Female Residents with Psychopathy in a High-Security Italian Hospital

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Before its closure on April 1, 2015, the Castiglione delle Stiviere was the only maximum-security hospital in Italy that admitted women. In this context, the investigators examined factors related to psychopathy that were thought to be gender specific. Several prior investigations have reported a significant correlation between psychopathy and borderline personality disorder, a disorder thought to represent the phenotypical expression of psychopathy in women. The purpose of this research was to identify psychopathological and phenotypical gender-specific factors that are associated with psychopathy in women. The data appear consistent with that found in the recent international literature and also highlight the different phenotypical manifestation of psychopathy in the two genders. Whereas in males psychopathy is associated with antisocial personality disorder, in females psychopathy is associated with borderline personality disorder.

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Psychopathy in women has been understudied.[1,2] Debated is the question of whether and to what extent psychopathy in women is phenotypically the same as that in men. A better understanding of psychopathy in women could contribute ultimately to improved preventive, treatment, and management strategies.

This article begins with a concise review of the extant literature comparing psychopathy in men and women. The following section examines the developing construct of psychopathy and its measurement, in particular with the Psychopathy Check List-Revised (PCL-R).[3] Next, the change in the Italian mental health system for mentally disordered criminal offenders and the unique population of mentally disordered female offenders that constituted the group selected for the study are described. To our knowledge, this is the only study of psychopathy in females in Italy. It is also one of the very few studies in which the PCL-R was used to compare psychopathy in male and female subjects.

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Psychopathy and Gender Differences

The question of whether antisocial behaviors and psychopathy are fundamentally different or the same in women and men has long been debated in the literature.[1,4] The renowned Italian criminologist Lombroso found that female criminals were uncommon and unlike their male counterparts: "They do not commit crimes out of evil passions, but to please their lovers. They steal or compromise themselves for men's sake, without sometimes having any direct interest in the act" (Ref. 5, p 169). Recent research too has suggested differences in the likelihood and patterns of criminal conduct in women in comparison with men.[6]

Other investigators found remarkable similarities in violent female offenders,[7,8] especially in terms of their early histories. Similar to their male counterparts, female psychopaths show deficits in socialization and self-control as well as in their experience and expression of empathy.[2] Anderson and colleagues[9] found that women with high psychopathic trait scores showed increased peak 3 (P3) amplitude and

reduced startle potentiation. Competing theoretical perspectives in attempts to research female antisocial conduct and methodological challenges are summarized by Giordano and Cernkovich.[10]

Ambivalence about the application of psychopathy to women is discussed by Nicholls and Petrila.[11] Some question the usefulness of the construct in women because of psychological gender differences. Others assume that the construct, as researched in men, will apply equally to women. Nicholls and colleagues[1] concluded in their review that psychopathy is manifested differently in women. They also concluded that "little consensus exists regarding the etiology, expression, assessment, prevention, management and treatment of psychopathy in females" (Ref. 1, p 361). The importance of recognizing psychopathy in women[10] and the need for more research on female psychopathy[1] are well recognized and addressed by the present study.

Psychopathy may be different in men and women, as is suggested by several studies that reveal gender differences in the model of psychopathy.[7,11,12] From their literature review, Verona and Vitale[2] concluded that women show different manifestations, but have the same vulnerability to psychopathy as do men. Reasons for differences are not yet completely understood.[13]

Psychopathic women tend to be less aggressive than men, with less tendency to repeat criminal conduct. They show more self-directed violence and a greater risk of suicide. They are more seductively manipulative,[14] emotionally unstable, anxious, and prone to develop posttraumatic stress disorder (PTSD) and drug addiction.

