

Workplace Violence and Burnout Among Mental Health Workers

Andrea Aguglia, M.D., Ph.D., Martino Belvederi Murri, M.D., Claudia Conigliaro, M.D., Nicolò Cipriani, M.D., Marco Vaggi, M.D., Gabriele Di Salvo, M.D., Giuseppe Maina, M.D., Vito Cavone, M.D., Eugenio Aguglia, M.D., Gianluca Serafini, M.D., Ph.D., Mario Amore, M.D.

Objective: The authors conducted a cross-sectional survey to investigate the association between episodes of patient aggression and burnout among mental health professionals.

Methods: Scores of the Maslach Burnout Inventory (MBI) among 183 participants who completed a questionnaire on violence exposure were used as the outcome. Demographic and work-related variables were examined as potential moderators of the association between aggression and burnout.

Results: Lifetime exposure to verbal or object aggression was associated with higher MBI scores. In stepwise regression,

MBI score was positively associated with having experienced recent verbal aggression and with the number of symptoms experienced immediately after the worst event. MBI score was negatively associated with working in a university psychiatric inpatient unit. The association between verbal aggression and burnout was significant only among women.

Conclusions: Workplace violence may have a significant negative impact on subjective well-being and patient care and may contribute to burnout among mental health professionals.

Psychiatric Services 2020; 71:284–288; doi: 10.1176/appi.ps.201900161

Workplace violence toward health care practitioners may contribute to their levels of burnout (1, 2). This phenomenon is widespread: in 2015 the U.S. Bureau of Labor Statistics stated that nonfatal injuries due to aggression were approximately three times more frequent among health care practitioners than among private industry workers, with a reported incidence of 14 per 100,000 people per year. Similarly, a recent Italian study showed that 45% of health care professionals had experienced physical or verbal aggression from patients or patients' relatives (3). Italy has a universal public mental health care system, which gives patients direct access to care, potentially increasing their perceptions that the system functions well. Unfortunately, a significant reduction in the number of mental health care workers in Italy due to retirement has led to worsening quality of services because of decreased time that can be dedicated to patients. These conditions could in part explain the increasing number of aggressive acts (4).

The Violence Prevention Alliance, a network of World Health Organization member states, defines violence as “the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of

resulting in injury, death, psychological harm, maldevelopment, or deprivation.” This definition distinguishes four kinds of violent behavior: physical, sexual, and psychological attacks, and deprivation (5).

Being the victim of aggressive behavior may increase an individual's level of burnout, a state characterized by physical and mental exhaustion as well as detachment and negative attitudes toward work, accompanied by a perception of diminished professional efficacy (6). Professional burnout negatively affects both health care professionals and

HIGHLIGHTS

- Psychiatrists reported object aggression more frequently than did other mental health professionals.
- Exposure to verbal or object aggression by patients in the previous year was associated with higher Maslach Burnout Inventory (MBI) scores.
- MBI score was positively associated with having experienced recent verbal aggression and with the number of symptoms experienced immediately after the first event.

patients. High levels of burnout have been detected among mental health practitioners, but few studies have examined whether it is associated with workplace violence (7). Thus, the aim of this study was to explore the association between workplace violence and burnout among mental health workers and to assess whether individual or workplace characteristics could influence that relationship.

METHODS

A cross-sectional survey was conducted among mental health professionals working in emergency psychiatric wards in IRCCS Ospedale Policlinico San Martino in Genoa, San Luigi Gonzaga Hospital of Orbassano, and Gaspare Rodolico Hospital in Catania—and in mental health centers in Genoa and Catania, Italy, between January 1 and December 31, 2018. We developed an ad-hoc structured questionnaire to assess workplace violence among mental health professionals. The questionnaire inquired about the frequency and modality of exposure to violent behaviors from patients or their relatives. It included questions on verbal threats; verbal, physical, and object aggressions; and symptoms experienced after the worst event, including insomnia, anorexia, flashbacks, and discomfort.

