FEATURE ARTICLE
Research

Reporting Violence to a Health Care Employer

A Cross-Sectional Study

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Abstract

The purpose of this cross-sectional study was to identify individual and employment characteristics associated with reporting workplace violence to an employer and to assess the relationship between reporting and characteristics of the violent event. Current and former employees of a Midwest health care organization responded to a specially designed mailed questionnaire. The researchers also used secondary data from the employer. Of those who experienced physical and non-physical violence at work, 57% and 40%, respectively, reported the events to their employer. Most reports were oral (86%). Women experienced more adverse symptoms, and reported violence more often than men did. Multivariate analyses by type of reporting (to supervisors or human resources personnel) were conducted for non-physical violence. Reporting work-related violence among health care workers was low and most reports were oral. Reporting varied by gender of the victim, the perpetrator, and the level of violence experienced.

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Work-related violence is the third leading cause of occupational injury fatality in the United States and the second leading cause of occupational injury fatality for women, accounting for 609 work-related homicides in 2002 (U.S. Department of Labor, 2002). It is estimated that nearly 2 million acts of non-fatal work-related violence occur annually (Warchol, 1998). Research has primarily focused on the magnitude of violence and relevant risk factors, but little has been done to assess the predictors of reporting violence to the employer.

Under-reporting of violent events occurs when an individual is victimized and does not report the event to an employer, police, or through other means. It is believed to be a significant issue in addressing the incidence of violence (Croker & Cummings, 1995; Erickson & Williams-Evans, 2000; Jenkins, Rocke, McNicholl, & Hughes, 1998; Pozzi, 1998; Rose, 1997). The literature surrounding this issue is primarily descriptive in nature.

Several studies have addressed reporting both physical violence (PV) and non-physical violence (NPV). In a survey of 4,738 Minnesota nurses, 69% of PV events and 71% of NPV events were reported to a supervisor or other management personnel (Gerberich et al., 2004). Of the 310 Accident and Emergency Departments in the United Kingdom (UK) and Republic of Ireland surveyed about the frequency of violent encounters, incidents of verbal abuse were always recorded by 17%, sometimes by 45%, occasionally by 30%, and never by 7% (Jenkins et al.,

What Does This Mean for Workplace Application?

Upper-level management should encourage and support reporting of violence in an effort to adequately determine the level of violence experienced by employees. Occupational health nurses and managers should be aware that men tend to report violence less often than women. Measures should be taken to enhance reporting by all employees. Those with greater symptoms appear more likely to report violence. Support of these employees is essential, and resources, such as counseling, should be encouraged as needed.

1998). Incidents of physical abuse were always recorded by 77%, usually by 14%, occasionally by 6%, and never by one department. According to Rose (1997), nurses and attendants employed in an Accident and Emergency Department said that 63% of all violent incidents and 29% of assaults were not reported, despite the availability of an official report book. Research on sexual harassment shows it is much less likely to be reported than PV (Cholewinski & Burge, 1990; Finnis, Robbins, & Bender, 1993; Kaye, Donald, & Merker, 1994). Studies that have compared reporting violence through formal incident reports with other forms of reporting have also shown vast under-reporting (Bensley et al., 1997; Grenade & Macdonald, 1995; Lion, Snyder, & Merrill, 1981; Lord, 2001; Peek-Asa, Schaffer, Kraus, & Howard, 1998). Bensley et al. (1997) compared workers' compensation claims with incident reports and survey data from 628 hospital employees. The assault rates, computed by the authors, from workers' compensation claims, incident reports, and survey data, respectively, were 14, 35, and 415 per 100 employees per year.

The purpose of this study was to identify the individual and employment characteristics associated with reporting violence and to assess the relationship between reporting and characteristics of the violent event. Reporting is an important component in preventing future work-related violence.

METHODS

This study used a cross-sectional design and sampled employees of a major Midwest health care organization. Institutional Review Boards for the university and the health care organization approved the survey instrument and study protocol prior to implementation.

Study Population

This study included current employees of a major health care system, as well as individuals who left the organization within the previous 12 months. Selection criteria included a minimal employment of 12 weeks and 200 hours (0.1 full-time equivalent). The organization employed more than 21,000 workers in hospitals, clinics, and administrative environments. Employees held a variety of jobs ranging from clinical positions (e.g., nurses, client care assistants, physicians) to clerical and technical positions (e.g., accountants, computer programmers, technicians). This article addresses only the subset of employees who experienced PV or NPV to assess reporting.

