Violent behavior by women involuntarily committed to a forensic psychiatric hospital in Rio de Janeiro, Brazil

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Abstract

Objective: The goal of the current study was to evaluate the sociodemographic, criminological, and psychiatric characteristics of the full sample of female violent offenders committed involuntarily to a forensic psychiatric hospital in Rio de Janeiro, Brazil. Method: Psychiatric assessment using SCID-IV in all the female violent offenders treated in the only forensic psychiatric hospital in the state. Results: Most offenders (n = 29) were non-Caucasian single women with very low income. Schizophrenia was the most common diagnosis. Most patients had already been diagnosed with a mental disorder and placed under psychiatric treatment, but dropout and non-adherence were common. Conclusion: Violent behavior in mentally ill female offenders may at least partially reflect the failure of mental health and social services to provide much-needed support for economically and socially vulnerable women.

Introduction

Violence is one of the twenty leading causes of disability-adjusted life years worldwide, and its contribution to disability is expected to increase in the next two decades[1].

Little research was done on female criminal offenders for a long time, and the data on crime by women were assumed to be associated with data on crime by men; women were thus not analyzed separately. In fact, social development was accompanied by an exceptional increase in the burden of violence in all areas with human presence. To overlook women's presence in this scenario is thus a sign of prejudgment.

According to McKeown[2], the development of criminal behavior in women differs from that in men. The personal history of female offenders nearly always includes physical and sexual abuse, financial difficulties, mental health problems, and substance abuse. Meanwhile, intimate partner murder by women frequently follows previous victimization from domestic violence. Another finding is that women are less likely to use firearms to commit murder.

Violence perpetrated by community-living women is not well understood, due to a shortage of studies in this area. This is due partly to the fact that women are considered more victims than perpetrators of violence[3]. A study of psychiatric comorbidity in the United Kingdom from 2000 to 2007[4] found that the principal victims of women with aggressive behavior were intimate partners and friends. Prevalence of aggressive behavior in women was 5.5% in 2000 and 5.1% in 2007. Compared to the non-violent group, violent women displayed significantly more psychiatric morbidity (depression, anxiety disorders, alcohol and psychoactive substance use disorders, and antisocial personality disorder).

Fazel and Grann[5] analyzed this issue by examining data from hospitals and crime records in Sweden from 1998 to 2000. The definition of violent crime included homicide, attempted homicide and aggravated physical assault, threatening behavior, and sexual crime. During this period, 1.4% of the overall population had been discharged from psychiatric hospitals (55.8% of whom were women). Of all the patients with mental disorders, 6.6% had a history of incarceration for violent crime, compared to 1.8% of the overall population with history of imprisonment for such crimes. Among patients with mental disorders, women committed nine times more violent crimes than men. However, compared to men, violent crimes committed by women were more likely to be attributed to severe mental disorders.

Another study on this theme found that 50% of the violent crimes committed by women were associated with a diagnosis of mental disorder[6]. Studying this issue, Teplin *et al.* [7] found that one-fifth of the incarcerated female population have a diagnosis of severe mental disorder and that this figure is double the rate of mental disorders in women in the overall population. The most common psychiatric disorders in incarcerated women are mood, anxiety, psychotic, substance use, and personality disorders (especially antisocial and borderline)[7-9] , besides histrionic and narcissistic disorders[10].

One of the most consistent findings in the literature on violence is that aggressive behavior rates are lower in women than in men. Various studies have found that since adolescence, women display significantly less aggressive behavior and arrests for violent crimes. In the overall population, men are more physically aggressive than women according to various indicators, including incarceration for homicide and other violent crimes[11]. However, studies have suggested that mental disorders reduce or even eliminate the gender differences. Studies in large unselected samples in which individuals are followed since birth have shown that the risk of aggressive behavior increases in the presence of mental disorders in both men and women, but relatively more in women[12].

Research furnishing data that assist the identification of individuals with mental disorders involving risk of aggressive behavior, and adequate treatment for these individuals, can help prevent this behavior and its expression in society. Such studies can also allow to better characterize risk groups or situations and elucidate the specific motivations related to manifestation of aggressive behavior in individuals with mental disorders.

The current study thus aimed to evaluate, from the forensic psychiatric perspective, a population of women admitted to a forensic psychiatric security facility in Rio de Janeiro, Brazil, for crimes involving violent behavior. We previously published a preliminary article[13] reporting 14 cases of patients who had committed homicide.