Participation in the study was offered to all employees of the health centers listed above: 320 employees, including psychiatrists, residents in psychiatry, nurses, and other mental health professionals. Two hundred fifteen questionnaires were returned (67%). A total of 32 questionnaires were excluded because of incomplete data, resulting in a final sample of 183 participants. Burnout was assessed by using the Maslach Burnout Inventory (MBI), a 22-item self-report questionnaire that examines three dimensions: emotional exhaustion, depersonalization, and personal accomplishment (8). MBI scores range from 0 to 132, with higher scores indicating a greater degree of burnout. The study was approved by the IRCCS Ospedale Policlinico San Martino review board; all participants provided written informed consent.

First, we compared sociodemographic data, workplace characteristics, history of aggression, and levels of burnout among four categories of professionals: psychiatrists, residents, nurses, and other mental health professionals. We sought to explore the main correlates of burnout, using total MBI score as the main outcome. We conducted univariate analyses (Pearson product-moment correlation, *t* test, and one-way ANOVA) to explore associations between MBI scores and variables related to workplace aggression and sociodemographic and work-related factors. In addition, we sought to examine whether individual characteristics (age, gender, years of work experience, workplace, and previous training on violence management) would affect the strength of the association between workplace violence and burnout. Moderator effects were examined with the PROCESS macro (2.12.1 release), a widely used regression-based approach that probes the interaction between predictor and moderator (9).

The macro provides bias-corrected 95% confidence intervals by using bootstrap calculation. SPSS 22.0 was used for all analyses, and the level of significance was set at $p < 0.05$.

RESULTS

Among psychiatric residents ($N=58$, 32%), mean \pm SD age (29.8 ± 3.2 years, $p < 0.001$) and the percentage who had more than 10 years of working experience (2%, $p < 0.001$) were significantly lower than for all other professional categories (Table 1). Forty-eight percent of residents received specific training for managing aggression in the workplace. A total of 67% were working in acute inpatient psychiatric units, 31% in university psychiatric units, and 2% in private institutions. Among nurses ($N=56$, 31%) mean age was 50.5 ± 19.0 years, 60% were women, and 76% had more than 10 years of working experience. Forty-eight percent of nurses were working in acute inpatient psychiatric units, 38% in university psychiatric units, and 14% in mental health centers. A total of 65% of nurses received specific training for managing workplace aggression.

The mean age of other professionals (rehabilitation technicians, psychologists, and educators) ($N=30$, 16%) was 49.0 ± 12.0 years, 67% were women, 67% had more than 10 years of working experience, and 50% underwent specific training on workplace violence. A majority (42%) were employed in acute inpatient psychiatric units, 21% in university psychiatric units, 30% in mental health centers, and 6% in private institutions.

Data on workplace violence are reported according to the time frame of occurrence, separated into two categories: aggressions over the course of a whole career (“lifetime”) and episodes that occurred in the past year. A majority of professionals ($N=164$, 90%) reported having experienced verbal aggression from patients or patients’ relatives, with no differences among the professional groups studied. Verbal threats were reported by 97 participants (53%), and aggression with objects was even more frequent ($N=150$, 82%). Both verbal threats ($p=0.03$) and object aggression ($p=0.03$) were more frequently experienced by psychiatrists than by residents, nurses, and other professionals. Physical aggression was reported by half of participants ($N=92$, 50%), with a similar prevalence across professional categories.

Considering episodes of violence experienced in the past year, the prevalence of verbal aggression ($N=76$, 42%) and of object aggression ($N=81$, 44%) were similar in the total sample, while the frequency of physical aggression was much lower ($N=5$, 3%) and was experienced only by nurses and other professionals. Regarding between-group differences, Table 1 shows that psychiatrists, residents, and nurses reported a higher frequency of verbal aggression than did other professionals ($p=0.04$), while object aggression was more frequently reported by psychiatrists compared with residents and more frequently reported by nurses compared with other professionals ($p=0.04$).