Sampling Method

The organization maintains an employee database that groups employees into job families, or clusters of similar occupations, categorized for administrative purposes. In this study, job families were combined to include groupings with a similar expected risk for PV. For example, nurse practitioners were combined with physicians and residents to form the group of health care providers, rather than combined with nurses, because of their similar expected risk of PV, and job duties. Fourteen categories were used for sampling. Proportionate random sampling, based on the number of employees in each category, was conducted to obtain valid estimates of the expected incidence of violence within each stratum, with 95% confidence intervals.

Data Sources

The primary sources of data were the survey instrument and the employer's human resources database. Employees randomly selected for the study were mailed a specifically designed survey instrument that addressed the incidence of violence, reporting behavior, and follow up. The instrument had been pre-tested on 100 randomly selected employees, with minor changes made prior to implementation of the comprehensive survey. Findings from the pre-test were used to revise the survey as appropriate. The health system employee database was used to obtain information on employment characteristics (e.g., job family, department, business unit) and demographic data (e.g., age, gender, race).

Contact Procedures and Data Collection

Participants received a notification letter, survey instrument, cover letter, consent form (reviewing study goals and issues of confidentiality), and a stamped return envelope. Follow up was conducted for non-respondents with postcard reminders, a second mailing of the survey, and a final one-page survey.

Definition of Violence

The organization's policy related to violence stated: "Violence is broadly defined as words and actions that hurt people." Violent events that occurred between April 1, 2000 and March 31, 2001 were included. Physically violent events were measured by asking, "Were you the target of any work-related physical assaults or other unacceptable physical contact (e.g., shoving, hitting, kicking, biting, slapping, etc.)?" with response options of Yes or No. Non-physically violent events were measured by asking four questions taken directly from the organization's written policy and addressed the following:

- Words, stories, or comments that were found offensive.
- Written or graphic material that made one feel angry or hostile.
- Other behavior believed to be threatening, intimidating, hostile, or offensive.

- Unwelcome sexual advances being made a condition of employment.

Individuals indicating an occurrence of violence other than Never to any of the four questions were counted as having a NPV event.

Dependent Variables (Dichotomized as Reported/Not Reported)

Reporting of PV was measured by asking whether respondents who had experienced PV at work had reported this to their supervisors or human resources representatives, either orally, in writing, or both. Reporting NPV was measured by asking whether respondents who had experienced NPV at work had reported this to their supervisors or human resources representatives, either orally, in writing, or both.

Independent Variables

Employment characteristics. Business unit, department, job family, and longevity were obtained from the employee database. The business units comprised two urban hospitals, two suburban hospitals that were combined for analysis, six regional hospitals, and all other settings combined into a non-hospital category. Departments consisted of work areas within the business units (e.g., emergency, mental health, medical–surgical, administrative). The original job families were combined into seven categories for purposes of analysis. Longevity was the length of employment with the organization in years.

Work environment. Supervisor support was measured by two questions from Karasek's Job Content Questionnaire (Karasek, 1985): "My supervisor was concerned about the welfare of those under him or her" and "I was exposed to hostility or conflict from my supervisor." Individuals were asked to respond to these questions 3 months prior to the dates used for assessment of violence to obtain a baseline measure of support.

History of violence. History of work-related and non-work-related assaults were measured by questions asking whether the individual had, prior to the most recent assault, been a target of a work-related physical assault or a non-work-related assault including criminal or sexual assault, child abuse, or physical abuse by a spouse, partner, or other individual.

Demographic characteristics. Demographic characteristics included gender, age, education, marital status, and race.

Severity Measures. Lost time was measured by asking how much total time was missed from work as a result of the violence. A NPV frequency score was calculated by adding the responses to each of the four NPV questions. Scoring ranged from zero if the individual responded Never to four if the response was Always. These numbers were summed to arrive at a continuous measure of severity, with a range of values of 1 to 16 for this subset. A symptom score was calculated by summing the total number of symptoms a respondent experienced following the violence. These symptoms included:

- Pain.
- Stress.
- Anger.
- Fatigue.
- Sadness.
- Irritability.
- Headaches.
- Frustration.
- Flashbacks.
- Depression.
- Nightmares.
- Fear or anxiety.
- Embarrassment.
- Difficulty sleeping.
- Suspicion or distrust.
- Difficulty concentrating.

