Bullying in the Nuclear Medicine Department and During Clinical Nuclear Medicine Education

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Workplace bullying (WPB) in the medical field is a significant occupational hazard and health-care safety concern, though many cases go unreported. Often regarded as a rite of passage to desensitize and toughen new employees and students, WPB causes psychologic harm and creates an unsafe working environment resulting in health complications, anxiety, depression, low self-esteem, difficulty concentrating, and self-harm. Decreased productivity, increased absenteeism, high turnover rates, and inappropriate patient care are linked to WPB, perpetrating organizational dysfunction. This research study evaluated WPB (prevalence, frequency, and behaviors; associated characteristics; effects on patient care; and awareness and enforcement of antibullying protocols) in nuclear medicine (NM) departments and clinical education. **Methods:** A quantitative single-group correlational analysis was used to survey certified NM technologists and students in the Nuclear Medicine Technology Certification Board e-mail database ($n = 20,389$). The highest response rate for any individual question was 836. Data were collected using the short version of the negative-acts questionnaire along with a researcher-created survey and analyzed using χ^2 testing and central tendencies. **Results:** WPB existed in varying degrees (46.8%) within the previous 6 mo, predominantly in the form of being ignored, excluded, and subjected to repeated reminders of errors and having information affecting performance withheld. NM professionals are more likely to witness and experience WPB than students and are more likely to be bullied by a fellow technologist. Some characteristics, such as sex, age, and occupation, were statistically significant, whereas others, such as race, height, body type, experience, and education, showed no significant correlation. Attention to patient care decreased (39.6%) when WPB was present. An 8% variation exists between enforcement and nonenforcement of antibullying policies, with 26% of professionals being unaware of whether antibullying policies exist at their workplace. **Conclusion:** Explanations for underreported WPB include fear of retaliation, nonenforcement and lack of awareness of antibullying policies, organizational complacency, and perceived hierarchic power. Recommendations to minimize WPB include adopting and publicizing a descriptive definition, implementing antibullying policies, using mediation procedures, and imposing noncompliance penalties. A decrease in the incidence of WPB correlates with an increase in employee satisfaction and retention, patient safety, and student success.

Key Words: nuclear medicine; allied health; radiologic sciences; workplace bullying

Workplace bullying (WPB) has become a significant occupational hazard in medical education for workplace health and health-care safety (*1–5*). WPB can be described as intentional harm or aggressive behavior occurring repeatedly and can be an actual or perceived threat between the aggressor and the target (*2*). Therefore, WPB is not a one-time event (*6*) but progressively occurs when employees are exposed to harassment that they cannot stop or escape from (*7,8*). In its simplest form, WPB represents an asymmetric balance in perceived power (*8*).

Teaching by fear, humiliation, and intimidation in the medical field has been noted for decades to be a well-established practice (*2,9–11*), with 1 in 4 health-care professionals experiencing WPB (*12*). The medical profession has an unspoken code of silence, with many suffering in solitude and not reporting WPB for fear of retaliation (*2*). WPB thrives in an environment where the management hierarchy accepts this behavior, as well as in competitive environments such as teaching hospitals and patient-directed services, where it may become normalized as a form of effective leadership and way of inducing motivation in the workplace (*9,13,14*). WPB, which can become normalized as a rite of passage, may be initiated when one individual or group attempts to exert power over another to establish a hierarchy or social network (*9,14*). The psychologic violence and behaviors of bullying have been identified as physical (direct touching, humiliating or intimidating acts), verbal (jokes directed at the individual, gossip, verbal mistreatment), relational (isolating the individual; e.g., excluding the individual from functions), work sabotage (blaming the individual unjustly, taking credit for an accomplishment of the individual), and cyberbullying (*2,14,15*).

WPB is strongly associated with both physiologic and psychologic stress responses in targets and witnesses (*2,12,16–18*) and correlates positively with emotional distress (*12,17,19–21*), negative job performance, job dissatisfaction (*19*), anxiety (*22*), sleep deprivation (*21,23*), depression (*3*), altered thinking and decision making (*23*), health issues (*20*), self-harm, suicide (*2*), and diminished patient care (*3,5,11,23*). Targets perceive WPB as a personal attack on their self-worth and experience increased social

isolation at work (*2,15,20*), subsequently creating an adverse distortion in personality traits (*16,24*). WPB leaves a scar that is not physical but rather internal, effectively lowering an individual's self-esteem, resilience, and self-identity (*2*).

