Original communication

Major mental disorders, gender, and criminological circumstances of homicide

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ABSTRACT

Objective: To examine the criminological circumstances of homicide in a group of French murderers with and without major mental disorders (MMD) stratified by the perpetrator's gender.
Methods: Sociodemographic, clinical, and criminological variables were collected from the psychiatric expert reports of 210 cases of homicide heard at the High Court of Angers, France. Murderers were categorized according to MMD diagnosis and gender.
Results: Among 210 murderers, 17.6% (n = 37) had a MMD (20% of the female perpetrators). Logistic regression models showed that being a murderer with a MMD was associated with younger age (adjusted Odds Ratio OR = 1.03, P = 0.034), high school education (OR = 2.48, P = 0.036), previous use of psychiatric services (OR = 4.75, P = 0.003), alcohol intoxication (OR = 2.71, P = 0.027), and delusional state (OR = 3.96, P = 0.002) at the time of the homicide. Multiple correspondence analyses showed that female murderers with a MMD were more prone to have depression and to use drowning as a method than those without a MMD, and that male murderers with a MMD more often had a high school education and delusional beliefs at the time of the homicide than those without a MMD.
Conclusion: Specific profiles of criminological circumstances of homicide could help to explore the risk of homicide in female and male patients with a MMD.

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1. Introduction

Homicide is defined as fatal injuries inflicted by a person with intent to injure or kill another person.[1] Its incidence ranges from 1.0 per 100,000 in occidental countries to 44.8 per 100,000 in South Africa.[2] Homicide is rarely committed by women,[2] but women who commit such offences are not thought to pose the same degree of risk to society as men, in part because their victims are usually their own children or partners.[3] Furthermore, women commit a homicide as a consequence of self-defence, chronic domestic violence, or in the context of mental illness.[3] Epidemiological studies have also shown that 6%–15% of murderers, regardless of gender, suffer from a major mental disorder (MMD) such as schizophrenia, non-schizophrenic psychosis or affective disorders.[4–6] A recent meta-analysis confirmed that the risk of homicide was increased among patients with schizophrenia compared to controls (random-effects OR = 19.5, 95% CI 14.7–25.8).[7]

However, homicide committed by people with a MMD cannot be explained only by the existence of a MMD. Some additional risk factors for homicide, such as a male gender, a low educational level and a low level or the absence of a professional activity, previous use of psychiatric services, and previous convictions for any offence or for violence, have been identified among murderers with a MMD.[5,7–9] Homicide, therefore, results from predisposing conditions, which may interact with the MMD. In addition to a MMD and other predisposing risk factors, homicide may also result from contextual factors at the time of the crime called criminological circumstances of homicide (CCH).

A recent Finnish study of homicides, Hakkanen-Nyholm et al.[10] analysed crime scene behaviour and offence characteristics by gender. They found that gender was associated with several characteristics of the offence including the identity of the victim. Thus, women were less likely to kill in a public place and they moved and covered the body more often. Women more often killed a family member,[10] an intimate partner[11] and child.[12] In fact, most previous studies have focused on victim specific offences. For example, studies on filicide report that mental illness is an important trigger in women who kill their own child,[13] at least 50% of women convicted of killing an infant have a lifetime diagnoses of a mental disorder.[12] Moreover, homicide committed in women with late-onset alcohol and drug users[14] is associated with an earlier beginning of criminal activities, a lower educational level than their counterparts, and with more frequent history of being sexually abused in childhood, and more frequently in intimate relationship with external partners.[15] However, surprisingly, only a few studies have examined the specific CCH by gender among patients with a MMD,[16] although a better understanding of the CCH could be helpful in understanding the mechanism and risk of homicide in this particular population.

We hypothesized that a specific profile of CCH would characterize male and female murderers with a MMD compared to those without a MMD. We tested this hypothesis on a large number of homicide cases committed in the area of Angers, France, between 1985 and 2005. The aim of this study was to examine the criminological circumstances of homicide in a group of French murderers with and without major mental disorders (MMD) stratified by perpetrator gender.