The potential range of values was 0 to 17. Use of Employee Assistance Program (EAP) services was measured by asking whether the respondent used these services as a result of the violence.

Perpetrator characteristics. The perpetrator could have been a client, supervisor, or other employee with more than one response option allowed. Responses were categorized into "only clients as perpetrators," "at least a supervisor as the perpetrator" (used when respondents listed a supervisor and another person), and "all other perpetrators." "Perpetrator impaired" was measured by asking whether the perpetrator of the violence was impaired by disease, prescribed medication, drugs, or alcohol. "Told perpetrator to stop" was measured by asking whether the respondent had told the perpetrator to stop the behavior. The organization's policy recommended that employees should first attempt to resolve the problem by telling the perpetrator to stop the offensive behavior, and, if this was not successful, the behavior should be reported.

Data Analysis

Odds ratios and 95% confidence intervals were calculated for the association between the outcomes and each of the predictors using logistic regression. Separate analyses were performed for reporting PV and NPV. All analyses were performed using weights to adjust for the proportionate sampling at the level of job family. The weights were calculated as the proportion of the group in the population, divided by the proportion of the group in the sample (i.e., respondents).

T tests and chi-square tests were performed to establish differences in NPV frequency and symptom scores and comparisons by gender. Analysis of variance (ANOVA) was used to compare supervisor support scores by gender and perpetrator.

Multiple logistic regression (Hosmer & Lemeshow, 2000) was used to identify odds ratios for reporting work-related violence by the independent variables. Backward stepwise regression was used to obtain a multivariate model that best fit the data. Removal of variables occurred at the 0.10 level to obtain a model for reporting NPV. Further analyses using multiple logistic regression were conducted on reporting NPV to a supervisor or a human resources representative to make comparisons. Only those variables included in the final model are included in Tables 1 to 4.

Table 1

Demographic Characteristics of Participants (Weighted)†

	Sampled (n = 4166)		*Respondents (n = 1751)*		*Experienced Physical Violence (n = 127)‡*		*Experienced Non-Physical Violence (n = 883)*	
	n	*(%)*	*n*	*(%)*	*n*	*(%)*	*n*	*(%)*
Gender								
Women	3352	(80.5)	1447	(82.6)	104	(82.5)	741	(84.0)
Men	814	(19.5)	304	(17.4)	22	(17.5)	142	(16.0)
Education								
High school or less	*		192	(11.0)	3	(2.2)	81	(9.2)
Some college	*		841	(48.0)	61	(48.2)	402	(45.6)
College graduate	*		482	(27.5)	50	(39.3)	283	(32.0)
Post-graduate	*		231	(13.2)	13	(10.4)	115	(13.1)
Missing			5	(0.3)	0	—	2	(0.2)
Marital status								
Married	*		1114	(63.6)	79	(62.2)	544	(61.7)
Never married	*		344	(19.6)	26	(20.5)	192	(21.8)
Separated, divorced, or widowed	*		275	(15.7)	21	(16.5)	139	(15.7)
Missing			18	(1.0)	0	—	8	(0.9)
Race								
White	3682	(88.4)	1625	(92.8)	116	(91.8)	809	(91.6)
Non-white	379	(9.1)	88	(5.0)	8	(6.6)	54	(6.1)
Not indicated	105	(2.5)	38	(2.2)	2	(1.6)	20	(2.3)
Age in years (mean)	41.4	*SD* 11.5	43.5	*SD* 11.5	42.7	*SD* 11.1	42.1	*SD* 11.3
Personal hourly income (median)	$16.70		$17.64		$21.54		$18.03	
Personal annual income (median)	$27,781		$29,476		$33,337		$30,243	
Family income								
Less than $20,000	*		71	(4.1)	5	(3.8)	41	(4.7)
$20,000 to $39,999	*		354	(20.2)	19	(15.3)	190	(21.6)
$40,000 to $59,999	*		443	(25.3)	39	(31.2)	215	(24.3)
$60,000 to $79,999	*		316	(18.0)	24	(18.7)	166	(18.8)
$80,000 to $99,999	*		220	(12.5)	19	(15.3)	98	(11.1)
$100,000 or more	*		247	(14.1)	15	(11.5)	125	(14.2)

**Data not available as these variables were assessed on survey instrument only.*
†Due to rounding, numbers may not equal 100%.
‡Some totals equal 126 due to weighting methods.

