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Associations of Workplace Aggression With Work-Related Well-Being Among Nurses in the Philippines

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Objectives. We examined whether workplace aggression was associated with self-rated health and work-related injury and illness among nurses in the Philippines.

Methods. Our data came from a cross-sectional survey of nurses (n=687) in the Philippines. We assessed the associations of self-reported physical assault and verbal abuse with self-rated health, work-related injury and illness, and missed workdays with Poisson regression. Control variables included demographic and work characteristics (e.g., hours worked, work setting, shift).

Results. Verbal abuse was associated with poor general health (prevalence ratio [PR]=1.94; 95% confidence interval [CI]=1.09, 3.45). Both physical assault and verbal abuse were associated with work-related injury (PR=1.48; 95% CI=1.00, 2.20; PR=1.72; 95% CI=1.34, 2.23, respectively) and work-related illness (PR=1.46; 95% CI=0.99, 2.15; PR=1.68; 95% CI=1.32, 2.14, respectively) after demographic and work characteristics were accounted for in the model. In addition, physical assault was associated with missed workdays (PR=1.56; 95% CI=1.02, 2.33).

Conclusions. Workplace aggression was associated with increased risks of poor general health and adverse work-related health outcomes among nurses in the Philippines. (*Am J Public Health*. Published online ahead of print November 18, 2010: e1–e7. doi:10.2105/AJPH.2009.188144)

Workplace aggression, both physical and nonphysical, is a serious problem in health care settings.[1–3] In 2007, the US Bureau of Labor Statistics reported 25 360 incidents of physical assaults in health care settings, or 158.4 per 100 000 employees[3]—a rate higher than in any other US industry. A study of nurses in Minnesota estimated an incidence of 13 physical assaults in the workplace per 100 employees.[4] With regard to nonphysical aggression (e.g., bullying, harassment, intimidation), several studies have reported that about one third to one half of health care employees experienced such aggression within the past year.[4–8]

Workplace aggression research struggles with the definition of the concept, as discussed in several recent reviews.[9–11] Following Aquino and Thau's approach, we define workplace aggression as harmful acts that "inflict psychological, emotional, and even physical pain" as perceived by the targeted individuals.[10] In this paper, we contrast physical aggression (harmful acts that involve physical contact, such as assault) with nonphysical aggression (harmful acts that include verbal abuse and psychological harassment, such as "passive-aggressive" acts). Physical and nonphysical aggression are often studied in relation to different classes of outcomes. Physical aggression is typically examined in terms of the injury or mortality directly resulting from the assault, lost wages, and costs to the employer.[1,2,12] In contrast, nonphysical aggression is commonly studied as a correlate of mental health problems such as depression and anxiety.[5,13] Although evidence clearly supports the negative effects of both types of workplace aggression, several aspects have not been fully researched.

First, the general health effects of physical aggression are not well documented. Because most acts of physical aggression in health care settings do not result in injuries that require treatment,[4] focusing solely on injuries may fail to address other potential health consequences. For example, the Minnesota Nurses' Study reported that targets of physical assault commonly felt frustration, anger, fear, anxiety, and depression.[4] Thus, acts of physical aggression may have health consequences other than the injury stemming from the physical aggression itself.

Second, nonphysical aggression may have consequences beyond its effects on mental health. Niedhammer et al.[14] documented that being the target of workplace bullying, a form of nonphysical aggression that involves persistent intimidation and isolation,[9] was associated with poor self-rated health and sickness absence among workers in France. Kivimäki et al.[15,16] found that targets of workplace bullying in Finland were more likely than nontargets to have medically certified sickness absences and higher odds of developing cardiovascular disease.

Third, the contribution of workplace aggression to occupational injury and illness has not been fully explored. The presence of workplace aggression may reflect an overall hazardous work environment, which can result in poor work-related health. In a 3-year prospective study of Dutch employees in various industries, Swaen et al.[17] found conflicts with colleagues to be significant risk factors for work-related injury. Being the target of workplace bullying was associated with experiencing at least 1 work-related injury during the past 12 months among French workers.[14] Although these studies suggest that poor work-related health may be a consequence of workplace aggression, this line of research is still scarce.