Methods

The most important part of forensic psychiatric examination in the Brazilian legal system is assessment of the offender's criminal responsibility. According to the Brazilian Penal Code, the evaluation of criminal responsibility is based on a biopsychological definition. Full penal responsibility can only be ruled out if the offender was suffering from a mental disorder (biological component) at the time of the criminal act and was thus completely incapable of understanding the unlawful nature of his or her act or to refrain from committing it (psychological component). The existence of a causal link between the mental disorder and the offense must be established beyond a reasonable doubt. Studies have also acknowledged the possibility of cases with limited criminal responsibility, resulting from partial impairment of cognitive or volitional functions. Individuals classified as not responsible for their offense are committed to involuntary treatment in forensic psychiatric hospitals. In cases of limited responsibility, the courts can also order the individual's compulsory treatment.

All female offenders with mental disorders and ruled not guilty by reason of insanity (NGRI) by the criminal courts in the state of Rio de Janeiro, Brazil, were committed to a forensic psychiatric facility. Our initial study sample consisted of 29 female offenders in treatment at the facility, 14 of whom had committed homicide or attempted homicide.

All 29 study participants had been previously assessed by forensic psychiatrists as part of pretrial procedures. The study's principal author (AMV) also examined these patients in the summer and autumn of 2007. Identification data provided here refer to the time of the offense. Legal and medical files were also screened for relevant information (e.g. criminal records, descriptions of the crime's circumstances).

A conclusive psychiatric diagnosis was established on the basis of a psychiatric examination conducted by an experienced clinician (AMV) using the Structured Clinical Interview for DSM-IV mental[14] and personality disorders[15]and clinical and forensic records. We applied the positive and negative syndrome scale (PANS)[16] in the schizophrenia/schizoaffective disorder group. Patients were also asked to complete a questionnaire specifically created to collect sociodemographic and clinical data. The study was approved by the local Institutional Review Board, and all patients signed a voluntary consent form.

We selected all the patients whose offenses were related to some type of violent behavior. Patients that had committed non-violent offenses such as petty theft were not included in the study. Aggressive behavior was defined as: homicide or attempted homicide, aggravated physical assault or assault with a deadly weapon, armed robbery, kidnapping, illegal possession of firearms involving threat, destruction of property with violent behavior during the act, and sexual crimes. Of the 29 patients institutionalized at the time, 28 had committed at least one of these felonies. There were no cases of sexual crimes.

The study was approved by the Institutional Review Board of the Institute of Psychiatry, Federal University of Rio de Janeiro, and the office of the director of the forensic psychiatric hospital where the interviews with patients were performed. All patients signed a consent form about their participation in the study

Results

The final sample thus consisted of 28 female patients accused of criminal offenses involving violent behavior. All the patients agreed to participate in the study. Table 1 shows the sample's sociodemographic data. The most common psychiatric diagnosis was schizophrenia (n=13; 46%) (Table 2). Table 2 also lists other clinical variables such as history of psychiatric follow-up, use of psychoactive medication, or alcohol or psychoactive substance user prior to the offense. Homicide or attempted homicide (n=14; 50%) was the most common type of violent behavior (Table 2). Homicide per se had been committed by 11 patients (39%), with the following diagnoses: schizophrenia/schizoaffective disorder (n=5), mental retardation (n=2), bipolar disorder (n=1), borderline personality disorder (n=1), epilepsy (n=1), and no mental disorder (n=1). The latter patient was admitted by court order (accused of murdering her husband), although she did not present any mental disorder.

Nearly half of the victims (n=14; 47%) were family members of the patients. The principal means for perpetrating the act were cold steel weapons (n=9; 32%). Some 21% (n=6) of the patients had a prior history of aggressive behavior. As for criminal responsibility for the act, the majority of the patients (n=24; 86%) were considered not responsible on grounds of insanity.

According to the initial forensic psychiatric assessment (Forensic Mental Health Report), 14 patients (50%) out of the total sample (n=28) presented psychotic symptoms at the time of the assessment. The most common psychotic symptoms were auditory hallucinations (n=8 cases) and persecutory delusions (n=6 cases). One patient also presented disorganized thinking. Of the two patients with epilepsy, one presented psychotic disorder and the other mood disorder resulting from their clinical condition.

Five (18%) of the 28 patients had committed filicide or attempted filicide (killing or attempting to kill their own children). Three presented diagnosis of schizophrenia/schizoaffective disorder, one mental retardation, and another borderline personality disorder. Seven children in all had suffered such aggression, and one patient had tried to kill her three children by throwing them into a river (all three survived). Two of the seven children died. The children's age ranged from one to seven years. Both of the children that died were one to two years old. Five of the children were boys and two were girls. As for the method used, three children suffered attempted drowning, one was struck on the head with a blunt object, one was burned, one was poisoned, and one was thrown off the high floor of a building. The latter two died. In all the cases,

the patients were the children's principal caregivers. Only one case involved a history of the child's prior physical abuse. The two women convicted of killing their children had a history of prior suicide attempts and alcohol abuse.