RESULTS

A total of 4,166 employees were randomly selected to participate. There were 1,751 employees who responded to the long survey instrument (response rate = 42%). Table 1 shows the demographic characteristics of the sampled participants (n = 4,166), compared with respondents to the long survey (n = 1,751), and those who experienced PV (n = 127), and NPV (n = 883); limited differences were identified.

A total of 923 respondents (53%) experienced PV or NPV in the previous year; 86 (5%) experienced both. The methods of reporting are shown in Table 2. Most reports were made orally, usually to a supervisor. Of the respondents who stated they had experienced PV at work in the past year, 57% said they reported it to their supervisors or human resources personnel. Of those who responded that NPV occurred in their work environment in the past year, 40% said they reported it. Among those who reported experiencing both types of violence, reports were made orally to a supervisor (53%) and to human resources personnel (3%). In contrast, for those who experienced NPV, only 38% reported to a supervisor, and 8% reported to human resources; again the majority were oral reports.

Logistic regression was used to assess for factors associated with reporting. In univariate logistic regression, the only important factor associated with reporting of PV was the use of health care (OR = 30.5, 95% CI 3.0, 307.4), which had a wide confidence interval because of the infrequent use of such care. For reporting NPV, increased odds were identified for the following factors:

- Employed in the plant management/housekeeping department (OR = 2.1, 95% CI 1.2, 3.5).

Table 2

Method of Reporting Physical and Non-Physical Violence Among Those Who Reported (Weighted)

	Reported Physical Violence (n = 67)		*Reported Non-Physical Violence (n = 342)*	
	n	*(%)*	n	*(%)*
Reported to supervisor	67		329	
Oral	47	(70.1%)	247	(75.1%)
Written	4	(6.0%)	8	(2.4%)
Both	14	(20.9%)	70	(21.3%)
Reported to human resources	3		89	
Oral	3	(100%)	54	(60.7%)
Written	0		3	(3.4%)
Both	0		30	(33.7%)

- Told perpetrator to stop but they would not listen compared to not trying (OR = 3.2, 95% CI 2.3, 4.4).
- Lost work time following violence (OR = 4.5, 95% CI 2.6, 7.9).
- Increasing NPV frequency score (OR = 1.5, 95% CI 1.3, 1.6).
- Increasing symptom score (OR = 1.3, 95% CI 1.2, 1.4).
- Use of EAP services (OR = 16.0, 95% CI 5.0, 51.6).
- Use of health care (OR = 2.3, 95% CI 1.6, 3.5).

Decreased odds were calculated for increased supervisor support (OR = 0.6, 95% CI 0.5, 0.8); and being a man compared to being a woman (OR = 0.5, 95% CI 0.3, 0.7). To test for gender differences and the level of NPV experienced, frequency scores for NPV between men and women were compared using *t* tests. There was no difference in the mean frequency scores by gender, indicating that men and women experienced the same level of NPV. Comparisons of the symptom scores following NPV, however, showed that women experienced a significantly higher number of symptoms (3.5 for women, 2.5 for men, $p = .002$). Chi-square analysis was performed, comparing gender and each specific symptom checked. The following were recorded more often for women than for men: anger, frustration, and stress ($p < .01$) and headaches ($p < .05$). Comparisons were also made between overall symptoms following PV and NPV, with the mean number of symptoms following NPV being higher (3.3, NPV; 2.2, PV; $p < .001$).

Analysis of variance was used to compare the supervisor support score by gender and also by the identity of the perpetrator of NPV. Results showed supervisor support was higher for men than women ($F = 12.27$, $p < .001$). Also, results by type of perpetrator showed supervisor support was lowest when the perpetrator was a supervisor and highest when the perpetrator was a client ($F = 80.32$, $p < .001$).

The results of backward stepwise regression for reporting NPV showed that, when adjusted for other variables, there were decreased odds for reporting NPV at urban and suburban hospitals compared with non-hospital environments (Table 3). Decreased odds were identified for men compared with women. Regarding severity, as the NPV frequency score and symptom score increased, the odds of reporting violence increased. There were also increased odds of reporting when the perpetrator was told to stop but would not listen, compared to not trying to tell them.

To compare reporting of NPV to a supervisor and a human resources representative, two final models used multiple logistic regression and the same independent variables (Table 4):

- Age.
- Gender.
- Education.
- Perpetrator.
- Business unit.
- Symptom score.
- NPV frequency score.
- Told the perpetrator to stop.