Studies on the interplay between psychopathy and crime have focused mostly on men. There have been relatively few studies on psychopathy in female subjects.[1,15] Data in the literature suggest that men with psychopathic disorders commit more violent crimes than do women with psychopathy.[16] Men show higher levels of physical aggression as well, whereas women show higher levels of relational and verbal aggression. Women primarily commit crimes that are not physically aggressive, such as theft and fraud,[12] and they more frequently engage in so-called relational aggression.[17] The lower prevalence of psychopathy in women in comparison with men may have several causes. Psychopathy in women may be less likely to be identified because of sampling errors, errors related to gender differences in assessment tools, and gender stereotype biases of evaluators. Differences in the phenotypical expression of antisocial behavior[18] could be related to genetic and other[19–22] biological factors;[23] a primary emotion-processing deficit;[24] psychological,[25–27] cultural, and social factors; and complex interaction among these and other factors.[11]

According to Dolan and Voellm,[28] some of the most typical traits of psychopathy may have different underlying motivational factors in men and women. Promiscuity in female psychopaths may reflect the desire to gain financial or social benefits. Moreover, social norms could influence the evaluation of certain psychopathic characteristics differently in men and women. Manipulative women more often tend to flirt, whereas manipulative men are more likely to run scams and commit fraud. In women, the tendency to run away and to exhibit self-injurious behavior and manipulation characterize their impulsiveness and behavioral problems. The interpersonal symptoms in women are usually not characterized by superficial charm and grandiosity, as is the case with men. In both genders, there is a clear connection between psychopathy and abuse of alcohol and drugs,[10,12] although this correlation is even stronger in psychopathic women.[29,30] Several studies have reported a significant correlation, apparent more often in women than in men, between psychopathy and a histrionic pattern,[1] but especially between psychopathy and borderline personality disorder (BPD).[1,11,31,32] It has been suggested that BPD in women represents the phenotypical expression of psychopathy.[10] In particular, F2, which is a measure of interpersonal and affective abnormality in psychopathy, such as the tendency to be manipulative and lack of empathy,[33] shows a closer correlation with[34–36] and higher total scores on PCL-R and BPD in women.

Background

From the second half of the 19th century onward, the treatment of offenders with mental illness who were at risk of recidivism (dangerous to the society) in Italy was entrusted to hospitals for criminal offenders (*manicomi giudiziali*; judicial asylums). One century later, these asylums were transformed into actual forensic high-security psychiatric hospitals, known as judicial psychiatric hospitals (*ospedali psichiatrici giudiziari*; OPGs). The OPGs were directly managed by the Italian Ministry of Justice. They maintained their cultural and therapeutic profiles,

even after the Reform Law on Assistance to the Mentally Ill (Law No. 833) was enacted in 1978, mandating the closure of the general psychiatric hospitals (*ospedali psichiatrici*; OPs) in Italy.

With the closure of the general mental hospitals, the care of the mentally ill was entrusted to the National Health System (*Sistema Sanitario Nazionale*, *SSN*), which pursued a course that became increasingly detached from the problems concerning the treatment of mentally ill offenders at risk of recidivism.[37] This remained the exclusive responsibility of the prison system, and in particular, of the OPGs. A recent law (Law No. 9, enacted February 17, 2012), ratified the closure of the OPGs, which have now been replaced by centers located in each of the Italian regions. Administration of these treatment centers was entrusted to the SSN, following the model that already existed in Italy for the treatment of mentally ill persons. Just prior to their closure, (originally scheduled for March 31, 2015), the six Italian OPGs collectively accommodated around 1,500 patients, mostly men. These were offenders who, with regard to the Italian Penal Code, had been adjudicated not guilty or partially guilty by reason of insanity for their crimes. Total or partial nonculpability was due to a severe mental disorder at the time when they committed their crimes. In addition, they were deemed to be at risk of recidivism. As long as these individuals presented such a risk, they were subjected to involuntary hospitalization in an OPG or in a regional psychiatric center. For a complete account of this transformation in Italy's mental health system for insanity acquittees, see Carabellese and Felthous.[38]

The OPG of Castiglione delle Stiviere in northern Italy was the only facility that admitted women. All women who committed a crime in Italy and were at risk of recidivism were remanded to the OPG of Castiglione. Originating in the unique OPG hospital of Castiglione, the idea of research on possible gender-specific factors related to psychopathy, a psychopathological variable related to antisocial behavior[39] and criminal recidivism,[3] was developed and carried out.