TABLE 1. Characteristics of 183 mental health workers in Italy and exposure to workplace violence (WPV), by professional category^a

Characteristic	A: psychiatrists (N=39)		B: residents (N=58)		C: nurses (N=56)		D: other professionals ^b (N=30)		p
	N	%	N	%	N	%	N	%	
Age (M±SD)	47.4±10.7		29.8±3.2		50.5±19.0		49.0±12.0		<.001 ^c
Female	19	49	30	52	34	61	20	67	.40
>10 years of work experience	30	77	1	2	43	77	20	67	<.001 ^c
Received training on WPV	35	90	28	48	37	66	15	50	<.005 ^d
Workplace	<.001								
Acute inpatient unit	17	44	39	67	27	48	13	43	
University psychiatric unit	7	18	18	31	21	38	6	20	
Mental health center	12	31	0	—	8	14	9	30	
Other (e.g., private practice)	3	8	1	2	0	—	2	7	
Lifetime WPV exposure									
Verbal aggression	38	97	52	90	48	86	26	87	.23
Verbal threat	29	74	26	45	33	59	9	30	.03 ^d
Object aggression	38	97	47	81	43	77	22	73	.03 ^d
Physical aggression	24	62	26	45	29	52	13	43	.27
Past-year WPV exposure									
Verbal aggression	19	49	30	52	20	36	7	23	.04 ^e
Object aggression	23	59	25	43	25	45	8	27	.04 ^d
Physical aggression	0	—	0	—	4	7	1	3	.08
Symptoms soon after first episode (M±SD)	.8±1.2		.8±1.2		.5±.9		.2±.5		.02
Symptoms days after the worst episode (M±SD)	.9±1.1		.8±1.5		.5±1.1		.4±.5		.17
MBI score (M±SD) ^f									
Total	39.8±15.2		41.4±15.6		41.6±15.8		39.7±12.8		.89
Emotional exhaustion	18.3±8.2		19.3±7.8		17.1±8.6		17.5±7.7		.52
Depersonalization	4.4±3.9		5.6±4.8		4.9±4.7		4.1±3.8		.36
Personal accomplishment	15.2±8.0		14.6±6.8		17.8±8.5		16.7±8.7		.15

^a Means were compared by t tests, and proportions were compared by chi-square tests.

^b Other professionals include rehabilitation technicians, psychologists, and educators.

^c (B<A, C, D).

^d (A>B, C, D).

^e (D<A, B, C).

^f The Maslach Burnout Inventory (MBI) includes 22 items, divided into three subscales. Items are answered on a 7-point fully anchored scale (from 0, never, to 6, every day) in terms of the frequency with which respondents experience those feelings. Total scores range from 0 to 132, with higher scores indicating a greater degree of burnout. Emotional exhaustion subscale scores range from 0 to 54, with higher scores indicating more symptoms of being emotionally overextended and exhausted by one's work; a score of >22 indicates high burnout risk, according to the Italian calibration by Sirigatti and Stefanile (11). Depersonalization subscale scores range from 0 to 30, with higher scores indicating greater depersonalization symptoms; a score of >5 indicates high burnout risk (11). Personal accomplishment subscale scores range from 0 to 48, with lower scores indicating worsening of private life; a score of <32 indicates high burnout risk (11).

Among psychiatrists and residents, the mean numbers of symptoms experienced after the first episode of workplace violence were 0.8±1.2 and 0.8±1.2, respectively, while nurses and other professionals reported a mean of 0.5±0.9 and 0.2±0.5, respectively (p=0.02). No differences among groups were observed in the number of symptoms occurring up to four weeks after the most recent episode.

Overall MBI scores suggested low to moderate levels of burnout (mean≈40). No significant difference was found between the subgroups in total or subscale scores. Furthermore, we did not detect significant associations between total MBI score and gender (p=0.71), age (p=0.58), longer working experience (p=0.81), or having received specific training on workplace violence (p=0.83). A significant difference was found in total MBI score according to workplace, with higher scores among professionals working in acute inpatient psychiatric units versus those in university psychiatric units (45.5±16.9 versus 37.8±13.1, p=0.01).

No between-group differences in MBI scores were detected in relation to differences in rates of lifetime verbal aggression, verbal threats, object aggression, or physical aggression. Individuals who were exposed to verbal aggression or object aggression in the previous year had significantly higher MBI scores than those who were not exposed (44.5±15.6 vs. 38.1±14.1, p=0.003; and 43.5±16.5 vs. 38.6±13.3, p=0.03, respectively). No differences in MBI score were found on the basis of exposure to physical aggression in the previous year (p=0.97).

Total MBI score correlated significantly with the number of symptoms experienced by practitioners immediately after the worst episode they experienced (Spearman's rho=0.15, p=0.04) but not with the number of symptoms they developed later (rho=0.11, p=0.13).