DISCUSSION

We performed a forensic psychiatric assessment of a sample of 28 patients that were institutionalized in a forensic psychiatric facility (custodial hospital) in Rio de Janeiro, Brazil, for offenses involving violent behavior. Many of these women had little education and were single (57%), were not working (32%), and had low family income at the time of the crime. The main psychiatric diagnosis was schizophrenia (n=13; 46%). Our findings corroborate the results reported in the literature, which has identified schizophrenia as the main mental disorder associated with aggressive behavior in both developed[17-19] and developing countries[20,21].

Few studies in Latin America have addressed aggressive behavior in individuals with schizophrenia. One study[22] included 253 stable outpatients. Prevalence of aggressive behavior in the sample was 3.5% in Chile, 14.6% in Peru, and 55.4% in Bolivia. Aggressive behavior was associated with the severity of psychotic symptoms, low family income, young age at onset of the illness, and more hospitalizations. Most of these variables were present in our sample.

Analysis of the means and standard deviations for positive and negative symptom scores in our sample using the Positive and Negative Syndrome Scale (PANSS)[16] showed lower scores for positive symptoms (12 ± 8.92) than for negative symptoms (38.5 ± 10.91), which may be related to the evolution of this severe mental disorder, with predominantly negative symptoms [23,24].

A history of previous violence has been considered consistently as predictive of subsequent violence in various patient populations[25-27]. Six patients (21%) in our sample had a history of aggressive behavior, two of whom had been involved in three criminal cases (with diagnoses of schizoaffective disorder and bipolar disorder, respectively) and one patient had been involved in five criminal cases (her diagnosis was schizophrenia).

The relationship between severe mental disorders and crime is more complex than simple causality. Factors such as age, gender, socioeconomic status, and prior crime are important, as are other potentially treatable factors such as substance abuse, personality disorders, and regular use of medications. Comorbidity with substance abuse increases the risk of aggressive behavior in individuals with severe mental disorders [28-33]. According to Jaffe*et al* .[34], individuals with substance use disorders and comorbidity with mental disorders show lower success with addiction treatment and more involvement in the criminal justice system. It is highly important to track substance use disorders in order to prevent aggressive behavior in these individuals.

On this issue, 10 patients (35.7%) in our sample reported alcohol and/or psychoactive substance use on the day of the offense. Curiously, all three patients with involvement in more than one criminal case reported such use. The association between mental disorders and violence can definitely be affected by various factors, including comorbidity with substance use, negative life events, and low social support. Public health strategies to reduce violence in individuals with and without mental disorders should focus on substance abuse prevention.

Fourteen patients (50%) in the total sample (n=28) presented psychotic symptoms at the time of the initial forensic psychiatric assessment resulting in involuntary hospitalization. Auditory hallucinations (n=8 cases) and persecutory delusions (n=6 cases) were the most common psychotic symptoms. These data illustrate the relevance of psychotic symptoms prior to manifestation of the violent behavior. Another key finding was that only four patients (14.3%) in the sample were in psychiatric treatment or in use of psychiatric medication on the days preceding the offense. We believe that the lack of treatment may have contributed to perpetration of the violent behavior.

Homicide and unusual forms of aggression often result from symptoms leading persons with mental disorders to believe they are in danger. A study by Taylor[35] found a strong association between psychotic symptoms and recent aggressive behavior, since 93% of the sample displayed psychotic symptoms when they committed

these offenses, and 47% were "definitely" or "probably" motivated by these symptoms. Other studies have found an association between auditory hallucinations and persecutory delusions and motivation to commit homicide[36-40]. More severe paranoia is associated with greater aggressiveness, even when controlling for such factors as impulsiveness, command hallucinations, treatment with antipsychotics, substance abuse, age, and gender[41]. Many homicide cases definitely involve individuals with personality disorders rather than other forms of mental illness[42].

In this study's sample, violent behavior was largely targeted to family members. Of the 30 victims of violent behavior, 14 (47%) were the patients' family members, including a grandmother, mother, brother, husbands, and children. One patient had tried to drown her three children, who fortunately managed to survive. The most frequent means for committing the violent behavior was cold steel weapons (n=9, or 32% of the sample). A systematic review by Minero *et al.* [43] also found that cold steel weapons (knives, scissors, etc.) were the most frequent means used by individuals with psychotic disorders to commit homicide.

Severe mental illness has been associated with certain cases of familicidal behavior, with an emphasis on psychotic motivations. Other purportedly associated factors are: loss of family control; revenge for loss of the female partner; fear of abandonment; narcissistic rage; financial difficulties; altruistic urges to defend the family from real or imaginary catastrophes; and instrumental violence[44-45]. One patient in our sample poisoned and killed her two-year child as revenge for her male partner having left her for another woman. We recently published case reports of parricide[46] and fratricide[47] by individuals with psychotic disorders.