Psychopathy

Several tools have been developed to evaluate the psychopathological dimension. The most common instruments to assess psychopathy in international research are: the Structured Clinical Interview for DSM Axis II disorders,[40] the Psychopathy Checklist Revised,[3] the Screening Version of the Psychopathy Checklist,[41] the Levenson Psychopathy Scale,[42] and the Psychopathic Personality Inventory-Revised.[43] Recently, the University of Palermo validated the Italian version of the PCL-R used in this research.[44] The Hare PCL-R, a semistructured interview that incorporates information from the subjects' health records, consists of 20 items that are scored from 0 to 2, depending on how well each item fits the individual. The maximum score is 40, which is extremely rare. Within research, 30 is the accepted threshold score for a diagnosis of psychopathy, but a lower score[25] has been determined to be more appropriate for clinical use in some cultures, for instance in Scandinavia[45] or in recent research on female samples.[46]

Three models for PCL-R are based on factor-analytic studies using the two-factor model[47]: Factor 1 (interpersonal-affective) and Factor 2 (antisocial-criminal lifestyle); the three-factor model[48]: Factor 1 (arrogant and deceitful interpersonal style), Factor 2 (deficient affective experience), and Factor 3 (impulsive and irresponsible behavioral style); a four-factor model[3]: Factor 1 (interpersonal), Factor 2 (affective), Factor 3 (lifestyle), and Factor 4 (antisocial). The two factor model was used in this study. The items were divided into Factor 1 (F1), which assesses core personality features, and Factor 2 (F2), which assesses antisocial behavior and poor impulse control. F1 reflects interpersonal and affective items and appears to be stable over time.[49] The interpersonal facet includes: superficiality, grandiosity, lying, and manipulation, whereas the affective facet includes lack of guilt, shallow affect, lack of empathy, and lack of responsibility for one's actions.

F2 reflects an antisocial and criminal lifestyle and is considered more dynamic and potentially mutable.[21] It has been suggested that this factor is influenced by childhood experiences.[22] The lifestyle facet involves craving for stimulation, parasitic lifestyle, lack of planning for the future, impulsiveness, and irresponsibility. The antisocial facet involves lack of behavior control, early behavioral problems, adolescent crime, rule violations, and criminal versatility.[12]

All legal systems must recognize the criminal psychopaths' challenge (i.e., criminal legal disposition). These individuals are usually considered legally responsible for the crimes they commit. Although the psychopath is typically considered mentally healthy in the jurisprudence of criminal responsibility, contemporary neuroscience, thanks to functional neuro-

imaging studies, suggests that immoral behavior could arise from a persistent deficit in the so-called morality circuit associated with dysfunction of the amygdala and the medial prefrontal cortex.[50] However, there are limitations to these studies, especially as applied to criminal responsibility.[51]

There is evidence of the role of genetic variants in the phenotypical expression of psychopathy.[49] The development of psychopathy in an individual is the result of complex interactions between biological and temperamental predispositions, as well as social and environmental influences.[19,26,27,52,53] There is indeed a close interdependence between a person's genotype[23] and environmental experiences.[23,54,55]

According to one definition of psychopathy,[56] the psychopathic person has a total lack of empathy and a sadomasochistic relationship style based on power rather than on emotional bonding. He is unable to identify with others and is completely indifferent to the potentially dangerous results of his actions.

French, German, and Anglo-American psychiatry gave birth and development to the concept of psychopathy.[56,57] Historically, the concept of psychopathy dates back to the 19th Century with Pinel,[58] subsequently taken up by others who accepted the modern definition, such as Cleckley,[59] in the middle of the past century. The subsequent development of the Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III),[60] led to the concept of antisocial personality disorder (ASPD), the most studied personality disorder in the international literature.[28,61] For a detailed account of the historical and conceptual development of psychopathic disorders see Sass and Felthous.[56] The prevalence of ASPD in the general population is 3 percent in men and 1 percent in women.[60]

ASPD and psychopathy are partially overlapping concepts. ASPD is based more on the assessment of antisocial behavior, whereas psychopathy takes interpersonal and affective aspects more into account. It is estimated that the prevalence of psychopathy in the general population is 0.5 to 1 percent, whereas this percentage is increased significantly (20–25%) in prison populations.[57] To be noted is that, according to some,[61] only one-third of the subjects diagnosed with ASPD fully correspond to the diagnostic criteria of psychopathy. There is agreement that psychopathy is more prevalent in men than in women.[12,62]

The Study

This study was conducted in the OPG of Castiglione delle Stiviere from August 1, 2012, through February 1, 2013. At the time of the study, the population of the OPG was composed of a male section with 230 men and a female section with 86 women.

