAs) both perpetrated and experienced workplace violence. Another recurring concept was violence experienced

Table 4. Themes and Concepts Related to Perioperative Workplace Violence Derived from Open-Text Comments

Thematic Category	Unique Concepts (alphabetical order)	Representative Quotations*
Characteristics of Workplace Violence		
Perpetrators of WPV	• Anesthesiologists • CRNAs • Nurses • Patients • Senior leaders • Surgeons	• "I saw an anesthesiologist throw a phone at a surgeon with no consequences." (Anesthesiologist) • "I have experienced verbal abuse from male physicians (surgeons and anesthesiologists) that was either derogatory, condescending, and humiliating." (OR RN)
People experiencing WPV	• Advanced practitioners • Anesthesiologists • CRNAs • Nurses • Residents • Students • Surgeons	• "Nurses get verbal abuse from patients and doctors." (PACU RN) • "Once I saw an attending cardiac surgeon punch a resident surgeon and knock him out cold." (OR RN)

Types of WPV	• Physical
	  ○ Item thrown
	  ○ Punched
	• Verbal
	  ○ Demeaning/mocking
	  ○ Shouting/yelling
	• Other or unclear
	  ○ Bullying behavior
	  ○ Discrimination
	  ○ Emotional
	  ○ Intimidation
	  ○ Mental/psychological
	  ○ Passive-aggressive behavior
	  ○ Sexual behavior
	  ○ Threats
		• "100% of the physical violence is a patient hitting/pinching/scratching/biting staff." (PACU RN)
		• "Several surgeons in my perioperative environment try to shout you down to get their way when you want to postpone a case due to abnormal labs, inadequate cardiac workup, etc." (Anesthesiologist)
		• "The nonphysical abuse is harsh, nonproductive, demeaning comments from another nurse." (OR RN)

Organizational Considerations About Workplace Violence		
Barriers to reporting	• Fear of repercussions / history of repercussions • Lack of support from colleagues • Past reports ineffective/dismissed • Reporting discouraged to protect perpetrator • WPV comes from leadership	• "Verbal harassment and bullying is pervasive. Management's response has been mixed. They frequently dismiss the behavior. It has gotten to the point that I don't report it." (Resident/Trainee RN) • "I did not feel safe speaking up at the time for fear of retribution that would affect my career." (Anesthesiologist) • "Who are you going to report to when the highest leadership is involved?" (Anesthesiologist)
Leadership/ organizational response to WPV	• Ignored/dismissed by leadership • Intimidation by leadership • Protection of perpetrator	• "Weak so-called leaders . . . lack courage and integrity to make prudent decisions and rise to the occasion. No one wants to hurt feelings anymore or fire staff who are bullies. … I learned (a) valuable lesson—HR is not trustworthy to any employee in this position and only protects the hospital." (PACU RN) • "There is little support from administrators in protecting staff from abusive patients or families. We are supposed to expect it to be part of our job." (Anesthesiologist)

(*continued on next page*)

Table 4. (*continued*)

Thematic Category	Unique Concepts (alphabetical order)	Representative Quotations*
Characteristics of Workplace Violence		
Environmental/ cultural contributors to WPV	• Isolation • Lateral abuse • Power hierarchy / power dynamic • Systemic discrimination • WPV is normalized	• "Violent behavior is tolerated when the perpetrator is (1) a leader, (2) a money maker for the institution, or (3) a productive researcher. Power excuses misbehavior. I have observed at prestigious institution RNs provided extra pay to work with MDs known to be abusive." (Anesthesiologist) • "As certain groups attain preferred status, they then think they are protected from repercussions for bad behavior—and, frankly, it appears that they are correct." (Anesthesiologist) • "We have been told that only 'certain' people have the certain personality that belongs in the OR environment. It is toxic, hostile, and has completely destroyed our ability to have a healthy and safe work environment." (OR RN) • "Bullying and lateral violence is prevalent in ORs due to the nature of the work, and because it is behind closed doors. The environment is the worst I have seen in my career; extremely toxic." (OR RN) • "Receiving abusive comments from coworkers seems pretty typical (and rejoiced) for anyone in this line of work." (Anesthesiologist) • "I think my perception was wrong. It was not bullying or violence but harmless play." (Trainee RN)
Impacts of Workplace Violence		
Consequences for the perpetrator	• Disciplinary action against perpetrator • Perpetrator protected	• "The nurse that pushed me was never punished, because she had been there so long, and she is friends with the director . . . she never expected any repercussions for her actions." **(**CAA) • "The aggressive person no longer works for our system. However, I feel like it took longer than necessary to get here." (OR RN)
Consequences for the victim	• Disciplinary action against victim • Lasting physical harm • Left job • Negative impact on mental health • Ridiculed/gaslit (for example, called "too sensitive")	• "I walked out of the job never to return in fear of retaliation." (OR RN) • "My institution suspended me as the reporter, and the surgeon was allowed to continue to practice without repercussion." (Anesthesiologist) • "Bullied by colleague and driven to voluntarily leave with a severance package." (CRNA) • "Verbal abuse actually occurred when I was a younger attending . . . in the middle of the hallway, he (Chief) was yelling at me that I would be a failure." (Surgeon)
Reflections About Workplace Violence		
Changes in WPV over time	N/A	• "Workplace violence is worsening now and has been growing." (PACU RN) • "Abuse from the public has gotten so much worse over the last 10 years, unfortunately." (PACU RN) • "I have noticed a significant decrease of WPV in the last 10 years of my career." (OR RN)
Perceptions of WPV solutions	N/A	• "I have received training, but I would not consider it adequate. Just a lame video and learning module . . . does not give me confidence in my ability to de-escalate a situation or that my group of colleagues would be safe in a violent scenario." (Anesthesiologist)