Finally, with just 1 exception,[4] previous studies have examined physical and nonphysical aggression separately; therefore, the relative effect of both types of aggression is not known. For example, the current literature does not indicate whether physical assault has a stronger effect on health than does verbal abuse. Moreover, it is plausible that workers who experience both types of aggression are at a greater health risk than are those who experience either type alone because of the combined greater exposure or "dose" of aggression. Simultaneously examining physical and nonphysical aggression is particularly relevant in health care settings because health care workers are at high risk for both types of aggression.

In summary, the literature suggests that workplace aggression may contribute to various health

problems. However, the effect of workplace aggression on general health and work-related injury and illness is not well understood. Issues involving workplace aggression are important not only for the workers themselves but also for patients and employers. For example, if workplace aggression leads to work absences, health care facilities may experience staff shortages, which can adversely affect quality of care.

In this study, we investigated how physical and nonphysical aggression in the workplace were related to health outcomes among nurses in the Philippines. Specifically, we examined (1) whether the experience of workplace aggression was associated with poor self-rated health, as well as with work-related injury or illness, and (2) whether being exposed to physical assault and verbal aggression simultaneously was associated with a higher risk of work-related injury or illness, compared with being exposed to either type of aggression alone.

METHODS

Data came from a sample of nurses attending the 2007 national convention of the Philippine Nurses Association, held in Cagayan de Oro, Philippines. Attendees were from all 13 regions of the Philippines, representing various nursing occupations (e.g., educators, administrators, clinical practitioners). A self-administered anonymous questionnaire was given to the first 1000 attendees; 690 returned their questionnaires (response rate=69%). We excluded 3 respondents who indicated that they were not registered nurses or that they worked outside of health care settings.

Measures

The questionnaire was adapted from the American Nurses Association's (ANA's) 2001 Health and Safety Survey.[18] All questions were asked in English, which is commonly used in educational and professional settings in the Philippines.

Physical assault was assessed by the following question: "In the past year, have you been physically assaulted at work?" Verbal abuse was measured by the following question: "In the past year, have you been threatened or experienced verbal abuse at work?" Response options for both items were no (0) or yes (1). We also combined responses to the physical assault and verbal abuse questions as "no aggression experience" (reference), "one type of aggression" (no=0; yes=1), and "both types of aggression" (no=0; yes=1). These were modeled as categorical variables.

We measured 1 general health outcome and 3 work-related health outcomes. Self-rated general health status was determined by the following question: "How would you rate your current physical health compared to other people your age?" Response options were "poor," "fair," "good," "very good," and "excellent." Per convention, we dichotomized this measure into fair/poor (1) versus good/very good/excellent (0). This single-item general health measure has strong associations with mortality[19,20] and has been used in other epidemiological studies of workplace aggression.[14]

The 3 work-related health outcomes were assessed as follows: (1) work-related injury: "Over the past 12 months, how many times have you been injured on the job?" (no injuries=0; at least 1 injury=1); (2) work-related illness: "Within the past year, have you had any illnesses that you think were caused or made worse by any nursing job you had?" (no=0; yes=1); and (3) missed work: "Have you missed more than 2 days of work in the past 12 months due to a work-related injury or illness?" (no=0; yes=1). Although assessing the actual number of missed days would be optimal, our survey asked respondents only about missing more than 2 days, in accordance with the ANA survey.

Additionally, because of their potential association with both aggression experience and health outcomes, we controlled for the following variables: age, type of work setting (acute care hospital, long-term care facility, clinic, educational setting, other), shift type (regular day shift, other than day shift), availability of patient lifting devices (yes, no), and time spent in direct patient care (none, <25%, 25%–50%, 51%–75%, >75%).

