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Evaluation of safety at work in a psychiatric setting: the "Workplace Safety Assessment"

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Key words

Psychiatric setting; safety; workplace violence

Parole chiave

Setting psichiatrico; sicurezza; violenza sul luogo di lavoro

Summary

Objectives: *Workplace violence is a common risk for mental health professionals, and psychiatrists often encounter it in a variety of settings. The aim of this study was to estimate the prevalence and features of violent episodes toward psychiatrists in various mental healthcare system settings.* **Methods:** *All psychiatrists from the Region of Puglia (Apulia) were contacted (N=285) via email and were administered an on-line standardized questionnaire.* **Results:** *The response rate by psychiatrists was 57%. The main types of violence revealed were "threats" and "verbal aggression" and, of particular importance, "stalking". Female psychiatrists seemed to be at a higher risk of becoming victims of workplace violence, especially as regards verbal abuse (OR: 2.7, 95% CI: 1.2-6.5, χ^2 6.7, p=0.0095) and reported more serious psychological consequences with need for rest after the episode of aggression.* **Conclusions:** *Our data confirm that mental health workers, particularly psychiatrists, are healthcare professionals at high risk for workplace violence. Future implementation of preventive strategies with the aim of reducing aggressive episodes towards psychiatrists should be a high priority for managers and policy-makers operating in the Italian healthcare sector.*

Riassunto

«Valutazione della sicurezza lavorativa nel setting psichiatrico: il "Workplace Safety Assessment"». **Obiettivi:** *La violenza sul luogo di lavoro è un rischio comune per i professionisti della salute mentale e gli psichiatri, che spesso la riscontrano in diversi ambiti della loro professione. Lo scopo di questo studio è stato quello di valutare la prevalenza e le caratteristiche degli episodi di violenza nei confronti degli psichiatri nei diversi settings dell'assistenza psichiatrica.* **Metodi:** *Tutti gli psichiatri della Regione Puglia (N=285) sono stati contattati via e-mail e a loro è stato somministrato un questionario on-line standardizzato.* **Risultati:** *Il tasso di risposta da parte degli psichiatri è stato del 57%. Tra i principali tipi di violenza riscontrati vi erano le "minacce" e l'"aggressione verbale" e, soprattutto, lo "stalking". Gli psichiatri di genere femminile avevano un maggior rischio di essere vittime di violenza sul lavoro, soprattutto in riferimento alla violenza verbale (OR: 2.7, 95% CI: 1.2-6.5, χ^2 6.7, p=0.0095) e hanno riportato conseguenze psi-*

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cologiche più gravi con necessità di astensione dall'attività lavorativa dopo l'episodio di aggressione. **Conclusioni:** *I nostri dati confermano che gli operatori della salute mentale, in particolare gli psichiatri, sono professionisti sanitari ad alto rischio di violenza sul lavoro. Future implementazioni di strategie preventive, con l'obiettivo di ridurre gli episodi aggressivi verso gli psichiatri, dovrebbero essere una priorità per i manager ed i responsabili delle politiche che operano nel settore dell'assistenza sanitaria italiana.*

Introduction

Workplace violence is a common hazard in clinical settings and this issue has been widely investigated (10, 14, 23, 30, 32, 39). Violence in the workplace may have deleterious effects on the wellbeing of healthcare workers, their commitment and efficiency, and quality of life (QoL). It can also lead to increased stress, burnout, accidents and illness, and even death, in addition to being a common cause of decreased job satisfaction, increased occupational stress, and poor patient care outcomes (20, 40).

Violence can affect any healthcare worker, both male and female alike. Some professionals, such as emergency services, ambulance staff, and those who work in isolated settings seem to be at higher risk than others (33). Indeed, the risk is higher in situations where stress and emotions run high, and this may partially explain the growing number of reported incidences of aggression in community-based psychiatric wards and clinics. Some authors also attribute this increase to the inadequate design of healthcare environments, including visual access to the facility, lighting systems, waiting area features, and even the choice of alarm systems (15).