WPB has effects that extend far beyond the individuals involved and reflects broken professional relationships within an organization (*11,12,16,23*). Unequal treatment among employees may foster a hostile work environment. External hires are at risk of not being accepted by current employees who may feel cheated out of a promotion, and internal hires may not be respected by their former peers. Management may view conflict among coworkers as a personality conflict rather than WPB and therefore be less likely to intervene (*2,25*). Patient care and the mental well-being of health-care providers can be indicators of organizational dysfunction and poor performance (*3,5,6,11,12,20,23*) and should be a concern of health-care organizations. Previous studies have found that adverse events in patients and patient mortality rates can have a positive association with WPB (*23*).

WPB is associated with decreased organizational commitment (*19*), decreased productivity (*6,11*), decreased motivation (*5*), and increased employee turnover (*25,26*). Passive bystanders of the WPB may cognitively distance themselves as a coping mechanism (*15*), experience negative psychologic effects, and perceive WPB as indicative of how employees are treated within the organization (*11,22*). Similar to findings for WPB in health care, WPB in higher-education employees results in increased health issues, disengagement, lower morale, and higher turnover for faculty (*27*).

When nuclear medicine technologists (NMTs), students, educators, and organizations remain silent and do not acknowledge or address WPB behavior, it will continue to permeate the organization and have lasting detrimental effects on employees, organizations, and educational programs. Physiologic distress, such as panic attacks, anxiety, decreased self-esteem, and loss of confidence, have been reported by students during clinical placements that involved bullying (*13,14*). Negative academic environments allowing a culture of silence, hostility, and bullying damage the reputation of the educational institution and NMT program. Eighteen percent of staff technologists reported training students while on the job; however, only 1.4% reported receiving compensation for their teaching time and effort (*28*). Lack of reimbursement for time and effort may increase the chance of WPB between preceptors and students if the teaching is an assigned duty for the preceptor rather than a choice (*29*). Professional and self-identity development are particularly vulnerable during clinical rotations, as self-identity is strongly connected to professional identity. For most U.S. workers, their profession describes who they are, not just what they do (*30*).

In this research study, WPB (prevalence, frequency, and behaviors; associated characteristics; effects on patient care; and awareness and enforcement of antibullying protocols) was evaluated in nuclear medicine (NM) departments and during clinical education. The following questions were explored: Does WPB occur in NM departments? How frequently does WPB occur in NM departments? Does an association exist between position and experiencing or witnessing WPB? Does an association exist between WPB and demographic characteristics? Does WPB affect patient care? Are NM professionals and students aware of antibullying protocols at their workplaces or educational institutions, and if so, are the protocols enforced?

MATERIALS AND METHODS

The A.T. Still University Institutional Review Board approved this study as exempt under title 45, section 46.104, of the *Code of Federal Regulations,* and the requirement to obtain informed consent was waived. All participants were provided a full disclosure and voluntarily gave informed consent when opening the survey. No identifiable information was collected. This study was a purposive sample of NMTs and NMT students in the Nuclear Medicine Technology Certification Board database who reside predominantly in the United States. Approximately 100 e-mail addresses were associated with certified NMTs residing outside the United States. The total population size for this study was 20,385. Data were collected using the short version of the negative-acts questionnaire (SNAQ) and a researcher-created survey specific to NM. The SNAQ was designed to measure the frequency, intensity, and prevalence of WPB and had a high level of internal consistency in this study ($\alpha = 0.948$). Permission was granted by the authors to use the SNAQ (*31,32*). The researcher-created survey was pilot-tested and further modified on the basis of feedback from the pilot-test participants and selected NM experts. WPB was defined in the survey as a situation in which one or several individuals persistently, over time, perceive themselves to be on the receiving end of negative actions from one or several persons and had difficulty defending themselves against these actions. A one-time incident was not referred to as WPB (*31,32*). REDCap (Vanderbilt University) was used to collect the responses from the final survey tool (supplemental materials, available at http://jnmt.snmjournals.org).

