Staff Gender and Risk of Assault on Doctors and Nurses

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Clinical staff on acute psychiatric inpatient units often are asked to provide care for potentially violent patients. Documentation of which staff are at greatest risk of being assaulted is a necessary step in developing interventions to reduce that risk. The present study evaluated the relationship between staff gender and the risk of becoming a victim of assault while taking into account the professional discipline of the staff victims. The sample included all medical staff (n = 120) and nursing staff (n = 83) who worked on a short-term psychiatric unit between August 1988 and May 1991. Seventy-two percent of the medical and nursing staff were female and 28 percent were male. Five hundred ten assaults were directed toward medical and nursing staff during the study period. Staff gender was not significantly associated with the risk of being a victim of violence for the staff as a whole, the doctors, or the nurses. Staff discipline, however, was strongly associated with risk of assault. Nurses as a group were significantly more likely to be assaulted than were doctors. The findings suggest that violent behavior is a significant occupational hazard on acute inpatient units, and that the role relationship with the patient is more important than the gender of the clinician as a predictor of who is most likely to be assaulted. The authors discuss the implications of the findings for administrative decisions regarding staffing.

Violent behavior has become a major cause of occupational injuries and deaths. On acute psychiatric inpatient units, the risk of violence toward clinical staff is inherent in admission policies governed by laws specifying that one criterion for civil commitment is that a patient be considered a danger to others. Despite a large body of research on the prediction of violent behavior,[1] limited data are available that could inform policies designed to reduce violence toward staff.

Most research on violence in psychiatric hospitals has emphasized attributes of violent patients[2] despite the widely recognized importance of situational factors to the expression of violent behavior.[3,4] For example, only a few studies have examined the characteristics of staff who become targets of patients' violence.[4,5] Documentation of which staff are at greatest risk is a necessary step in developing interventions to reduce that risk. This study provides information about this topic by documenting the role

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of staff gender in influencing the risk of becoming a victim of assaultive behavior by acute psychiatric inpatients.

The issue of whether male or female clinicians are more likely to be assaulted is controversial.[6] Some studies have suggested that women clinicians are at lower risk than are men for being assaulted. For example, Levy and Harticollis studied a psychiatric unit staffed only by women and reported that there were no incidents of violence on the unit. The authors hypothesized that violence-prone patients may find female nurses and aides less provocative than male staff and that women may rely more on a nonaggressive manner and feminine intuition when confronted with threatening patients.[7] Similarly Carmel and Hunter found that male nursing staff were nearly twice as likely as female nursing staff to be injured by patients. They hypothesized that male staff had a higher rate of injury because male staff become more actively involved than female staff in containing violent patient behavior.[5]

In contrast, some studies have suggested that women clinicians, especially psychotherapists and physicians, are at equal[8–10] or even at higher risk[11–13] for being assaulted than men. In consideration of these issues, a recent American Psychiatric Association Task Force Report,[14] called for more data to clarify the incidence of violence against women clinicians in a psychiatric setting.

An issue that complicates the study of the relationship between staff gender and risk of assault by patients is that the distribution of male and female staff often varies according to the mental health discipline under consideration, e.g., nurses, doctors, social workers, etc. Hence, apparent associations between staff gender and risk of assault could be attributable to the different patterns of staff–patient interactions associated with the duties of different hospital staff, rather than to gender of staff. With this issue in mind, the present study evaluated the relationship between staff gender and the risk of becoming a victim of assault on a short-term inpatient unit, while taking into account the professional discipline of the staff victims.

Method

The setting for this study was a 16-bed locked university-based inpatient unit with a mean length of stay of 18 days. The sample included all medical staff (n = 83) and nursing staff (n = 120) who worked on the unit between August 1988 and May 1991. (Because less than 5% of the assaults were directed toward other staff such as social workers, psychologists, and rehabilitation therapists, the data analysis was restricted to physicians and nurses.) Seventy-two percent (n = 146) of the medical and nursing staff were women and twenty-eight percent (n = 57) were men. The study focused on the gender and staff discipline of the victim of each act of physical aggression that patients exhibited during the study period.