Data show that nurses working in psychiatric facilities in the U.K. have a one in ten chance of being assaulted by a patient over any 12-month period (16). According to the U.S. Department of Justice, psychiatrists experience the most workplace violence of all healthcare workers (2001). Moreover, psychiatric nurses face a higher risk of violence than other clinicians because they typically have the most face-to-face time with psychiatric patients (4, 41).

Violence in the psychiatric workplace is characterized by a convergence of two complex systems that relate to each other in the everyday life of the patient. Firstly, individuals may become violent or aggressive as a direct consequence of psychiatric symptoms and/or psychotropic substance abuse, which may alter their perception, state of consciousness, or behaviour (13, 37, 38). Secondly, aggressive and violent behaviour may occur as a reaction to the restrictions and requirements typically associated with a hospital setting. Such hostile behaviour is often used as a means to express anger, as a form of retaliation, or as a way to affirm one's status (8, 9, 18). Within these two complex systems, any number of variables may result in high-risk situations that jeopardize both the staff member and the patient. Verbal abuse is the most often described type of violence in the literature (17, 21, 36), followed by physical abuse (often associated with verbal abuse), sexual harassment, threats of violence against personal property or the person himself, and stalking (36). Serious injury (29) is often reported and, in extreme cases, the victim does not survive the attack (31).

In spite of efforts to evaluate the effects of the Psychiatric Reform Act in Italy (Law 180, 1978), which resulted in the transformation from a custodial approach to a community care system (11), the problem of violence in mentally ill patients has not been studied extensively (19) and only a few studies have examined the frequency and characteristics of violent behaviour among psychiatric patients (6, 19, 35). Inpatient psychiatric units are the most studied environments in the mental health field, but not local outpatient facilities (3, 22).

Many of Italy's most influential psychiatrists have long denied the problem of violent behaviour by patients; as a consequence there is now insufficient preparation for the management of violence in therapeutic settings (7). The literature reveals that episodes of violence in psychiatric settings are a significant work-related stress factor that can have harmful effects on healthcare professionals, the quality of patient care, and on the organization of work activities (12, 15, 24, 28). Recent studies on

this topic that were conducted in Italy seem to confirm that mental health workers are at high risk for violence in the workplace and that the implementation of prevention programmes can play an important role in averting it (7, 25).

The authors conducted a cross-sectional, retrospective study with the aim of improving working conditions in psychiatric settings in Italy.

The aim of this study was to estimate the prevalence of aggressive episodes and violence towards psychiatrists in psychiatric settings in the Region of Puglia (Apulia).

Methods

Psychometric evaluation

For the purpose of this study, the researchers developed the "*Workplace Safety Assessment*" online structured questionnaire consisting of multiple choice and free text response. The questionnaire was developed after an extensive review of the literature. The working group, composed of the authors of the article have not found many data on this topic, and so created an ad hoc tool to detect more information.

This tool allows the respondent to better grasp the concept of risk that is linked to work-related stress in order to gain a more complete picture of real and perceived safety issues in Mental Health Service facilities in the Puglia Region.

The questionnaire begins with a brief assessment of the socio-demographic characteristics (age, nationality, gender and marital status) and the employment status of the psychiatrist (A-B), and continues with a detailed description of physical violence in the workplace, whether witnessed or directly experienced, over the preceding 12 months (C). This is followed by a description of workplace experience of threats, verbal abuse, and episodes of stalking (D). The subsequent section (E) explores the psychiatrist's perception of workplace violence risk. Approximately 20 minutes are needed to complete the questionnaire. Along with the questionnaire, a personalised letter was sent to each participant with a request to participate in the research, explaining rationale and objectives. To ensure confidentiality of data, we created an ad-hoc e-mail address for the study, directly managed by one of the authors. This e-mail address received the questionnaires and forwarded them as de-identified questionnaires to the statistician who created the excel file used as database. The questionnaires were evaluated anonymously to ensure the privacy of the interviewees.