Statistical Analysis

We first assessed missing data. Among the 687 respondents, a small fraction (0.9%–2.2%) did not provide 1 or more of the health outcome data. These respondents were excluded on an analysis-by-analysis basis because we did not impute dependent variables.[21] To account for missing data on other variables (missing rate=1.7%–9.9%), we conducted multiple imputation (PROC MI in SAS; SAS Institute Inc, Cary, NC) to create 10 complete data sets. Coefficient estimates from the 10 imputed data sets were combined according to Rubin's procedure.[22]

After summarizing sample characteristics, we examined bivariate relations with the χ^2 test. Next we used Poisson regression to quantify associations of workplace aggression with general and work-related health outcomes as we adjusted for age and work characteristics (e.g., work setting, shift type). Because of the high prevalence of cases (>30%) in injury, illness, and missed work variables, we used Poisson regression to calculate prevalence ratios (PRs) as a measure of association between workplace aggression and those dichotomous outcome variables. For the missed workday model, we controlled for work-related injury and illness. Missed workdays may have partly reflected work-related injuries or illness directly resulting from workplace aggression (e.g., taking a week off after being hit by a patient and straining one's back). In this analysis, we considered missed workdays as a general indicator of nurses' health and examined the associations with aggression independently from the injury and illness directly resulting from workplace aggression. Finally, the combined effect of physical assault and verbal abuse on health outcomes was examined with Poisson regression models. All analyses were conducted with SAS version 9.2 (SAS Institute Inc, Cary, NC).

RESULTS

Demographic and work characteristics of the respondents are summarized in Table 1. Respondents were aged between 20 and 79 years, with a median age of 42 years. The largest segment (35.4%) worked in an educational setting, followed by 23.1% who worked in an acute care hospital. More than 64% of respondents worked more than 40 hours a week, including 9.6% who reported working more than 60 hours a week. About two thirds (62.4%) of respondents reported working a regular day shift.

Workplace physical assault within the past year was reported by 7.1% of respondents, and verbal abuse within the past year was reported

TABLE 1—Demographic and Work Characteristics of Survey Respondents (n = 687): National Convention of the Philippine Nurses Association, Philippines, 2007

Sample characteristic	No. (%)
Experienced physical assault in past year	49 (7.1)
Experienced verbal abuse in past year	234 (34.1)
Age, y	
20–29	80 (11.6)
30–39	231 (33.6)
40–49	143 (20.8)
50–59	212 (30.9)
≥60	21 (3.1)
Work setting	
Acute care hospital	159 (23.1)
Long-term care facility	70 (10.2)
Doctor's office, public health clinic	70 (10.2)
Educational setting	243 (35.4)
Other	145 (21.1)
Hours worked per week	
≤40	246 (35.8)
41–60	375 (54.6)
>60	66 (9.6)
Regular day shift	429 (62.4)
Lifting devices available	308 (44.8)
Percent of time spent on direct patient care	
None	83 (12.1)
<25	124 (18.0)
25–50	174 (25.3)
51–75	198 (28.8)
76–100	108 (15.7)
Self-rated health status, poor/fair (n = 671)[a]	49 (8.0)
Work-related injury (≥1) in past year (n = 677)[a]	255 (37.7)
Work-related illness in past year (n = 680)[a]	278 (40.9)
Missed >2 workdays for work-related injury or illness in past year (n = 679)[a]	207 (30.5)

Note. The values were calculated from 10 imputed data sets, except for the 4 outcome variables.
[a]Slightly smaller sample size due to missing data: self-rated health (n = 671), work-related injury (n = 677), work-related illness (n = 680), and missed workdays (n = 679).

by 34.1%. Eight percent rated their health status as fair or poor. About 30% to 40% of respondents reported that they had experienced work-related health problems.

Table 2 presents bivariate associations of workplace aggression with each of the 4 health outcomes as well as with work characteristics. Reports of physical assaults were related to poor work-related health: targets of physical assaults were more likely to have a work-related injury (59.2%) than were nontargets (36.0%), to have experienced work-related illness (61.2% vs 39.3%), and to have missed more than 2 days of work in the past year (61.2% vs 28.1%). However, physical assault was not related to self-rated health.

Reports of verbal abuse were related to poor work-related health and poor self-rated health (Table 2). Respondents who experienced verbal abuse were more likely to report their health to be fair or poor (10.3%) compared with those who did not experience verbal abuse (5.7%). Finally, of the 49 respondents who reported a physical assault, 44 (89.8%) also reported experiencing verbal abuse, whereas of those who did not report a physical assault, a much lower percentage (29.8%) reported verbal abuse ($\chi^2_1 = 72.0$; $P < .01$).