Violent behavior exhibited by patients in the hospital was evaluated with the Overt Aggression Scale (OAS),[15] a widely used measure with documented reliability and validity as an index of inpatient

aggression.[16] The OAS is a behavioral checklist that nursing staff complete at the end of each eight-hour shift to indicate if patients have engaged in physical aggression against other people, physical aggression against objects, physical aggression against themselves, or verbal aggression. In this study, assaults were defined as acts of physical aggression against other people.

The relationships between staff gender, staff discipline (doctor or nurse), and risk of assault were analyzed with chi-square analyses and analyses of variance.

Results

Frequency and Characteristics of Assaults on Staff During the 2.75 years of the study, 149 patients made 678 physical attacks on 97 victims. Seventy-four percent (n = 503) of the assaults were directed toward nursing staff, one percent (n = 7) toward medical staff, and twenty-five percent (n = 167) toward other victims such as police, family members, and other patients. Forty-nine percent (n = 329) of the assaults occurred during the day shift, 23 percent (n = 156) during the evening shift, and 28 percent (n = 193) during the night shift. Of the assaults directed toward medical and nursing staff (n = 510), 65 percent (n = 331) were directed toward women and 35 percent (n = 179) targeted men.

To describe the sample of 149 assaultive patients, their demographic and diagnostic characteristics at the time of the first admission to the unit during the 2.75-year period of the study will be summarized. The assaultive patients' mean age was 48 years old, with a range of 15 to 94 years. Forty-three percent (n = 64) were men and 57 percent (n = 85) were women. Sixty percent (n = 89) were single, 18 percent (n = 27) were married or in living-together relationships, 15 percent (n = 22) were widowed, and 7 percent (n = 11) were divorced or separated. Seventy-one percent (n = 105) were white; 14 percent (n = 21), African-American; 10 percent (n = 15), Asian-American; and 5 percent (n = 8), other ethnic backgrounds. Primary diagnoses, based on the International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM), were as follows: 33 percent (n = 49) had schizophrenic disorders, 25 percent (n = 37) had manic disorders, 19 percent (n = 29) had organic psychotic conditions, and 23 percent (n = 33) had other mental disorders. Eighty-seven percent (n = 130) were hospitalized on involuntary civil commitments, and 13 percent (n = 19) were hospitalized voluntarily.

Relationships Between Staff Gender, Staff Discipline, and Risk of Being a Victim of Assault Chi-square analyses, corrected for continuity, were used to assess relationships between staff gender, staff discipline, and whether or not staff members were ever assaulted during the study period. As shown in Table 1, the majority of staff victims were women. However, the majority of the staff as a whole also were women. Staff gender was not significantly associated with the risk of being a victim of violence for the staff as a whole, the doctors, or the nurses. However, staff discipline was

Table 1
Proportion of Male and Female Nurses (n = 83) and Doctors (n = 120) who Were and Were Not Victims of Assault by Inpatients

Victim Status	Nurses				Doctors				Total	
	Male		Female		Male		Female		n	%
	n	%	n	%	n	%	n	%		
Victim of assault	20	62.5%	30	58.8%	5	8.1%	2	3.4%	57	28.1%
Not victim of assault	12	37.5%	21	41.2%	57	91.9%	56	96.6%	146	71.9%

Note.—Chi-square analyses showed that nurses as a group were more likely to be assaulted than doctors ($\chi^2 = 69.25$, df = 1, $p < .00001$), that male nurses were more likely to be assaulted than male doctors ($\chi^2 = 29.31$, df = 1, $p < .00001$), and that female nurses were more likely to be assaulted than female doctors ($\chi^2 = 37.50$, df = 1, $p < .00001$). Staff gender was not significantly associated with risk of being a victim of violence for the group as a whole, for the nurses or for the doctors.

strongly associated with risk of assault. Nurses, as a group, were significantly more likely to be assaulted than doctors. Male nurses were significantly more likely to be assaulted than male doctors, and female nurses were significantly more likely to be assaulted than female doctors.