Subjects

All psychiatrists employed by CSM (Centri Salute Mentale; Italian Outpatient Treatment) and SPDC (Servizi Psichiatrici Diagnosi e Cura; Inpatient Hospital Treatment) in the Puglia Region (N=285) were asked to participate in the online survey via email. Each potential respondent received four email requests, over an 8-week period from January to March 2014, to participate. A covering letter that explained the main focus of the project was included along with the questionnaire: The response rate was 57% region wide.

Puglia is a large region of southern Italy with over 4 million inhabitants; according to regional governmental data 1.5-2% of the population suffers from psychotic disorders. In local services there is one psychiatric worker for every 3,000-3,500 inhabitants (lower than the national average). The number of residential communities is high (i.e. communities for psychiatric patients in need of care and rehabilitation services), with more than 100 having over 1,500 patients. There are 18 psychiatric hospitals (SPDC) in Puglia, which by law cannot have more than 15 beds each. There are about 6,500 admissions a year, with an average stay of 12 days. The annual average percentage of compulsory admissions is 16.5%.

Statistical analysis

We performed univariate and multivariate analysis models. The assessment of significant differences between means of continuous variables was carried out through ANOVA tests and t-tests for independent samples (significance level $p<.05$). For the qualitative variables we prepared crosstabs (2x2) and calculated the chi-square value. We deemed values of

p<.05 as significant. We calculated odds ratio (OR) and confidence intervals (CI) at 95%. The software package SPSS 11.0.4 X Mac OS X was used for the analyses.

Results

The sample in this study consisted of 162 psychiatrists (56.2% males and 43.8% females), with an average age of 49.8 years. Three quarters (74.7%) of the sample had been working for more than 10 years in a psychiatric setting; a smaller number of psychiatrists (16.7%) had been working for between 5 and 10 years; and a minority of them (8.6%) for less than 5 years. The vast majority of psychiatrists worked in local services (CSM) or in a hospital setting (SPDC), and only a small number worked in a therapeutic community, or other service facility. There were no psychiatrists who worked in more than one service at the time of interview.

Various types of violence (i.e. physical, verbal, and stalking) were analyzed by exploring the respondent's entire job career and activities over the preceding twelve months. Table 1 gives the number of psychiatrists who experienced workplace violence.

The number of workplace aggressive episodes that psychiatrists experienced is reported in table 2.

The female psychiatrists in the sample were shown to be at higher risk of suffering physical violence (single episode of aggression: OR: 2.7, 95% CI: 1.1-6.9, χ^2 5.0, p=0.0249; 2-4 episodes: OR: 2.8, 95% CI: 1.2-6.7, χ^2 6.7, p=0.0095), and verbal aggression (2-4 episodes: OR: 4.9, 95% CI: 1.0-31.0, χ^2 5.2, p=0.0228) from their patients. Taking into consideration the places where the violence occurred and the most typical time periods involved, we can see that both physical and verbal aggression mainly occurred in the institution where the psychiatrists worked. Only in a small number of cases did these episodes occur during a home visit, or elsewhere. In almost all aggressive episodes the perpetrator of violence was a patient. Patients' family members were found to be less frequently involved in violent episodes.

Data relating to place, time, and the perpetrators of violence are summarized in table 3.

Table 1 - Workplace violence

	Lifetime	Last 12 months
Physical violence	66.7%	27.2%
Verbal violence	90.1%	68.5%
Stalking	17.9%	-

Table 2 - Workplace violent episodes

	Lifetime	Last 12 months
Physical violence		
1 episode	24.1%	20.4%
2-4 episodes	35.2%	6.8%
5-10 episodes	6.2%	-
> 10 episodes	1.2%	-
Verbal violence		
1 episode	11.7%	21.6%
2-4 episodes	36.4%	33.3%
5-10 episodes	19.8%	9.3%
1 or more times each month	22.4%	4.3%
Stalking	19.8%	9.3%
1 episode	13.0%	-
More episodes	4.9%	-