In total, 870 (4.3%) participants opened the survey. Of these, 757 (87%) completed it fully, whereas 113 (13%) surveys contained missing data. Surveys with no responses were deleted, and incomplete items on surveys were coded as 99 (items coded as 99 were not included in the statistical analyses). All completed data were analyzed. The highest response rate for any individual question was 96% (836/870), as participants could refuse to answer any or all questions. IBM SPSS Statistics 26 and Microsoft Excel were used to analyze numeric data and precise measurements. Frequencies, χ^2 testing for independence, and the assumption of normality were assessed when warranted. The predetermined α-level was 0.05, and Cramér *V* effect sizes of 0.10 (small), 0.30 (medium), and 0.50 (large) were used (*33*). Fisher exact tests were performed for low cell frequencies as needed. Statistical calculations, tables, and empiric reasoning were presented in the data findings. The 37 survey questions were consolidated into 6 research questions for analysis in this work.

RESULTS

Research Question 1: Does WPB Occur in NM Departments?

Research question 1 analyzed the responses to survey question 10, "please state whether you have been bullied at work over the last 6 mo." The 5 response choices on a Likert scale were categorized as either "no" or "yes." Of the

TABLE 1
Bullied at Work in Previous 6 Months

Answer	n	%	Mean	SD
No	444	53.2		
Yes	391	46.8		
Total	835	100	2.1066	1.36306

835 respondents to this question, 444 (53.2%) answered "no" and 391 (46.8%) "yes" (Table 1).

Research Question 2: How Frequently Does WPB Occur in NM Departments?

Research question 2 analyzed the responses to survey questions 1–10 (the SNAQ-derived questions). The responses were evaluated for frequency, median, index of qualitative variation, and number of participants (Table 2). Survey question 10, about whether the respondent had been bullied at work during the previous 6 mo, had 5 response choices on a Likert scale, which were again categorized as either "no" (53.2%, 444/835) or "yes" (48.6%, 391/835). The "yes" responses included "yes, but only rarely" (9.8%, 82/835), "yes, now and then" (18.2%, 152/835), "yes, several times per week" (10.8%, 90/835), and "yes, almost daily" (8.0%, 67/835). Most respondents selected "never" for all SNAQ questions, with the second most frequently chosen response being "now and then." The question about practical jokes had the highest percentage of "never" responses (75.8%, 632/834). The question about being ignored or excluded was answered as "never" by 38.8% of respondents (324/835) and as "now and then" by 27.1% (226/835). The question about withholding of information was answered as "never" by 42.8% of respondents (358/837) and as "now and then" by 26.9% (225/837). The question about repeated reminders of errors was answered as "never" by 43% (359/835) of respondents and as "now and then" by 27.8% (232/835).

Research Question 3: Does an Association Exist Between Position and Experiencing or Witnessing WPB?

Research question 3 analyzed the responses to survey questions 14–17 (Table 3). No statistically significant associations between experiencing or witnessing WBP and being an NMT student existed; however, statistically significant associations did exist between experiencing ($P = 0.001$) or witnessing ($P = 0.001$) WPB and being an NMT. The effect sizes for WPB of NMTs were large (experiencing, $V = 0.794$; witnessing, $V = 0.811$).