Table 3 shows associations between workplace aggression and health outcomes after we controlled for age and work characteristics. After adjustment for covariates, physical assault was associated with increased risk of work-related injury (PR = 1.48; 95% confidence interval [CI] = 1.00, 2.20) and illness (PR = 1.46; 95% CI = 0.99, 2.15) but not with self-rated health. Additionally, those who reported experiencing physical assault were more likely to have missed more than 2 workdays (PR = 1.54; 95% CI = 1.02, 2.33) in the past year.

Verbal abuse followed a similar pattern. Targets of verbal abuse were more likely than nontargets to report poor health (PR = 1.94; 95% CI = 1.09, 3.45), work-related injury (PR = 1.72; 95% CI = 1.34, 2.23), and work-related illness (PR = 1.68; 95% CI = 1.32, 2.14). Also, targets of verbal abuse showed a trend toward missing work (PR = 1.32; 95% CI = 0.98, 1.78).

Individuals who spend more time in direct patient care or who work more hours per week may experience worse outcomes for a given level of workplace aggression than do other employees. We tested the interactions between physical assault or verbal abuse and percentage of time spent in direct patient care and work hours (data not shown). These interactions were not statistically significant, suggesting that neither work characteristic moderated the relationship between workplace aggression and any of the health outcomes.

Table 4 compares respondents who reported no workplace aggression with those who reported either type of aggression only and with those who reported both. Respondents who reported 1 or both types of aggression had a significantly higher risk of a work-related injury or work-related illness (PR = 1.64–1.95). Those who reported either type of aggression alone were more likely to report poor self-rated health than were other respondents. However, there was no statistically greater chance of poor self-rated health for respondents who reported both types of aggression. Finally, targets of either type of aggression alone did not have a higher risk of missing work than did nontargets, but respondents who reported both types of aggression were more likely to miss work than other respondents.

DISCUSSION

We found that physical assault and verbal abuse were associated with general health status and work-related health problems among nurses in the Philippines. A notable number of respondents reported workplace aggression within the past year: 1 in 14 reported a physical assault, and 1 in 3 reported verbal abuse. Furthermore, physical assault was associated with both work-related injury and missing work. Verbal abuse was associated with work-related injury and illness as well as with poor self-rated health.

Prevalence of Workplace Aggression

The rates of physical assault (7%) and verbal abuse (34%) that we observed were similar to those reported elsewhere. A study of nurses in 3 Turkish hospitals reported that 7% experienced physical assault and 38% experienced verbal abuse.[7] The Minnesota Nurses' Study[4] revealed a slightly higher rate of physical assault (13%) but a similar estimate for verbal abuse

TABLE 2—Bivariate Associations of Reported Workplace Aggression With Self-Rated Health and Work Characteristics Among Survey Respondents (n = 687): National Convention of the Philippine Nurses Association, Philippines, 2007