Because several staff members were victims of more than one assault, we also analyzed the relationship between staff characteristics and risk of victimization considering the outcome variable as the frequency of being attacked. Specifically, a two-way analysis of variance was conducted in which the independent variables were staff gender (male or female) and staff discipline (doctor or nurse), and the dependent variable was frequency of being attacked. There was a significant main effect for staff discipline ($F = 17.15$, df = 1, 199, $p < .0001$), with significantly more physical attacks being directed toward nurses (mean, 6.1; SD, 11.21) than doctors (mean, 0.1; SD, 0.24). There was no significant main effect for staff gender, nor a significant interaction of staff gender and staff discipline, on the rate of being a victim of assault.

(A subsidiary analysis of whether the gender of the staff victim varied depending on the gender of the violent patient did not reveal a significant association.)

Discussion

The results of this study show that physical assault clearly is an occupational risk for staff on psychiatric inpatient units, especially for nursing staff. Although this occupational risk has been reported in other settings, e.g., inner city hospitals and forensic hospitals,[4, 5, 9] it is important to emphasize that this risk is present even in settings such as the one described in this study. An earlier report suggested that violence on inpatient units is related to overcrowding, staff inexperience, poor management practices, tolerance of violence, and location in an inner city hospital.[4] None of these factors were present in the current study. This study was conducted on a university-based inpatient unit located in a middle class neighborhood that had a high staff-to-patient ratio, a cohesive

nursing staff, and little staff turnover. An implication of these findings in this setting is that all staff on inpatient units need to be aware of techniques to prevent and manage assaultive behavior by patients. In addition, although most of the assaults in this study caused minimal, if any, physical injuries, even minor assaults have the potential of causing psychological stress and trauma. Therefore, administrators for inpatient units need to develop and monitor postassault interventions to mitigate possible psychological sequelae in staff victims.

In this study, staff gender was not significantly associated with the risk of being a victim. Although, the majority of staff victims were women, this reflects the fact that the majority of the staff members were women. Other authors[5,7] have hypothesized that men and women interact with patients differently, and therefore staff gender is associated with different risks of being assaulted. However, the data in this study suggest that gender is less relevant in who gets assaulted than the role relationship with the patient, e.g., a doctor or nurse. The conflicting results of previous studies about whether men or women clinicians are at greater risk for assault[6] may be partially explained by the fact that clinician gender was examined without fully considering the nature of the relationship between the clinicians and patients.

In this study, staff members' professional discipline was strongly associated with risk of assault. A majority of nurses in our sample were assaulted at least once during the period of the study. This is consistent with reports in the nursing literature (e.g., 17) that state that physical assault by patients is an occupational hazard for many psychiatric nurses. There was no significant difference in the risk of assault between male and female nurses. In contrast to the conclusions of Levy and Harticollis,[7] the results of this study do not suggest that female nurses are seen as less provocative than male nurses to assaultive patients. This study, however, did not examine the impact of a totally female staff, precluding direct comparison with the findings of Levy and Harticollis.

A possible explanation of the high risk of assault against nurses relates to their interaction with patients. Nurses are often the staff members who have the most frequent contact with the patient and therefore are more readily available as targets. The physicians on our unit typically meet with the patients, do an evaluation, and then leave the inpatient unit to go to their offices and seminars. In contrast, the nurses spend eight hours each shift on the unit. In addition, the nursing staff are more likely than physicians on the inpatient unit to be in the position of setting limits with the patient, and therefore they may be more likely to precipitate assaults. This interaction is similar to the situation of family caregivers who are often the victims of assaults by aggressive psychiatric outpatients.[18] The results of previous research on family caregivers have suggested that caregivers are available victims and also may precipitate assaults when they attempt to set limits on aggressive patients.[18] Further study is

needed on the specific types of interactions and role relationships that precipitate patient violence on psychiatric inpatient units as a basis for improving preventive strategies.

The results of this study have implications for administrative decisions regarding the ratio of men and women nurses. The data provide no support for the belief that altering the ratio of male or female nurses will affect the rate of patient assaults. The issue is not whether a nurse is a man or woman, but that nurses are involved in caring for potentially assaultive patients and therefore are at risk for assaults.[17] Our recommendations to administrators making decisions about staffing patterns on inpatient units are that units need to be staffed with adequate numbers of personnel, either men or women, who are trained in the recognition and management of assaultive behavior.

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