When reporting to the supervisor, decreased odds were identified for urban and suburban hospitals (compared with non-hospital environments), being a man, and the supervisor as perpetrator. Increased odds were seen with increasing NPV frequency and symptom scores, and telling perpetrators to stop but they would not listen. Decreased odds of reporting to human resources were seen with client perpetrators; increased odds of reporting were seen with increasing NPV frequency and symptom scores.

DISCUSSION

Under-reporting violence has been described in other studies, but factors associated with reporting have not been addressed. This study examined employment, demographic, and severity characteristics pertinent to reporting using multivariate analyses. Less reporting occurred for NPV than PV, consistent with other research (Gerberich et al., 2004; Jenkins et al., 1998). Although 57% of victims reported PV, just 40% of victims reported NPV. Although under-reporting of PV would appear to be a larger concern, in this study, the relevant subset of participants was too small to conduct multivariate analyses. Therefore, the remainder of the discussion focuses on the reporting of NPV.

One reason often cited for not reporting violence is that the event was considered minimal and, therefore, not

Table 3

Estimates of Likelihood of Reporting Non-Physical Violence (Adjusted; Results of Backward Stepwise Regression) (Weighted)

Exposure	*Odds Ratio*	*95% CI*
Employment Characteristics		
Business unit		
Non-hospital	1	
Urban hospital #1	.45	(.24 to .82)*
Urban hospital #2	.48	(.25 to .90)*
Suburban hospitals	.32	(.17 to .62)*
Regional hospitals	1.07	(.55 to 2.08)
Department		
Medical-surgical	1	
Administrative	.58	(.29 to 1.16)
Intensive care	1.15	(.48 to 2.75)
Mental health	.48	(.19 to 1.22)
Emergency	2.23	(.64 to 7.74)
Home care	.24	(.02 to 2.63)
Other patient care and services	1.37	(.76 to 2.49)
Plant management or housekeeping	2.22	(.86 to 5.74)
Job Family		
Medical specialists	1	
Clerical	.65	(.32 to 1.33)
Patient care assistants	.76	(.31 to 1.87)
Professionals	2.01	(.92 to 4.40)
Nurses	1.58	(.80 to 3.13)
Medical care providers	1.05	(.38 to 2.94)
Other not classified	1.00	(.40 to 2.50)
Personal income (2000 earnings)	.99	(.98 to 1.00)
History of Violence		
History of non-work-related assaults (yes versus no)	.68	(.45 to 1.02)
Demographic Characteristics		
Gender		
Women	1	
Men	.39	(.22 to .72)*
Age (change per year)	1.02	(1.00 to 1.04)
Severity Measures		
Non-physical violence frequency score (change per one unit increase in frequency score)	1.41	(1.23 to 1.62)*
Symptom score (change per one unit increase in symptom score)	1.24	(1.15 to 1.34)*
Use of Employee Assistance Program services (yes versus no)	3.43	(.87 to 13.48)
Perpetrator		
Perpetrator		
Other perpetrators	1	
Only patients	.68	(.38 to 1.21)
At least a supervisor	.44	(.26 to .75)*
Told perpetrator to stop		
Didn't try	1	
Tried but wouldn't listen	3.34	(2.14 to 5.18)*
Tried and they listened	1.38	(.86 to 2.20)

**95% CI does not include 1.*

worth reporting (Broedel-Zaugg, Shaffer, Mawer, & Sullivan, 1999; Gerberich et al., 2004; Lanza, 1983). Based on severity measures used in this study, it appeared that the more frequent the NPV and the more symptoms experienced, the more likely the victim was to report the violence to the employer. However, respondents of PV experienced fewer symptoms in response to violence, but reported physical events more often. It may be the ongoing nature of NPV and the more acute, time-limited nature of physical assaults that leads to a greater number of symptoms. Also, because the perpetrator of NPV is more likely a coworker, supervisor, or health care professional (versus a client perpetrator), it is more likely that the NPV generates employee feelings of anger and resent-

Table 4

Estimates of Likelihood of Reporting Non-Physical Violence to Supervisor and Human Resources (Adjusted) (Weighted)