Health Outcome/Work Characteristic	Physical Assault			Verbal Abuse		
	Targets, No. (%)	Nontargets, No. (%)	P[a]	Targets, No. (%)	Nontargets, No. (%)	P[a]
Self-rated health (n = 671)[b]			.82			.03
Excellent/very good/good	45 (91.8)	577 (92.8)		208 (89.7)	414 (94.3)	
Fair/poor	4 (8.2)	45 (7.2)		24 (10.3)	25 (5.7)	
Work-related injury in past year (n = 677)[b]			< .01			< .01
None	20 (40.8)	402 (64.0)		106 (45.7)	316 (71.0)	
≥ 1	29 (59.2)	226 (36.0)		126 (54.3)	129 (29.0)	
Work-related illness in past year (n = 680)[b]			< .01			< .01
No	19 (38.8)	383 (60.7)		97 (41.8)	305 (68.1)	
Yes	30 (61.2)	248 (39.3)		135 (58.2)	143 (31.9)	
Missed workdays for work-related injury or illness in past year (n = 679)[b]			< .01			< .01
≤ 2	19 (38.8)	453 (71.9)		125 (53.9)	347 (77.6)	
> 2	30 (61.2)	177 (28.1)		107 (46.1)	100 (22.4)	
Work setting			.18			.04
Acute care hospital	17 (34.7)	142 (22.3)		70 (29.9)	89 (19.6)	
Long-term care facility	7 (14.3)	63 (9.9)		19 (8.1)	51 (11.3)	
Doctor's office, public health clinic	3 (6.1)	67 (10.5)		22 (9.4)	48 (10.6)	
Educational setting	15 (30.6)	228 (35.7)		81 (34.6)	162 (35.8)	
Other	7 (14.3)	138 (21.6)		42 (17.9)	103 (22.7)	
Hours worked per week			.07			.01
≤ 40	13 (26.5)	233 (36.5)		70 (29.9)	176 (38.9)	
41–60	27 (55.1)	348 (54.5)		135 (57.7)	240 (53.0)	
> 60	9 (18.4)	57 (8.9)		29 (12.4)	37 (8.2)	
Shift			.77			.62
Regular daytime	30 (61.2)	399 (62.5)		143 (61.1)	285 (62.9)	
Other than regular daytime	19 (38.8)	239 (37.5)		91 (38.9)	168 (37.1)	
Lifting devices			.47			.02
Available	19 (38.8)	289 (45.3)		89 (38.0)	219 (48.3)	
Not available	30 (61.2)	349 (54.7)		145 (62.0)	234 (51.7)	
% time spent on direct patient care			.05			.36
None	3 (6.1)	80 (12.5)		20 (8.5)	62 (13.7)	
< 25	5 (10.2)	119 (18.7)		43 (18.4)	82 (18.1)	
25–50	14 (28.6)	160 (25.1)		67 (28.6)	107 (23.6)	
51–75	17 (34.7)	181 (28.4)		66 (28.2)	131 (28.9)	
76–100	10 (20.4)	98 (15.4)		38 (16.2)	71 (15.7)	
Verbal abuse			< .01			...
Not experienced	5 (10.2)	448 (70.2)		...	...	
Experienced	44 (89.8)	190 (29.8)		...	...	

Note. Ellipses indicate information not applicable.
[a]The *P* value associated with χ^2 test for association between workplace aggression and health measures or work characteristics. Calculated from 10 imputed data sets, except for the 4 outcome variables.
[b]Slightly smaller sample size due to missing data.

(38%). A study of the British National Health Service observed that 44% of nurses experienced workplace bullying.[5] In the ANA's 2001 Health and Safety Survey, 17% of nurses reported physical assault, and 57% reported verbal abuse. Because the terms and definitions of workplace aggression vary across studies,[9,10,23,24] making precise comparisons is difficult. Nonetheless, cross-national trends indicate that nurses report nonphysical forms of workplace aggression more often than physical aggression. Our findings among nurses in

TABLE 3—Prevalence Ratios (PRs) of Fair/Poor Self-Rated Health Status and Work-Related Health Problems Associated With Reported Physical Assault or Verbal Abuse: National Convention of the Philippine Nurses Association, Philippines, 2007

Health Outcome	Physical Assault, PR (95% CI)	Verbal Abuse, PR (95% CI)
Self-rated health, fair/poor	1.37 (0.48, 3.93)	1.94 (1.09, 3.45)
Work-related injury in past year	1.48 (1.00, 2.20)	1.72 (1.34, 2.23)
Work-related illness in past year	1.46 (0.99, 2.15)	1.68 (1.32, 2.14)
Missed >2 workdays in past year because of work-related health problems[a]	1.54 (1.02, 2.33)	1.32 (0.98, 1.78)

Note. CI = confidence interval, PR = prevalence ratio. Physical assault and verbal abuse were examined in separate models. Parameter estimates were aggregated from 10 imputed data sets. Sample size was n = 687. All models were Adjusted for age, work setting, work hours, shift type, lifting device availability, and time spent on direct patient care.
[a]Additional adjustments were made for work-related injury and illness.