Table 3 - Place, time and perpetrator of violence

	Witnessed physical violence	Physical violence	Verbal violence
Place			
Istitution	89.3%	77.7%	87.8%
Patient's home	8.2%	11.6%	4.5%
Somewhere else	2.5%	4.5%	4.8%
Time			
Morning	68.1%	59.5%	72.1%
Afternoon	18.5%	27.0%	15.6%
Evening	7.6%	6.3%	5.4%
Night	5.9%	-	4.1%
Perpetrator			
Patient	93.4%	88.4%	75.5%
Relatives	2.5%	3.6%	17.7%
Colleague/operator	1.7%	-	2.0%
Other	2.5%	1.8%	1.4%

In cases of stalking, the patient was the perpetrator of violence in almost 80% of cases.

During these assaults, a weapon was used in 9.2% of cases when the psychiatrist was a witness to physical violence, and 11.9% when the psychiatrist was the object of physical violence. When verbal abuse was involved, a weapon was used only in 0.7% of the time.

The physical and psychological repercussions that the victim experienced as a result of different types of violence are summarized in table 4.

Female psychiatrists reported the most significant psychological consequences after suffering verbal abuse (OR: 2.7, 95% CI: 1.2-6.5, χ^2 6.7, p=0.0095). The psychological consequences were assessed based on of the need for rest by psychiatrists after the episode of aggression even in the absence of physical injury. It was even shown that they received more help from fellow colleagues after an episode of physical violence than did their male counterparts in the sample (OR: 3.1, 95% CI: 1.0-10.2, χ^2 4.8, p=0.0282). More than half of the survey participants stated they had experienced psychological consequences as a result of stalking. More than half of stalking episodes lasted between 1 to 12 months (65.5%), and almost one third (31%) for more than one-year.

The data indicate that psychiatrists often prefer not to take formal action after violent episodes, and police intervention as a consequence of episodes of verbal abuse was extremely low (25%). The specific safety measures taken by the victim as a result of physical violence and stalking are reported in table 5.

In most cases there were no changes in the therapeutic relationship subsequent to episodes of physical violence (44.2%) and verbal aggression or stalking (42.9%). The most frequent response of the psychiatrist after such an event was to warn the aggressor not to repeat his actions (table 6).

The most significant consequences for the therapeutic relationship occurred following episodes of physical violence that took place in local facilities (OR: 2.6, 95% CI: 1.1-6.7, χ^2 5.3, p=0.0209). Psychiatrists working in hospital settings reported fewer changes in the therapeutic relationship with the patient after suffering physical aggression (OR: 0.3, 95% CI: 0.1-0.7, χ^2 8.1, p=0.0045).

In recent years, psychiatrists have experienced a diminished feeling of safety on the job (66% of our sample reported feeling "less safe at work" over the last five years). There is also concern about the imminent closure of forensic psychiatric hospitals, resulting in the transfer of patients deemed socially dangerous (about 100 psychiatric patients from Puglia) to therapeutic communities located throughout the area.

Lastly, the psychiatrist was asked to give his/her own opinion about recognition of the risk situations

Table 4 - Consequence of violence

	Need for rest	Without need for rest
Physical		
Witnessed physical violence	37.9%	21.6%
Physical violence	12.5%	26.8%
Psychological		
Verbal violence	2.%	23.1%
Stalking	37.9%	10.3%

Table 5 - Safety measures taken by the victim

	Physical violence	Stalking
No safety measure	63.6%	86.2%
Complaint	0%	3.4%
Law enforcement intervention	15.5%	0%
Complaint and law enforcement intervention	14.5%	6.9%

Table 6 - Consequences for therapeutic relationship

	Physical violence	Verbal violence/ Stalking
No consequence	44.2%	42.9%
Warning	28.3%	19.0%
Change therapist	18.6%	16.2%
Complaint	2.7%	8.6%
Discontinuation of therapy	2.7%	2.9%
Other	3.5%	3.8%

when the violent episode occurred. Most violent episodes (73.1%) were regarded as predictable by psychiatrists for two reasons: firstly, the patient had already been considered at risk for committing violent behaviour (51.4%); and secondly, there were environmental and inter-relational risk factors present (25.7%). Patients with a history of making threats and vandalizing (14.9%), or committing physical violence (8.1%), were rarely perpetrators of aggression against psychiatrists.