Exposure	Reporting to Supervisor (n = 329) OR	(95% CI)	Reporting to Human Resources Representative (n = 89) OR	(95% CI)
Employment Characteristics				
Business Unit				
Non-hospital	1		1	
Urban hospital #1	.63	(.41 to .99)*	.45	(.20 to 1.02)
Urban hospital #2	.54	(.33 to .89)*	1.30	(.63 to 2.67)
Suburban hospitals	.49	(.30 to .79)*	.89	(.40 to 1.99)
Regional hospitals	1.21	(.70 to 2.08)	1.28	(.55 to 2.97)
Demographic Characteristics				
Gender				
Women	1		1	
Men	.48	(.30 to .77)*	1.17	(.58 to 2.38)
Age	1.01	(1.00 to 1.03)	1.01	(.98 to 1.03)
Education				
High school or less	1		1	
Some college	.84	(.46 to 1.55)	1.03	(.42 to 2.51)
College graduate	.67	(.36 to 1.26)	1.28	(.50 to 3.28)
Post graduate	.63	(.31 to 1.31)	1.09	(.34 to 3.43)
Severity Measures				
Non-physical violence frequency score (change per one unit increase in frequency score)	1.30	(1.16 to 1.44)*	1.57	(1.37 to 1.80)*
Symptom score (change per one unit increase in symptom score)	1.19	(1.12 to 1.26)*	1.12	(1.04 to 1.20)*
Perpetrator				
Perpetrator				
Other perpetrators	1		1	
Only patients	.70	(.44 to 1.13)	.21	(.05 to .85)*
At least a supervisor	.41	(.25 to .65)*	1.36	(.76 to 2.46)
Told perpetrator to stop				
Didn't try	1		1	
Tried but wouldn't listen	2.80	(1.92 to 4.08)*	1.79	(.98 to 3.30)
Tried and they listened	1.31	(.86 to 1.98)	1.60	(.76 to 3.37)

**95% CI does not include 1.*

ment from the misuse of power by the perpetrator and the employee's lack of control in stopping the abuse.

When an individual told the perpetrator to stop the behavior but the perpetrator did not do so, there was increased reporting to the supervisor. These results suggest that when an employee tells the perpetrator to stop, and it is effective, the incident may not be reported because the offensive behavior has been addressed. Therefore, empowering employees to be assertive in their attempts to stop violent behavior may not only reduce the behavior, but also allow organizational resources to be focused on more serious incidents. The differences in reporting in hospital environments compared to non-hospital environments also suggests that this type of behavior is more accepted by those engaged in acute client care than would be tolerated in other types of work environments.

In this study, decreased odds of reporting was identified for men, consistent with a study showing men did not report verbal abuse when PV was not involved (Yassi, Tate, Cooper, Jenkins, & Trottier, 1998). One consideration is that men may experience violence differently than women, consistent with research on sexual harassment (Broedel-Zaugg et al., 1999). This is further evidenced by the comparison that men and women experienced the same level of NPV, but women experienced a greater number of symptoms afterwards. One limitation, however, is that only the types and number of symptoms were measured, not the duration or severity.

A history of assaults did not have an effect on the odds of reporting violence to the employer. If frequency and severity are factors in reporting violence, then those with a history of previous assaults would be expected to report more often. Further research is needed to address this issue.

Occupational health nurses play a critical role in encouraging employees to report violence. They should encourage reporting to either the supervisor or human resources personnel as a means of preventing future incidents. Also, they should encourage the employee to take advantage of support services available, such as counseling, when appropriate.

Limitations of this study include a modest response rate, resulting in the inability to address the analysis of reporting PV further. Another limitation is possible recall bias. Participants may be more likely to remember serious events and exclude less serious ones. Misclassification may occur if participants do not recall whether the violence they experienced was reported, especially using informal methods of reporting. Limiting recall to the previous 12 months has been used successfully in other studies of work-related assaults (Gerberich et al., 2004; Lee, Gerberich, Waller, Anderson, & McGovern, 1999). Some information, however, such as employment longevity and income, was obtained directly from the employee database, making it more accurate than participants' recall. An additional limitation is potential selection bias because those participants responding to the survey may be more or less likely to experience violence than those who did not respond. Although confidentiality was assured, some participants expressed concern to study staff related to how results would be reported to their employer.

Most work-related violence among health care workers is not reported to the employer. When it is, most reports are made orally. Reporting varies by gender of the victim, the identity of the perpetrator, and the level of violence experienced. Further research into this area is needed to address the reporting of PV using multivariate analysis. Without accurate reporting, employers are unaware of the level of violence in their workplace and may not take corrective actions to prevent its recurrence.

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