* Some quotations were coded as belonging to multiple categories. Quotations have been lightly copyedited to correct grammar and spelling.

WPV, workplace violence; CRNA, certified registered nurse anesthetist; OR, operating room; PACU: postanesthesia care unit (that is, recovery room); HR, human resources; CAA, certified anesthesiologist assistant; N/A, not applicable.

from patients, both due to illness ("ER [emergency room] surgical patient either drunk or on drugs threatened to kill me once he found me outside of the hospital") and due to disinhibition from anesthesia ("Recently I woke a trauma patient after anesthesia, and he said he wanted to shoot me in the head"). Dissatisfaction with organizational responses to workplace violence was another common theme, including reports of organizations avoiding discipline in favor of production ("Even though one incident resulted in the neurosurgeon being required to attend anger management classes, his behavior did not change. The surgeons brought in the money, and the administration allowed their abuse to continue unaddressed").

DISCUSSION

In this cross-sectional study of perioperative professionals in the United States, we found a high reported prevalence of physical and nonphysical workplace violence, including assaults, threats, verbal abuse, bullying, and harassment. There was a high reported prevalence across all demographic groups, along with underreporting and a lack of satisfaction that the situations were addressed or resolved. Our qualitative findings illustrate the complexity of workplace violence. Respondents' free-text comments included themes of generalized fear, fear of retaliation, career vulnerability, leaving the workplace, and perceptions of decisions made for profit over safety.

Workplace violence—which includes both physical and nonphysical acts[1]—is alarmingly prevalent in the perioperative environment. By expanding beyond academic programs, our results extend the findings of the AAMC report.[17] In addition, we found that workplace violence is experienced not only by anesthesiologists in academic programs but across all professions in the perioperative environment and encompasses a broad spectrum of behaviors that is not limited to harassment. Our findings are also in alignment with the range of prevalence found in previous single-profession surveys for CRNAs, surgeons, RNs, and anesthesiologists.[14–16] It is challenging to compare incidence or prevalence figures across studies, as inconsistent definitions are used for workplace violence—particularly nonphysical workplace violence. We do note that the prevalence of physical and nonphysical workplace violence among anesthesiologists in this study is similar to that of an anesthesiologist-only survey conducted in 2018.[16]

Our findings suggest increased odds of reported physical workplace violence for RNs and CRNAs, along with higher odds of nonphysical workplace violence in the OR RN group. Nurses in particular may be at risk for workplace violence. Workforce shortages, high-stress environments, power and authority imbalances, greater exposure to the front line of care, and lower job autonomy all have been discussed as possible reasons.[25,26] In addition, a recent study showed that incivility is contagious[27]—if one is treated with incivility, they are likely to pass it forward and instigate incivility themselves later in the day.

Our findings also suggest that the factors affecting workplace violence are not limited to power dynamics and interprofessional tensions, with lateral bullying and patient-perpetrated aggressions as two examples. Our results found that patients were the most common source of physical violence and the second most common source of nonphysical violence.