Discussion

This study demonstrated that the vast majority of psychiatrists suffered direct verbal or physical assaults. Threats and verbal aggression were the most frequently reported expression of violence by the respondents in this study. The phenomenon of stalking is highly correlated to more serious psychological consequences. Female psychiatrists in particular are at higher risk than males for being the target of physical or verbal violence; they also tend to experience more significant psychological repercussions as a result of such incidents. The violent incidents described occurred mainly in institutional settings, and the times of day most highly associated with risk tended to be the morning and afternoon.

The high frequency of physical and psychological consequences reported following workplace assaults helps us to understand the severity of this phenomenon, which is largely underestimated in Italy (5). In cases of stalking that last more than one year, the resulting negative psychological effects compelled psychiatrists to stop working in 50% of cases.

One important point to note here is that the psychiatrist, in most cases, does not take any formal action in response to aggression directed toward them. Indeed, the number of complaints registered with the authorities, and requests for police intervention were disproportionately low with respect to the number of actual aggressive episodes experienced, and the psychiatrist's reactions following an episode of violence seemed limited. The data gathered from the survey show that the victims either ignored the event, or just verbally communicated the incident to their manager. The therapeutic relationship did not appear to change significantly in response to the attacks, and warning the aggressor not to repeat such behaviour was the most common response, albeit not a very effective one.

A significant difference between psychiatrists who work in local services and those who work in hospital settings was observed. The therapeutic relationship between patients and psychiatrists in local services facilities was much stronger and with greater continuity; as a consequence, violent behaviour can more easily place the victim in a state of psychological crisis. In the hospital setting, however, there is a higher turnover of patients, and so the quality of the therapeutic relationship tends to be less affected. In response to workplace aggression, psychiatrists tended not to take formal measures, but rather seek help from colleagues, as there are no mechanisms in place for addressing this issue.

The results of this survey demonstrate that mental health professionals feel relatively safe at work, even though there are a number of significant risks (27). Many of these risks are directly attributable to patients; however, this study attempted to demonstrate that they are better understood as a result of the interaction of a wide range of individual and contextual factors that assign certain hospital environmental variables a role in triggering aggression in psychiatric hospitals (34, 41). The literature shows that a large number of cases of violent episodes go unreported, and that psychiatrists are four times more likely to experience workplace aggression than in other sectors (33). This is a direct result of the under-reporting of this phenomenon (1).

The WSA questionnaire investigated the number of psychiatric staff members during more than 50% of the psychiatric work and during all episodes of aggression. Analysis results revealed that in most cases there was an adequate number of psychiatric staff members on hand. This is contrary to what is commonly reported in the literature regarding a lack of personnel on duty during psychiatric sessions and activities (26, 34). Other data extracted from WSA regarded special training courses, which are at present mostly non-existent but are considered useful by most of the respondents.

The fear of being victimized by violence has increased over the last five years, especially for psy-

chiatrists who work in local mental health facilities. Through the replies received it is clear that psychiatrists seem to be fearful, especially following recent legislative changes in Italy that resulted in the closure of high-security psychiatric wards. It is the authors' opinion that decreased security combined with an increase in malpractice suits against psychiatrists create a risk factor for a diminished quality of relationship between doctor and patient.

With regard to improved safety conditions, it can be envisaged to put both structural and environmental changes into place, as well as staff training, with the aim of managing violent behaviour (34). In this way, two important aims can be achieved: a decrease in risk for work-related aggression, and a decrease in the emotional reactions of discomfort, fear, a feeling of inadequacy and loneliness that can result from such events (7).