TABLE 4—Prevalence Ratios (PRs) of Fair/Poor Self-Rated Health Status and Work-Related Problems Associated With Physical Assault and Verbal Abuse: National Convention of the Philippine Nurses Association, Philippines, 2007

Combination of Workplace Aggression	PR (95% CI)
Self-rated general health (fair/poor)	
No workplace aggression (Ref)	1.00
1 type of aggression	1.91 (1.05, 3.49)
Both types of aggression	1.96 (0.66, 5.83)
Work-related injury	
No workplace aggression (Ref)	1.00
1 type of aggression	1.64 (1.25, 2.16)
Both types of aggression	1.95 (1.27, 2.99)
Work-related illness	
No workplace aggression (Ref)	1.00
1 type of aggression	1.69 (1.30, 2.19)
Both types of aggression	1.71 (1.10, 2.66)
Missed >2 workdays[a]	
No workplace aggression (Ref)	1.00
1 type of aggression	1.16 (0.84, 1.60)
Both types of aggression	1.86 (1.17, 2.96)

Note. CI = confidence interval, PR = prevalence ratio. Parameter estimates were aggregated from 10 imputed data sets. Sample size was n = 687. All models were Adjusted for age, work setting, work hours, shift type, lifting device availability, and time spent on direct patient care.
[a]Additional adjustments were made for work-related injury and illness.

the Philippines were consistent with these trends.

We also found that physical assault was associated with increased time spent in direct patient care, whereas verbal abuse was not associated with such increased time. The Minnesota Nurses' Study documented that almost all perpetrators of physical assault against nurses were patients, and that nonphysical aggression was committed not only by patients but also by physicians, supervisors, coworkers, and various visitors.[4] We did not ask our respondents to identify perpetrators; however, the significant association between time spent in patient care and physical assault suggests that patients were among the perpetrators. Nurses who engage in direct patient care may be at higher risk for physical assault; therefore, preventing physical assault among this group should be a priority.

Health Correlates of Workplace Aggression

Our analysis showed that physical assault was associated with both work-related injury and illness. Although these associations could reflect direct consequences of physical assault (e.g., the injury inflicted by an attack), we suspect that this possibility is small because many physical assault incidents in health care settings do not require treatment.[4] Yet after we controlled for work-related injury and illness, nurses in our study who reported physical assault were more likely than others to have missed work. This result suggests that research on physical assault needs to focus not only on injury and workers' compensation but also on other health outcomes.

Nurses who reported verbal abuse were more likely to report poor general health, corroborating results from other studies.[14,15] Our study also found that verbal abuse targets were more likely to report both work-related injury and illness, a finding also seen in France.[14] Verbal abuse reported in our study may or may not be the same phenomenon as workplace bullying measured in the French and Finnish studies,[14,15] but the mechanisms through which various forms of workplace aggression affect employee safety and health may be similar, as discussed in "Potential Mechanisms and Intervention Strategies."

The magnitude of association with health problems was slightly greater for verbal abuse than for physical assault in our sample, but interpreting this result requires consideration of the nature of aggression. Physical assaults are often committed by patients, whereas verbal abuse can be committed by coworkers as well.[4] Aggression from patients may take a greater toll than that from coworkers because nurses may feel that they cannot fight back against patients. However, physical assaults by patients on nurses may be isolated incidents, whereas verbal abuse from coworkers may be ongoing. As shown in a Finnish study,[16] the prolonged exposure to workplace bullying (nonphysical aggression) predicted incidence of depression and cardiovascular disease more strongly than did 1-time exposure. Unfortunately, our study was unable to assess the source or duration of workplace aggression. Future studies should include these 2 important aspects.

Our study was 1 of the few to address both physical and nonphysical workplace aggression. Experiencing both types of aggression may increase risks of adverse health outcomes; however, we did not find evidence for increased risk of poor health—except for missed work—among targets of both types of aggression compared with targets of either type of aggression alone. Given the limitations in our data (i.e., no information on duration or intensity of aggression), we were not able to

examine effects of concurrent exposure further. Our data did indicate that a vast majority of physical assault targets are also targets of verbal abuse. Concurrent exposure certainly deserves further research.