Factors that were significantly associated with MBI score at the univariate level were entered in a stepwise linear regression (F=6.92; df=4, 18; p<0.001; R²=13.5%). Total MBI

score was positively associated with having experienced verbal aggression in the past year and with the number of symptoms experienced immediately after the event, although it was negatively associated with working in a university clinic.

Participant age, years of work experience, workplace, and training were not effect modifiers of the association between verbal aggression and burnout, while gender was a significant moderator, which improved the model (R^2 change=4%, $F=6.77$; $df=1, 18$; $p=0.01$). In particular, verbal aggressions in the past year were strongly associated with higher levels of burnout among women (effect=11.3, 95% confidence interval=4.65 to 18.0, $t=3.4$, $p=0.001$, $R^2=13\%$), but the association was not significant among men.

DISCUSSION

Workplace aggression was extremely common among mental health professionals in our sample, in line with the findings of other authors (10). Nonetheless, according to the norms of burnout for mental health practitioners in Italy, the mean scores obtained in our sample on the emotional exhaustion, depersonalization, and personal accomplishment subscales were all within the normal range across all professional categories (11). Symptoms occurring after the episode of aggression were only weakly associated with current levels of burnout. On the other hand, working in a university clinic predicted lower levels of burnout, possibly because this setting experiences less-frequent compulsory admissions and participants from university clinics have a lower mean age. Lack of a substantial effect of violence on burnout may be due to the fact that the MBI assesses the experience of participants but does not observe how burnout changes over time; it could be argued, thus, that the detrimental effects of experiencing aggression could have waned over time without being detected by the current survey. Workplace violence has been recognized as hindering professionals' well-being, organizational efficiency and, eventually, patient care (12, 13). Assessing the prevalence of physical and verbal aggression toward mental health professionals could represent the first step in implementing guidelines and preventive measures to face workplace violence and its consequences.

Several limitations of this study should be acknowledged. The main limitation was the use of a newly developed questionnaire that has not been formally validated against objective measures of aggression. This questionnaire was used mainly because, to our knowledge, other assessment tools were not available. In addition, given the retrospective nature of the collected data and the sensitive issue being studied, recall bias can be expected, especially when participants were asked to recall experiences from throughout their whole careers. Professionals who experience higher levels of burnout may have a greater tendency to emphasize past episodes of aggression (i.e., reverse causality). Furthermore, the number and dates of violent episodes were not

recorded, making it impossible to examine the cumulative effects of repeated aggressions and the temporal relationship with burnout. The sample was relatively small, and some associations may have gone undetected because of low statistical power. We also did not record other factors that may have contributed to increased levels of burnout, such as specific organizational features or individual workload. Finally, we did not employ techniques to handle missing data, such as multiple imputation.

CONCLUSIONS

Being exposed to aggressive behavior at work was not substantially associated with levels of burnout among professionals working in the mental health sector, with the possible exception of women. The effect of exposure to workplace violence may depend on workers' capacity to underestimate critical environmental situations or on coping strategies that effectively help individuals endure the psychological consequences of aggression. Given prior indications that workplace violence may extract a heavy toll on employee well-being and patient care, however, this report highlights a need to further study the temporal relationship between episodes of aggression and burnout as well as the barriers that may hinder reporting of workplace violence. It may be useful to provide mental health workers with training on managing verbal aggression and to improve resource allocation for the mental health sector, which is dramatically underfunded in Italy compared with other EU countries (4). These steps may lead to more-specific and more-timely preventive strategies to further reduce burnout among mental health professionals.

AUTHOR AND ARTICLE INFORMATION

Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal, and Child Health, University of Genoa, Genoa, Italy (A. Aguglia, Belvederi Murri, Conigliaro, Cipriani, Serafini, Amore); IRCCS Ospedale Policlinico San Martino, Genoa, Italy (A. Aguglia, Conigliaro, Cipriani, Serafini, Amore); Department of Biomedical and Specialty Surgical Sciences, Institute of Psychiatry, University of Ferrara, Ferrara, Italy (Belvederi Murri); Department of Mental Health and Drug Addiction, ASL3, Genoa, Italy (Vaggi); Psychiatric Clinic, San Luigi Gonzaga Hospital of Orbassano, and Rita Levi Montalcini Department of Neuroscience, University of Turin, Turin, Italy (Di Salvo, Maina); Psychiatric Unit, Gaspare Rodolico Hospital and Department of Clinical and Experimental Medicine, University of Catania, Catania, Italy (Cavone, E. Aguglia). Send correspondence to Dr. A. Aguglia (andrea.aguglia@hsanmartino.it). Dr. A. Aguglia and Dr. Belvederi Murri contributed equally to this work.