One of the strengths of this study was the use of a new questionnaire that enabled the authors to analyse the frequency of verbal and physical assaults reported by psychiatrists. Another strength was that the study involved local psychiatric services, whereas the Italian scientific literature has studied the phenomenon of violence mainly in hospital settings. In addition, this survey focused its attention on the psychiatrist, as a victim during the aggression, and not on the aggressor as other scales have done, like "The Violent Incident Form" (VIF) (2). This study also had some limitations, most notably, that it was conducted on an opportunistic sample of psychiatrists working in outpatient (CMS) and inpatient (SPDC) treatment facilities, in addition to the fact that they were only recruited from one region. This means that the workplaces investigated and territorial distribution was limited. Another weak point of the study was that the questionnaire was purpose-built for this investigation, therefore, it is not yet validated and there is a lack of a comparative sample.

Conclusion

In Italy, for the specific culture that has permeated psychiatric reform, there was reluctance to address the theme of work safety in psychiatry, as there were concerns that this might have contributed, indirectly, to increasing the stigma towards mentally ill people. Violence is an issue throughout health care. Yet, scientific literature – as confirmed by our study – shows that working in psychiatry may expose professionals to an even higher risk of violence than working in other health care specialties.

Therefore, the problem cannot be ignored, in particular with reference to the potential consequences on the health of professionals. In our region (Puglia), after the murder of a psychiatrist by a patient, some provisions were put in place in the absence of sufficient research and data to understand what the actual risk factors in the different work contexts are (inpatient wards and outpatient clinics) and how these factors interact with organisational models. It is crucial to identify untoward events and risk factors through studies and scientific data in order to plan effective preventive strategies to protect the health of professionals.

No potential conflict of interest relevant to this article was reported

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Errata Corrige: Med Lav 2016; 107 (3): 235-242

Patrícia Petromilli Nordi Sasso Garcia, Cristina Dupim Presoto, João Maroco, Juana A. Duarte Bonini Campos "Work-related activities that may contribute to musculoskeletal symptoms among dental students: validation study".

The authors reported an error that need to fully replace the data already published. The mistake is in Table 2 and the incorrect information may interfere with the results' interpretation, taking the reader to error. The values of factor 1 (Repetitiveness) should be in the first column, not in the third, corresponding to Q1, Q2, Q3 and Q4 items. The values of Factor 2 (Working Posture) should be in the second column, not in the first, corresponding to Q5, Q6, Q7, Q8 and Q9 items. The values of Factor 3 (External Factors) should be in the third column, not in the second, corresponding to Q9, Q10, Q11, Q12, Q13, Q14 and Q15.
Therefore, the authors requested an erratum in order to allow a real understanding by the readers of the information presented. The new table with corrections is presented below

Table 2 - Structural matrix with varimax orthogonal rotation of the factors* of the "Questionnaire on work-related activities that may contribute to musculoskeletal symptoms".

Item	Factor 1 Repetitiveness	Factor 2 Working Posture	Factor 3 External factors
Q1. Performing the same task over and over	0.541		
Q2. Working very fast for short periods	0.741		
Q3. Having to handle or grasp small objects	0.786		
Q4. Insufficient breaks or pauses during the workday	0.587		
Q5. Working in awkward or cramped positions		0.833	
Q6. Working in the same position for long periods		0.754	
Q7. Bending or twisting your back in an awkward way		0.831	
Q8. Working near or at your physical limits		0.711	
Q9. Reaching or working over your head or away from your body		0.549	0.574
Q10. Hot, cold, humid, wet conditions			0.729
Q11. Continuing to work when injured or hurt			0.503
Q12. Carrying, lifting, or moving heavy materials or equipment			0.739
Q13. Work scheduling			0.627
Q14. Using tools			0.725
Q15. Training on how to do the job			0.648

*according to third step described in Methods.