Potential Mechanisms and Intervention Strategies

Workplace aggression may influence worker health in several ways. First, aggression represents a specific form of work stress. As Rospenda et al.[25] argued, labeling a certain experience as "assault" and "abuse" in and of itself implies that the experience was stressful. Stress at work has been a well-documented risk factor for various health problems, including occupational injury.[26] Second, workplace aggression may be a marker of other hazardous work conditions. For instance, aggression may signify poor leadership or an unfair workplace, both of which have been reported to have negative effects on employee health.[27,28] A workplace that tolerates aggression among employees is less likely to facilitate a supportive work environment. Future research should test these possible pathways.

The problem of aggression against nurses should be considered in the context of the persistent nursing shortage and the quality of patient care. The Minnesota Nurses' Study reported that 3.5% of physical violence targets and more than 10% of nonphysical violence targets left the workplace either by quitting, by being transferred, or by taking a leave of absence.[4] Implications include an increased workload for the remaining nurses, a situation which can compromise the quality of patient care.[29,30] Thus, aggression not only has a direct effect on the target, but it also has an indirect effect on the nursing workforce as well as on the patient population.

Different approaches are likely needed for preventing physical and nonphysical aggression because different types of individuals (i.e., patients, coworkers) are often responsible for each type of aggression. However, health care organizations' commitment to protect nurses from workplace aggression, regardless of types and sources, may have positive effects overall. Nachreiner et al.[31] documented that the presence of written policies on zero tolerance for violence regardless of the perpetrator was associated with a significantly lower likelihood of patient-to-nurse physical assault. In 2008, the Joint Commission for the Accreditation of Healthcare Organizations, the accreditation body for health care organizations in the United States, issued a set of requirements for programs to develop organizational policies to eliminate disruptive behaviors, including workplace aggression.[32] Although these requirements mainly address employee-to-employee aggression, they might be expanded to consider patient-to-employee aggression as well.

Study Limitations

Besides the issues already mentioned, several other limitations should be acknowledged. First, all data were collected via self-report, which is subject to response biases (e.g., recall, social desirability). Second, although we used the same measures as used in the ANA survey to ensure comparability, our measure of workplace aggression (physical assault and verbal abuse) consisted of a single item. In assessing workplace harassment and discrimination, single-item measures consistently produced lower prevalence than did multi-item measures.[25] Our study, therefore, may have underestimated the prevalence of workplace aggression. Third, our data were collected from a sample of attendees at a national nursing convention. Although our respondents were from all regions throughout the Philippines, the sample cannot be considered nationally representative. Because attending a conference incurs fees and other costs (e.g., travel, registration), our sample likely overrepresented nurses with greater resources. Moreover, about a third of the respondents worked in educational settings, where the risk of workplace aggression may be lower than in other settings. Hence, our data may represent the most advantaged nurses and may underestimate the true prevalence of workplace aggression. Finally, the cross-sectional design did not allow us to investigate causal relations. For example, nurses may experience verbal abuse because they missed many workdays and, thus, increased the workloads of their colleagues. Accordingly, longitudinal data are needed for future study.

Conclusions

We examined associations of physical and nonphysical forms of workplace aggression with general health status and work-related health outcomes among nurses in the Philippines. Our results suggested that physical assault has consequences other than injuries directly caused by the assault. We also found that physical assault and verbal abuse experiences had a similar magnitude of association with work-related health outcomes. Future studies should examine mechanisms through which workplace aggression increases the risk of work-related injury and illness. ■

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Contributors

K. Fujishiro developed the concept of the article, conducted the analyses, interpreted the results, and led the writing of the article. G. C. Gee refined the concept, interpreted the results, and provided critical revision of the drafts. A. B. de Castro developed the collaboration with the Philippine Nurses Association, collected data, interpreted the results, and provided critical revision of the drafts.

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Human Participant Protection

The study protocol was approved by the institutional review board of the University of Washington, Seattle. The human subject review board of the National Institute for Occupational Safety and Health provided exempt status for the current analysis because the data were collected anonymously.

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