TABLE 2
Frequencies of Negative Behaviors

Item	Frequency					Median	n
	Never	Now and then	Monthly	Weekly	Daily		
Having someone withhold information that affects your performance	358 (42.8%)	225 (26.9%)	36 (4.3%)	94 (11.2%)	124 (14.8%)	1 (IQV, 3)	837
Facing repeated reminders of your errors or mistakes	359 (43%)	232 (27.8%)	40 (4.8%)	93 (11.1%)	111 (13.3%)	1 (IQV, 2)	835
Facing persistent criticism of your work	417 (49.9%)	175 (21%)	33 (4.0%)	91 (10.9%)	119 (14.3%)	1 (IQV, 3)	835
Having gossip and rumors spread about you	392 (46.9%)	216 (25.9%)	40 (4.8%)	62 (7.4%)	125 (15%)	1 (IQV, 2)	835
Having insulting or offensive remarks made about your person (i.e., habits and background), your attitudes, or your private life	446 (53.4%)	180 (21.6%)	34 (4.1%)	68 (8.1%)	107 (12.8%)	0.0000 (IQV, 2)	835
Being shouted at or being the target of spontaneous anger or rage	482 (57.7%)	204 (24.4%)	33 (4.0%)	56 (6.7%)	60 (7.2%)	0.0000 (IQV, 1)	835
Being ignored or excluded	324 (38.8%)	226 (27.1%)	33 (4.0%)	87 (10.4%)	165 (19.8%)	1 (IQV, 3)	835
Facing a hostile reaction when you approach	442 (52.9%)	172 (20.6%)	28 (3.4%)	68 (8.1%)	125 (15.0%)	0.0000 (IQV, 2)	835
Being the subject of practical jokes by people with whom you do not get along	632 (75.8%)	122 (14.6%)	15 (1.8%)	27 (3.2%)	38 (4.6%)	0.0000 (IQV, 0.00)	834
Experiencing WPB at work within the past 6 mo	444 (53.2%)	82 (9.8%)	152 (18.2%)	90 (10.8%)	67 (8.0%)	1 (IQV, 2)	835

IQV = index of qualitative variation.
Data are counts.

TABLE 3
WPB Data Regarding Students Versus Professionals

Category	n	χ^2 test of independence	P	V	Fisher exact test
Experienced WPB as a student	780	$\chi_1^2 = 1.741$	0.187	0.047	—
Witnessed WPB as a student	780	$\chi_1^2 = 0.722$	0.396	0.030	—
Experienced WPB as a professional	780	$\chi_2^2 = 492.224$	0.001*	0.794	0.001
Witnessed WPB as a professional	778	$\chi_2^2 = 511.588$	0.001*	0.811	0.001

*$P \leq 0.05$.

Research Question 4: Does an Association Exist Between WPB and Demographic Characteristics?

Research question 4 analyzed survey questions 13 and 31–37 (Table 4). Experiencing WPB within the previous 6 mo had a significant association with sex ($P = 0.003$, $V = 0.123$), age ($P = 0.029$, $V = 0.119$), and occupation ($P = 0.005$, $V = 0.134$). In addition, although not significant, there was a slight propensity for an association with height ($P = 0.052$, $V = 0.088$) and body type ($P = 0.051$, $V = 0.101$). No significant association existed for race, experience, or level of education.

Research Question 5: Does WPB Affect Patent Care?

Research question 5 evaluated survey questions 1 (with responses dichotomized to "yes" or "no") and 28, which were presented at different intervals in the survey with differences in placement of responsibility (on self or on others). The question about whether withholding of information affected performance was answered as "yes" by 57.3% (479/836) of respondents and as "no" by 42.7% (357/836). The question about whether attention to patients decreased because of WPB was answered as "yes" by 39.6% (308/777) of respondents, as "no" by 30.8% (239/777), and as "no bullying was experienced or witnessed" by 29.6% (230/777).

Research Question 6: Are NM Professionals and Students Aware of Antibullying Protocols at Their Workplaces or Educational Institutions, and If So, Are the Protocols Enforced?

Research question 6 evaluated survey questions 13 and 29 (Table 5). Survey question 13, about the occupation of the respondent, had 4 response choices, which were categorized as "NM professional" or "student." Survey question 29, about awareness of antibullying policies, showed a statistically significant association between being an NM professional or student and being aware of antibullying policies ($\chi_3^2 = 10.048$, $n = 777$, $P = 0.018$, $V = 0.114$, Fisher exact test $P = 0.035$). Of the 777 respondents, 753 (97%) were NM professionals and 24 (3%) were students. Of the students, 54% (13/24) were not aware of antibullying policies at their facility, 25% (6/24) knew that there were antibullying policies and that they were enforced, and 21% (5/24) knew that there were antibullying policies but they were not enforced. Of the NM professionals, 26% (196/753) were not aware of antibullying policies at their facility, 7% (49/753)

stated that their facility did not have antibullying policies, and 38% (287/753) said their facility had antibullying policies and that they were enforced.