The main purpose of the study was to identify psychopathological and phenotypical gender-specific factors that are related to psychopathy.

Methods

This research was conducted in compliance with the rules established by the ethics committee for the facility, which approved the study in advance. The patients enlisted were informed of the purpose of the research and participated after written informed consent was obtained. All women who provided their consent (i.e., all 86 hospitalized women), underwent a clinical evaluation that included a comprehensive clinical history. Data were available for only 66 of them.

After a period of observation, we administered to the entire sample the Structured Clinical Interview for DSM-5 (SCID) I and II interviews and other tests: Minnesota Multiphasic Personality Inventory (MMPI)-2, Millon Clinical Multiaxial Inventory (MCMI)-III, and the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS). This battery of tests allowed the investigators to diagnose 33 patients with personality disorders, 31 of whom were categorized as Cluster B and 2 as Cluster A.

To highlight the gender characteristics that related to psychopathy, we compared this population with a group of men who were hospitalized during the same period. This group of male subjects of equal sample size was controlled for diagnosis, age, and legal status. Diagnoses were established with the same clinical and historical assessment that was used for the women. Thus, a group of 33 male subjects was selected who had personality disorders, including 29 categorized as Cluster B and 4 as Cluster A. The total sample consisted of 66 patients (33 women and 33 men).

To achieve the goal, a clinical and historical assessment was conducted to investigate age, gender, marital status, education, personal and family psychiatric history, legal status (not guilty by reason of insanity (NGRI) or partially guilty by reason of insanity),

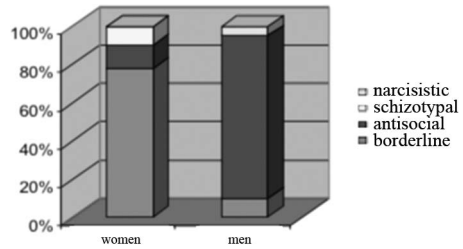

Figure 1. The distribution of personality disorders among psychopathic women and men. In the psychopathic women (n = 33) BPD was the most common personality disorder, while in the psychopathic men (n = 33), the most common personality disorder was the ASPD.

type of crime (property versus person), and pharmacotherapy.

To evaluate the index of psychopathy, the Psychopathy Checklist-Revised,[47] recently validated in Italy,[46] was used. Extant literature supports the utility of the PCL-R in assessing psychopathy in female offenders.[2] For this research a score ≥25 was considered indicative of psychopathy,[45] which is the cutoff that is generally recognized in Europe.

All data were analyzed by using SPSS, version 22.0. For contrasting group comparisons, analyses of the two groups were based on the PCL-R cutoff score of 25. Women and men with scores of ≥25 constituted the two psychopathy groups. Women and men with scores of < 25 comprised the two nonpsychopathy groups. To examine for significant differences in the mean F1 scores between nonpsychopathic women and men, the t test was used. For two-tailed tests, the effect size was calculated by using Cohen's d.[63]

Results

The diagnosis of psychopathy was made in 30.1 percent of the sample (11 men and 10 women) with an average score on the PCL-R of 28.5 for the women and 26.5 for the men. In 85 percent of the psychopathic men, the diagnosis of ASPD prevailed; in the women, BDP (80%) was the most common personality disorder (Figure 1).

These data appear consistent with results found in the recent international literature and, in addition, highlight the different phenotypical manifestations of psychopathy in the two genders.[2,64] Male and female samples were each dichotomized based on the presence or absence of psychopathy. The four subgroups so obtained (psychopathic men, psychopathic women, nonpsychopathic men, and nonpsychopathic women) were compared according to the following variables: F1 scores, F2 scores, types of criminal offenses (against person/against property), type of violent behavior (self-aggressive behavior/aggressive behavior against others), substance abuse (present or absent), legal status (total absence of responsibility or diminished responsibility), types of medication prescribed (antipsychotics, mood stabilizers), psychiatric history before having committed the crime and whether they had a history of mental health treatment before committing the index offense.