2. Methods

2.1. Participants

We examined retrospectively the psychiatric expert reports of 210 cases of homicide tried at the High Court of Justice in Angers, France, between January 1985 and January 2005. All cases of homicide from the same area and in the same period of time were consecutively included in the current study. The study was conducted in accordance with the ethical standards set forth in the Helsinki Declaration (1983). The local Ethics Committee of Angers (France) approved the entire study protocol.

2.2. Evaluation

All murderers were Caucasian and French. They were examined by at least one forensic psychiatrist. In addition to a comprehensive psychiatric evaluation, the examinations included standardized psychological tests such as the WAIS or the MMPI[17] and additional physiological tests (such as blood tests, electroencephalography, and in some cases a brain computed tomography scan) in order to evaluate the perpetrator's physical health. Psychiatric reports were requested from the trial courts, the Prison Service, the National Prosecution Service, and from other sources.

The following information were extracted from the reports: socio-demographic characteristics; psychiatric and clinical history; alcohol intoxication at the time of the offence; and mental state at the time of the homicide. Diagnoses, socio-demographic, criminological, victim and forensic characteristics were identified.

For the purposes of this paper, we identified a lifetime history of a MMD only if it was diagnosed by the psychiatrist preparing the court report or by the psychiatrist completing the questionnaire that was asked to mental health services of each individual. Moreover, no definition adequately specifies the boundaries of the concept of "mental disorder" (DSM-IV-TR). An international definition of MMD[6] was used in the present article, which considers that MMD includes schizophrenia, non-schizophrenic psychosis or affective disorders[4–6] but not personality or alcohol abuse disorders. We concluded that a person had depression at the time of the homicide only if they fulfilled ICD-10[18] criteria for depression. Diagnoses were cross-checked by another psychiatrist expert (J.P.O.), with 100% agreement.

The CCH[19] were noted as follows: place of homicide (home vs. outdoors), time of homicide (evening vs. not), type of homicide (weapon present vs. not), relationship between the victim and the murderer (stranger vs. not), alcohol intoxication at the time of the homicide (yes vs. no), and mental state at the time of the homicide (unremarkable, depression or delusional beliefs)[16].

The following predisposing factors for homicide were included in the data analysis as potential confounders: age (mean ± standard deviation), proportion of participants with at least a high school education (yes versus no), employed (yes versus no), prior use of psychiatric services (yes versus no), and history of prior convictions for violence or for any offence (yes versus no).

2.3. Statistical analyses

Participants' baseline characteristics were summarized using means and standard deviations or frequencies and percentages, as appropriate. Normality of data distribution was checked with a skewness-kurtosis test. Since the number of observations was greater than 30 for each group, no transformations were applied to the variables of interest.

Subjects were separated into two groups according to the existence of a MMD. First, between-group comparisons were performed using t-test and Mann–Whitney U test for quantitative variables, as appropriate, and Chi-square test for qualitative variables. Second, univariate and multiple (i.e., full adjusted model, and stepwise model including all variables) logistic regression analyses were performed to specify the associations between MMD (dependent variable) and CCH (independent variable) after adjustment for covariables.

P-values less than 0.05 were considered as statistically significant. All statistics were performed using SPSS (version 15.0; SPSS, Inc., Chicago, IL).

Finally, multiple correspondence analyses (MCA)[20,21] were performed to highlight the main interrelationships between the above-mentioned qualitative data, described with proportions and percentages. MCA measures the association between categorical variables by representing the categories of variables as points in a low-dimensional space. This representation aims to visualize the similarities and/or differences of profiles simultaneously. The diagnoses, gender and CCH were projected onto two-dimensional spaces formed by the main axes explaining the most variance in order to visualize their proximity. We considered three axes and two maps (axes 1 and 2 and axes 2 and 3, respectively). Age was a categorical variable. The contribution of each category to each axis was calculated to determine the set of diagnoses, gender and CCH with maximal contribution to a given axis and to make the