Additional Findings

Survey questions 18–27 and 30 were additionally analyzed (Table 6).

Questions 18–21 asked about the initiator of WPB and the position of the target. Those who personally experienced WPB reported that the aggressors were primarily fellow technologists (51%, 398/780), followed by administrators (27.3%, 213/780) and radiologists (21.9%, 171/780). Technologists (59.9%, 467/779) were more likely than students (20.8%, 162/779) to experience WPB. Likewise, those who witnessed WPB reported that the aggressors were primarily fellow technologists (51/2%, 398/778), followed by administrators (25.8%, 201/778) and radiologists (21%, 166/778). Again, technologists (59.9%, 465/776) were more likely than students (24.6%, 191/776) to experience WPB. A few participants did not answer every question; therefore, on average, 33% (255/778) of respondents had not experienced or witnessed WPB in NM.

Survey questions 22–27 and 30 asked about whether WPB was ever reported and stopped, whether there was fear of retaliation, whether the respondent had defended a target or initiated WPB, and whether antibullying laws should be enacted. Only primary responses are reported for these questions (other responses are available on request). Among all respondents, 34.1% (265/778) said that WPB was never reported. Among those who experienced WPB, 55.4% (431/778) feared retaliation if they reported it. Among those who witnessed WPB, 51.7% (401/775) were also fearful of retaliation. Despite being fearful of retaliation, most respondents (54.2%, 421/777) defended someone during WPB. Almost half the respondents (42.8%, 332/776) to survey question 25 did not report WPB. WPB had never been initiated by 96% of respondents (746/777). Most respondents (70.4%, 547/777) strongly support the enactment of a law that would protect all workers from WPB.

DISCUSSION

To my knowledge, this was the first study to examine WPB in NM departments and during clinical NM

TABLE 4
NM Respondent Demographics and WPB

Characteristic	n	% of total	Bullied at work within previous 6 mo		P	V
			No	Yes		
Sex						
Male	271	35.8	168	103		
Female	474	62.5	233	241		
Other/prefer not to answer	13	1.7	7	6		
Total	758	100	408	350	0.003*	0.123
Age (y)						
<25	22	2.9	10	12		
26–35	70	9.2	43	27		
36–45	167	22.0	74	93		
46–55	222	29.3	119	103		
>56	277	36.5	162	115		
Total	758	100	408	350	0.029*	0.119
Race						
Black	47	6.2	27	20		
Asian	33	4.4	19	14		
Hispanic	46	6.1	25	21		
White	586	77.3	312	274		
Other/prefer not to answer	46	6.1	25	21		
Total	758	100	408	350	0.971	0.026
Height						
Petite	161	21.3	75	86		
Average†	362	47.8	194	168		
Tall	234	20.9	138	96		
Total	757	100	407	350	0.052	0.088
Body type						
Underweight	12	1.6	3	9		
Healthy	479	63.2	266	213		
Overweight	242	31.9	130	112		
Obese	25	3.3	9	16		
Total	758	100	408	350	0.051	0.101
Experience (y)						
≤1	23	3.0	14	9		
1–2	20	2.6	8	12		
3–4	24	3.2	12	12		
5–6	24	3.2	9	15		
7–10	41	5.4	25	16		
11–15	107	14.1	50	57		
16–20	117	15.4	58	59		
≥20	402	53.0	232	170		
Total	758	100	408	350	0.138	0.121
Education level						
Certificate	40	5.3	21	19		
Associate	209	27.6	123	86		
Bachelor	412	54.4	217	195		
Master	90	11.9	44	46		
Doctoral	7	0.9	3	4		
Total	758	100	408	350	0.464	0.069
NM occupation						
Administrator	65	7.8	47	18		
Educator	12	1.4	8	4		
Technologist	696	83.4	350	345		
Student	24	2.9	13	11		
Other	38	4.6	25	13		
Total	835	100	443	391	0.005*	0.134

*$P \le 0.05$.
†Female, 163 cm (5 ft 4 in); male, 175 cm (5 ft 9 in).

education. Potential respondents received surveys that defined WPB as a situation in which one or several individuals persistently, over time, perceived themselves to be on the receiving end of negative actions from one or several persons from whom there was little or no possibility of self-defense (31). A one-time incident was not referred to as WPB (supplemental materials).

