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Monitoring and predicting the risk of violence in residential facilities. No difference between patients with history or with no history of violence

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ABSTRACT

Background: Most people with mental disorders are not violent. However, the lack of specific studies in this area and recent radical changes in Italy, including the closure of six Forensic Mental Hospitals, has prompted a more detailed investigation of patients with aggressive behaviour.
Aims: To compare socio-demographic, clinical and treatment-related characteristics of long-term in-patients with a lifetime history of serious violence with controls; to identify predictors of verbal and physical aggressive behaviour during 1-year follow-up.
Methods: In a prospective cohort study, patients living in Residential Facilities (RFs) with a lifetime history of serious violence were assessed with a large set of standardized instruments and compared to patients with no violent history. Patients were evaluated bi-monthly with MOAS in order to monitor any aggressive behaviour.
Results: The sample included 139 inpatients, 82 violent and 57 control subjects; most patients were male. The bi-monthly monitoring during the 1-year follow-up did not show any statistically significant differences in aggressive behaviour rates between the two groups. The subscale explaining most of the MOAS total score was aggression against objects, although verbal aggression was the most common pattern. Furthermore, verbal aggression was significantly associated with aggression against objects and physical aggression.
Conclusions: Patients with a history of violence in RFs, where treatment and clinical supervision are available, do not show higher rates of aggressiveness compared to patients with no lifetime history of violence. Since verbal aggression is associated with more severe forms of aggression, prompt intervention is warranted to reduce the risk of escalation.

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1. Introduction

The risk of violence posed by patients with severe mental disorders has long been a hot topic. In the general population, the attributable risk due to mental disorders is small compared to other risks of violence. By using population registers, Fazel and Grann (2006) found the population attributable risk fraction of severe mental illness on violent criminality to be no more than 5%. In other words, mental illness is a limited source of violence in the community. However, violence committed by people suffering from mental disorders tends to gain disproportionate media coverage, creating an exaggerated sense of personal risk (Arboleda-Flòrez, 2009), and this underlines the need for proper management of patients at risk of violent behaviour.

In Italy there have been six Forensic Mental Hospitals (FMHs) with a total population of around 1400 individuals. Recent laws (n. 9/2012 and 81/2014) set the deadline of 31 March 2015 for the gradual discharge of all patients from FMHs and their relocation to special high-security units, with no more than 20 beds each. In addition, many patients at lower risk of reoffending, will be cared for by ordinary Mental Health Departments (DMHs). This change will involve increasing legal responsibility of both individual psychiatrists and DMHs and will also require a substantial organizational change for Mental Health Services compared to the past.

Given this radical change and given the paucity of Italian studies in this area, we set up a specific study aimed to verify whether psychiatric patients with a history of violence and living in Residential Facilities (RFs) are really more aggressive than inpatients with no history of violence. Our main aims were: (a) to assess the socio-demographic, clinical and treatment-related characteristics of patients living in RFs with a lifetime history of interpersonal violence, and compare them with controls with no history of violence; (b) to find predictors of aggressive and violent behaviour in patients assessed bi-monthly with the Modified Overt Aggression Scale (MOAS) over a 1-year follow-up.

2. Materials and methods

2.1. Study design

This prospective cohort study involved patients living in different RFs in four sites (Cernusco, Pavia, Brescia and Turin) in Northern Italy. All patients with a history of severe interpersonal violence (named 'violent patients'), living in these RFs in the index period May–September 2013, were recruited by treating clinicians. Furthermore, patients with no history of violence, similar by age, gender and primary diagnosis (including co-morbidity with substance or alcohol addiction), were identified as a control group.

2.2. Patient inclusion and exclusion criteria

Violent patients had to meet one or more of the following criteria: (i) to be admitted at least once to a FMH for any violent acts against people; (ii) to be arrested at least once for any violent act against people; (iii) to have a documented lifetime history of violent acts against people (as reported in the official clinical records). The control group included patients who did not meet any of these three conditions. Exclusion criteria were being older than 65 years and having a primary diagnosis of organic mental disorder. The study was approved by the relevant Ethics Committees and all participants provided written informed consent.

2.3. Baseline assessment

A *Patient Schedule* addressing socio-demographic characteristics, social relationships, leisure activities, socioeconomic status, clinical and treatment-related features, plus a specific section (only for violent patients) concerning their history of violence was filled in for each patient recruited. The SCID-I and SCID-II (First et al., 2002, 1997) were administered in order to confirm clinical diagnoses.

Psychopathology and psychosocial functioning were assessed by the following: the Brief Psychiatric Rating Scale (BPRS) (Ventura et al., 1993), the Personal and Social Performance (PSP) scale, a modified version of the DSM-IV Social and Occupational Functioning Assessment Scale (SOFAS) (Morosini et al., 2000) and the Specific Levels Of Functioning (SLOF) (Harvey et al., 2011).

Aggression and impulsivity were evaluated by the following instruments: (a) the Brown-Goodwin Lifetime History of Aggression (BGLHA), an 11-item questionnaire assessing lifetime aggressive behaviour across 2 stages of life (adolescence and adulthood) by directly aiming how many times the aggressive behaviour occurred for each item (Brown et al., 1979); (b) the Buss-Durkee Hostility Inventory (BDHI), a 75-item questionnaire developed to assess 8 subscales related to hostility and negative affect (Buss and Durkee, 1957); (c) the Barratt Impulsiveness Scale (BIS-11), a 30-item, 4-point Likert scale questionnaire that investigates personality and behavioral impulsiveness, with scores ranging from 30 to 120 (Barratt, 1965); (d) the State-Trait Anger Expression Inventory 2 (STAXI-2), which includes six scales plus an Anger Expression Index, an overall measure of total anger expression (Spielberger et al., 1985).

Patients' insight was assessed by the Insight scale (Marková et al., 2003), which provides a total score ranging from 0 (no insight) to 30 (full insight).

All research assistants underwent centralised instrument administration- and rating training conducted by clinicians with a specific experience in this area.

2.4. Bi-monthly monitoring of violent behaviour

Every two weeks, during the 1-year follow-up after the baseline assessment, the treating clinician or the patient's case manager filled in the MOAS (Margari et al., 2005) for each patient involved in the study. All assessors were very familiar with patients and had daily contact with them. The MOAS included 4 subscales of aggression: verbal, physical, against objectives and self-harm behaviour. Here, we focused only on the first three subscales. A score from 0 to 4 is assigned to each act: 0 indicating no aggressive behaviour and higher scores increasing severity. The score in each category is multiplied by a factor assigned to that category; 1 for verbal aggression, 2 for aggression against objects, 3 for aggression against self and 4 for aggression against other people. So, the total weighted score ranges from 0 (no aggression) to 40 (maximum grade of aggression). We will subsequently refer to the weighted MOAS score simply as the MOAS score.

2.5. One-year follow-up

Changes in the patients' clinical and psycho-social conditions were re-evaluated with the BPRS and PSP. For patients discharged to other accommodations or discharged home during follow-up, the researchers contacted their treating psychiatrist and asked him/her to fill in the MOAS fortnightly.

2.6. Statistical analyses

Categorical data were analysed in inter-group comparisons with χ^2, or Fisher's exact test, when appropriate ($n < 5$ in any cell in binary comparison). The Cramer values were reported as association index. Student t-test was used to compare quantitative