Workplace violence is a multifaceted problem without easy answers, but the high reported prevalence in our study and others should serve as a call to action. The updated Joint Commission standards are a starting place, providing a framework approach to address workplace violence.[1,2] They specifically point to the importance of leadership oversight as part of the standard to create and maintain a culture of safety, and for organizational policies and procedures to include ongoing training, education, and post-incident support and a system for monitoring, reporting, and investigating workplace violence incidents. A recent scoping review similarly highlighted the importance of strong leadership and a culture of inclusivity, support, and respect, as well as multicomponent interventions (for example, education, training, debriefing, rapid response, or threat response teams) to successfully address workplace violence. The review noted a need for further research and sharing of successful interventions.[28]

Ideally, workplace violence interventions should place workplace safety and patient safety on equal horizontal footing. Vertically, a comprehensive approach includes interventions at the leadership, team, and individual/frontline level. Leaders should bring clear policies to life, offer unwavering support, and establish consistent transparent processes across the organization. Teams must practice psychological safety where productive conflict and disagreements are encouraged with effective, respectful practices to resolve conflict. Individuals must be prepared with scripts and tools to deal with situations in the moment and must be upstanders, supporting their colleagues. The APSF will be offering video-triggered workshop materials and tools to bring this critical dialog to the forefront.[29]

Our qualitative findings relating to workplace culture serve as a reminder that technical solutions alone will not be successful. Workplace violence is an example of a problem that requires both technical and adaptive solutions.[30] A multicomponent intervention critically includes clear organizational processes for confidential reporting. Timely response from leaders with expertise, along with recognition of potential conflicts of interest, are imperative. There should be zero tolerance for behaviors that signal dysfunctional cultural norms where status allows certain perpetrators to continue disrespectful behaviors without consequences. Consistent and fair actions will signal new cultural norms. Workplace violence can affect the performance

of teams, undermining team psychological safety and ultimately affecting the safety of our patients. Individuals are known to avoid communication, reduce information-sharing with team members,[7,31] and alter care in unsafe ways to avoid confrontation. We urge organizations to survey their own perioperative environments, both as a current snapshot and longitudinally, to gain insights into local factors as they develop and implement interventions.

Limitations

There are several limitations to the survey conducted. First, definitions of behaviors in workplace violence are subjective and affected by both personal and organizational beliefs. For example, incivility can be defined as "low-intensity deviant behavior with ambiguous intent to harm the target."[32(p. 457)] The target is harmed whether there is actual intent by the aggressor. However, survey responders could have considered intent as criteria for their response. In addition, if the organizational culture tolerates unacceptable behaviors, responses may be muted. Second, we did not specifically ask respondents to exclude physical violence that occurs during emergence from anesthesia. These actions again may not have intent. However, we chose to allow for these responses, as organizations still have an obligation to mitigate harm from these injuries. Third, there could be a biased higher response rate from those who have personally experienced workplace violence. Finally, there is a risk of nonresponse bias owing to a likely low response rate (though the precise rate was not able to be calculated). However, for the overall population, our response of 4,662 is reasonable. Most of our professional subgroups—anesthesiologists, CAAs, CRNAs, OR nurses, perianesthesia RNs, and surgeons—also had > 100 responses. We believe this sample size is sufficient to illuminate the pervasiveness of workplace violence. Future research could include specific populations such as a department, hospital, or health system where a higher survey response could be obtained. Future surveys could look at specific behaviors. We need future research to share longitudinal surveys that test the effectiveness of interventions. Finally, as this is a convenience sampling survey, we see these findings of increased risk for certain groups as provocative, and not confirmatory or generalizable.

CONCLUSION

This multiprofessional perioperative US survey of physical and nonphysical workplace violence demonstrates that the experience of workplace violence is common across all perioperative professions. This survey evidence adds to our knowledge that workplace violence is persistent, is underreported, and occurs regularly in the perioperative environment. Our current systems do not adequately support the need to address and resolve these situations individually and systemically, which affects not only worker safety but patient safety. Initiatives to eliminate workplace violence should not ignore perioperative units. Organizations should survey their perioperative areas to include the continuum of behaviors from incivility to physical assault. They should develop a multicomponent intervention that horizontally includes both worker safety and patient safety and vertically leverages leadership, team, and individual strategies. Ongoing assessment of reported and unreported occurrences and implemented action plans by a collaborative clinician and leadership team is critical to acknowledge successes and identify new opportunities for improvement. Longitudinal surveys are important to assess the impact of the interventions. We hope these findings will elicit a call to action for further national dialogue and compel local perioperative units to act urgently against workplace violence harms to both patient and staff safety.

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SUPPLEMENTARY MATERIALS

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.jcjq.2024.07.010.

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