The findings showed that WPB occurs in NM departments almost as frequently as it does not. Almost half the NM professionals and students reported that they had been bullied in various degrees within the previous 6 mo, a percentage that exceeds the national average for WPB (46.8% compared with 19%) (34). Prior studies involving health-care–related fields reported that 47% of surgeons (35) and 71% of radiation therapists experienced WPB (36), possibly indicating that health-care workers are more likely than workers in other professions to experience WPB due to performance-driven and high-stress environments.

Exposure to WPB is associated with decreased job satisfaction, decreased organizational commitment, increased intention to leave the position, burnout, posttraumatic stress, and mental and physical health issues ($2,26$). When mental distractions and health issues are caused by WPB in NM departments, lives are endangered.

The frequency at which WPB occurs showed similar results as the occurrence of WPB in NM departments. WPB was primarily experienced as being ignored or excluded, subjected to repeated reminders of errors or mistakes, and having information withheld that might affect job performance. Less frequent WPB tactics included being subjected to practical jokes by people with whom the target does not get along, being shouted at, or being the target of spontaneous anger. Therefore, WPB behaviors were subtle rather than direct offenses. The results from the SNAQ portion of the survey support previous research showing that WPB behaviors primarily involve being socially excluded or ignored, being subjected to verbal abuse and hostility, and having one's work obstructed ($10,26$).

NMTs were more likely to report being bullied at work within the previous 6 mo, whereas NM administrators, educators, and students were less likely to have experienced WPB. Previous studies of WPB reported that students were bullied at a higher percentage than professionals (1). Differences in the results may be attributed to the longer time frame of medical education (≥ 4 y) than of NMT education (1–2 y). NMT programs have a limited number of clinical site agreements; clinical rotations may consist of 4–6 wk up to 1 y at a facility. The longer a student remains at one clinical site, the greater the chances of experiencing or witnessing WPB.

Certain demographic characteristics, such as sex, age, and occupation, had a statistically significant association with WPB, whereas others, such as race, experience, and education, did not. A slight propensity toward an association was observed for height and weight (variance from average in either direction). Women were significantly more

TABLE 5
Awareness of Antibullying Policies

Answer	NMT professional	NMT student	Total
No, my facility does not have antibullying policies			
Count	49 (6.5%)	0 (0%)	49 (6.3%)
Expected count	47.5	1.5	49.0
Yes, my facility has antibullying policies, and they are enforced			
Count	287 (38.1%)	6 (25%)	293 (37.7%)
Expected count	283.9	9.1	293.0
Yes, my facility has antibullying policies, but they are not enforced			
Count	221 (29.3%)	5 (20.8%)	226 (29.1%)
Expected count	219.0	7.0	226.0
I do not know whether my facility has antibullying policies			
Count	196 (26.0%)	13 (52.4%)	209 (26.9%)
Expected count	202.5	6.5	209.0
Total			
Count	753	24	777 (100%)
Expected count	753.0	24.0	777.0

likely than men to experience WPB within the previous 6 mo; the percentage of women being the target of WPB (68.9%) was slightly greater than that found previously (66%) (34). Differences in how men and women perceive WPB may contribute to the greater number of women who acknowledged being bullied in the workplace. All respondents 36–45 y old were significantly more likely to have experienced WPB within the previous 6 mo than were other age groups. This finding may be attributed to the composition of the sample—62.5% women, 35.8% men, and 1.7% other or prefer not to answer—and to the differences in perception of WPB between men and women.

Almost half the respondents reported that they or others gave less attention to patient care (a 39.6% decrease) after experiencing or witnessing WPB. Previous findings showed that WPB is a dangerous occupational hazard and can be detrimental to patient care (3,4). Patient care is compromised, and departmental teamwork impaired, when a culture of WPB exists within an organization. Previous studies indicated that health-care professionals lose confidence in treating patients and make more medical errors when subjected to WPB (2,14). Appropriate patient care is the goal

of health-care facilities; it is the patient who suffers the consequences when appropriate care is not given.