Various studies have provided evidence that the risk of aggressive behavior can increase in patients with affective disorders[48-51]. However, estimates of the risk of violence associated with bipolar disorder have not differed statistically from those associated with psychotic depression in many studies, often limited by the sample sizes. Manic symptoms such as impulsiveness, grandiose delusions, impaired judgment, and psychosis can also contribute to aggressive behavior in these patients[52]. Our study found only two cases of bipolar disorder. We believe that this finding may reflect the relatively small sample size.

A wide variety of mental disorders have been described in association with matricide, including schizophrenia[53,54], depression[53,55] personality disorders[53,55], and alcohol and psychoactive substance abuse[55,56]. Our sample included one case of matricide and another of assault with a deadly weapon against the mother. The first patient had bipolar disorder and the second schizophrenia. We published a case report on the patient with bipolar disorder who killed her mother[57]. It should be noted that many cases of matricide are not associated with mental disorders[58].

Five patients in the sample (18%) had committed or attempted filicide. Three of the five patients presented diagnoses of schizophrenia. The other two patients had diagnoses of mental retardation and borderline personality disorder (the latter being considered partially responsible to stand trial, thus her confinement to a forensic facility). Two of these five patients had a history of alcohol abuse. The fact that there was only one case of personality disorder may have been due to the fact the it was a sample of patients with more severe mental disorders, under more rigorous security. However, studies have found aggressive behavior against intimate partners[59,60] and children[61] in individuals with borderline personality disorder. Another study found that filicidal mothers, compared to fathers, were more subject to compulsory psychiatric hospitalization than to incarceration[62]. We published a report of two cases of filicide and attempted filicide, both with diagnosis of schizophrenia[63].

Various studies have found a persistent pattern of interrupted contact with mental health services, while in others, the aggressive behavior appears to occur right after the onset of the mental disorder, before the offender has made contact with these services[64]. In our study, 21 of 28 patients (75%) had a history of psychiatric treatment. However, only four of the 28 patients (14.3%) were in psychiatric treatment shortly before the crime, and the same percentage were on psychoactive medication. The findings illustrate the fact that these patients with aggressive behavior were not in regular psychiatric treatment before they displayed this behavior. According to a cohort study[65], persons with schizophrenia show lower risk of committing violent crimes when they are on antipsychotic medication, compared to periods when they fail to receive

such treatment.

Psychiatric patients with a criminal history would benefit from treatment programs which nevertheless frequently exclude them. The presence of criminal history should be an indicator of increased need for integrative approaches, as opposed to exclusion from treatment. Mental health services should strive to prevent patients' loss to follow-up and nonadherence to treatment, which often precede the aggressive behavior committed by persons with severe mental disorders. It is also essential for society and government authorities to mitigate barriers to psychiatric and psychosocial treatment.

Although the statistical and empirical evidences point to a direct relationship between serious mental disorders and aggressive behavior, this certainly represents a small proportion of the violence occurring in the community. In countries like Brazil with high rates of violence, and where violence and crime show a strong association with precarious socioeconomic conditions, the percentage of violent crimes such as homicides associated with mental disorders may be even smaller. The aim of studies on the association between violence and mental disorders is not to stigmatize, but to better understand the factors contributing to this association, as well as to propose mental health policies and therapeutic interventions for patients with mental disorders and aggressive behavior.

Current mental health policies and clinical practices have failed to recognize that aggressive behavior and victimization are problems for many patients with severe mental disorders. Thus, treatment services have not provided sufficient services to treat these problems, increasing the number of patients transferred to forensic services.

The media coverage on violence committed by individuals with serious mental disorders increases the alarm and stigma towards these individuals. They rarely commit violence, and they are actually the victims[66,67] more often than the perpetrators of violence. Some studies have found that patients with mental illness were more prone to dying from homicide than persons in the general population[68,69].

One limitation to our study was the small sample size (n=28). Our sample is definitely not adequate for obtaining epidemiological data on a potential association between mental illness and aggressive behavior in women. Our sample consisted of court referrals on aggressive behavior in women in a forensic facility and is thus not representative of the overall population of women with aggressive behavior. However, the sample included all the female patients that were committed to psychiatric hospitalization for violent behavior in the state Rio de Janeiro at the time of the study.

Another limitation was the use of retrospective data, although all the participating patients were interviewed during the study itself. Further studies are definitely necessary to explore the risk of violence in women with mental disorders from various populations and to assess the benefits of the therapeutic intervention in these factors, in reducing the risk of violence.

Although our study cannot be considered representative of all the women that committed homicide, we believe it can contribute to understanding the relationship between homicide and mental disorders in women. The study of motivating factors for violent behavior can provide knowledge for establishing therapeutic interventions in women with mental disorders that present risk of violent behaviors.

Author Contributions

A.Valença planned the study, made the interviews with the patients , performed the literature searches and drafted the text of the report. All the authors contributed to the interpretation of the data, provided critical comments on the draft and contributed to the final version of the report.

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