The authors thank the participants in the study.

The authors report no financial relationships with commercial interests.

Received March 27, 2019; revision received September 2, 2019; accepted September 5, 2019; published online October 23, 2019.

REFERENCES

1. Speroni KG, Fitch T, Dawson E, et al: Incidence and cost of nurse workplace violence perpetrated by hospital patients or patient visitors. *J Emerg Nurs* 2014; 40:218–228
2. Employer-Reported Workplace Injuries and Illnesses—2015. Washington, DC, US Bureau of Labor Statistics, 2016. https://www.bls.gov/news.release/archives/osh_10272016.pdf

3. Ferri P, Silvestri M, Artoni C, et al: Workplace violence in different settings and among various health professionals in an Italian general hospital: a cross-sectional study. *Psychol Res Behav Manag* 2016; 9:263–275
4. Starace F: Mental health and cut of its financial resources. That is why we risk the collapse of the mental health system [La salute mentale e i tagli alla sanità. Ecco perché si rischia il naufragio di un intero settore]. *Quotidiano Sanità*, September 28, 2015. https://www.quotidianosanita.it/studi-e-analisi/articolo.php?articolo_id=31547. Accessed October 3, 2019
5. Definition of Typology of Violence. Geneva, Department of Violence and Injury Prevention and Disability, World Health Organization, 2019. <https://www.who.int/violenceprevention/approach/definition/en>. Accessed October 3, 2019
6. Maslach C, Schaufeli WB, Leiter MP: Job burnout. *Annu Rev Psychol* 2001; 52:397–422
7. Melchior MEW, Bours GJW, Schmitz P, et al: Burnout in psychiatric nursing: a meta-analysis of related variables. *J Psychiatr Ment Health Nurs* 1997; 4:193–201
8. Schaufeli WB, Leiter MP, Maslach C, et al: Maslach Burnout Inventory–General Survey (MBI-GS); in *MBI Manual*, 3rd ed. Edited by Maslach C, Jackson SE, Leiter MP, et al, Menlo Park, CA, Mind Garden, 1996
9. Hayes AF: *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. New York, Guilford, 2013
10. North Bay Hospital Staff Report Staggeringly High Workplace Violence Rates: Poll. Toronto, Ontario Council of Hospital Unions, 2016. <https://www.globenewswire.com/news-release/2016/04/01/1105226/0/en/North-Bay-hospital-staff-report-staggeringly-high-workplace-violence-rates-Poll.html>. Accessed October 3, 2019
11. Sirigatti S, Stefanile C: *MBI–Maslach Burnout Inventory: Adattamento e Taratura per l'Italia*. Florence, Italy, Giunti OS Organizzazioni Speciali, 1993
12. Zaninotto L, Rossi G, Danieli A, et al: Exploring the relationships among personality traits, burnout dimensions and stigma in a sample of mental health professionals. *Psychiatry Res* 2018; 264: 327–333
13. Nowrouzi-Kia B: The impact of workplace violence on health care workers' quality of life. *Dev Med Child Neurol* 2017; 59: 675

Short Descriptions of Novel Programs Invited

Psychiatric Services invites contributions for Frontline Reports, a column featuring short descriptions of novel approaches to mental health problems or creative applications of established concepts in different settings.

Text should be 350 to 750 words. A maximum of three authors, including the contact person, can be listed; one author is preferred. References, tables, and figures are not used. Any statements about program effectiveness must be accompanied by supporting data within text.

Material to be considered for Frontline Reports should be sent to one of the column editors: Francine Cournos, M.D., New York State Psychiatric Institute (e-mail: fc15@cumc.columbia.edu), or Stephen M. Goldfinger, M.D., Department of Psychiatry, SUNY Downstate Medical Center (e-mail: smgoldfingermd@aol.com).