Research question 6, regarding awareness of antibullying policies and enforcement, produced interesting results. Most NM professionals were aware of their facility having antibullying policies; however, an 8% difference existed between policies being enforced and not being enforced. Students were less likely to know whether their educational institution or clinical facility has antibullying policies. A surprising result was the 26% of NM professionals who said they do not know whether their facility has antibullying policies. Martin and LaVan (37) pointed to a lack of antibullying policies (64.4%) as contributing to a lack of awareness of antibullying policies at a facility or educational institution.

How educators and organizations handle WPB can significantly reduce its occurrence and effects. Students and employees need to be educated about WPB, engaged in discussions about it, and encouraged to overcome the barriers of embarrassment and shame that prevent them from gaining the skills and confidence needed to report incidents (13). Without antibullying policies in place, and without

TABLE 6
Data on Initiators and Targets of WPB, Stratified by Position

Position	If you experienced WPB in NM …		If you witnessed WPB in NM …	
	Who initiated it? (n = 780)	What position were you in? (n = 779)	Who initiated it? (n = 778)	Who was the target? (n = 776)
Administrator	213 (27.3%)	23 (3.0%)	201 (25.8%)	21 (2.7%)
Radiologist	171 (21.9%)	3 (0.3%)	163 (21.0%)	13 (1.7%)
Radiology nurse	43 (5.5%)	0 (0.0%)	48 (6.2%)	16 (2.1%)
Radiology scheduler or secretary	31 (4.0%)	3 (0.4%)	31 (4.0%)	30 (3.9%)
Technologist	398 (51.0%)	467 (59.9%)	398 (51.2%)	465 (59.9%)
Student	16 (2.1%)	162 (20.8%)	17 (2.2%)	191 (24.6%)
Educator	39 (5.0%)	7 (0.9%)	36 (4.6%)	7 (0.9%)
Did not experience WPB	251 (32.2%)	250 (32.1%)	258 (33.2%)	260 (33.5%)

workers' knowing how to seek assistance in sensitive situations, WPB will continue to permeate an organization.

This study also provided insight into the dynamics of WPB in NM. The results indicating that NMTs both initiate and experience most WPB suggest a significant problem with WPB in the culture of the NM profession. Fellow technologists may unconsciously feel that reporting an incident will threaten their job security or that toughening a peer through WPB will transform that person into a better technologist (*10,14*). In addition, a perceived hierarchy and power structure within the organization may exist (*1,9,14*) such that WPB is less likely to be reported by targets and witnesses because of fear of retaliation. Our respondents overwhelmingly supported enactment of a law protecting against WPB.

Limitations of this study included environmental factors and the timeline of survey distribution, data coding errors for various items, and respondent perceptions of WPB and self-identity. The researcher worked under a specific timeline established by the research institution and the survey was sent out on March 29, 2020, at the height of COVID-19 within a 3-wk timespan. Participants self-reported answers based on individual perceptions. Participants may have been persuaded to disregard the survey or respond to questions differently based on a discussion within an NMT social media group regarding the validity and intent of the research study while the survey was available.

CONCLUSION

WPB represents an asymmetric balance in perceived strength and should not be regarded as a rite of passage or a part of hierarchic status. Most U.S. citizens find their identity in their profession; when the protection of their mental and physical stability is threatened at work, they lose confidence in their skills and experience distractions during the workday, affecting their performance and personal well-being. When NM professionals and students are bullied at work or during clinical education, their self-identity is damaged, some to a point of self-deprecation and self-harm. Reasons for overlooking WPB included fear of retaliation, lack of awareness and nonenforcement of antibullying policies, organizational complacency, and perceived hierarchic power and status. Enactment of a law that protects workers from WPB was strongly supported by respondents. Organizations should adopt and publicize a descriptive definition of WPB and develop and implement antibullying policies, including education, mediation procedures, and penalties for noncompliance. Actions such as these can decrease the incidence of WPB in NM, increase employee satisfaction and retention, enhance student success, and improve patient safety and security.

DISCLOSURE

No potential conflict of interest relevant to this article was reported.

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