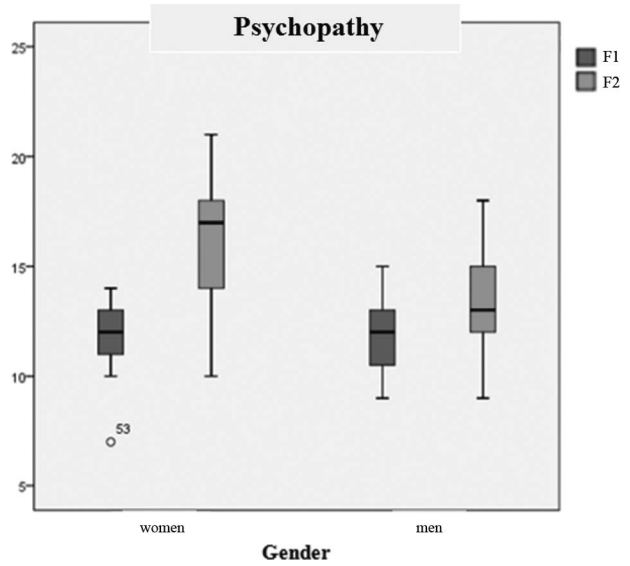

Figure 2. Psychopathy. In men and women with psychopathy, specific gender differences were not statistically significant (11 men and 10 women).

In men and women with psychopathy, specific gender differences were not statistically significant, although the women with psychopathy showed an average F2 score that was higher than that of the male subjects (Figure 2).

Regarding the type of crime committed, a significantly larger number of men in the psychopathic group had committed crimes against the person (p = .024) than the group of psychopathic women. In the latter, there was instead a slight predominance of property crimes compared with crimes against the person (Table 1).

The study groups showed no significant differences with regard to substance abuse; however, psychopathic men and women showed a higher percentage of substance abuse than for nonpsychopathic men and women (75% versus 57.8%). The literature shows a positive correlation between sec-

Table 1. Specific Crimes Committed by Women and Men with Psychopathy

Crime	Men	Women
Murder	11	10
Attempted murder	7	3
Personal injury	8	3
Abuse	12	2
Sexual offenses	1.5	0.5
Stalking	3	1
Other offenses against persons	4	1
Offenses against property	8	3
Other	18	4

$N = 66$; 33 women and 33 men. Data are percentages of the entire group of 66.

ondary psychopathy (high F2 scores) and substance abuse.[1,47,65,66] Regarding legal status and pharmacotherapy, there were no significant differences in the psychopathic groups.

Finally, taking psychiatric histories into consideration, no significant gender differences were identified between the groups. Apparently, psychopathic women more often have a positive psychiatric history (77.8% versus 60.9%) compared with nonpsychopathic women. In psychopathic men, this difference was not observed.

Discussion

The BPD diagnosis was found in 80 percent of the female sample, with PCL-R score ≥ 25. Most in the male sample had antisocial personality disorder. These findings are consistent with those in the international literature[36] and suggest that BPD and psychopathy, as measured by current instruments, overlap in women. This result may reflect gender-differentiated phenotypical expressions of similar dispositional vulnerabilities.

As for F1 and F2 scores, taking into account the limitation of the small samples, women with psychopathy showed no significant differences in F1 and F2 scores compared with the men, although the women showed an average F2 score that was higher than that of the male subjects. The clinical presentation of psychopathy in women may be marked by a stronger loading of negative affect and greater overlap with internalizing psychopathology. This perspective is supported by molecular genetic research, which has found a functional polymorphism for monoamine oxidase A to be linked to antisocial behavior in men and mood disorders in women.[65] Moreover, personality research indicates that traits related to F2 are more strongly linked to internalizing disorders in women than in men.[49] Some have claimed that the next version of the DSM would benefit from adding a "dysregulated personality type," reflecting secondary psychopathy and BPD, to supplement the "psychopathic/callous type," reflecting primary psychopathy.[63,64]

With regard to co-occurring substance abuse, no significant differences were found between the men and women, with or without psychopathy.

As for the types of crime committed, the men with psychopathy committed crimes against persons significantly more often than did the women, consistent with published findings in the international literature. Women with psychopathy committed a slight preponderance of crimes against property over those against the person. This finding can be explained by the fact that women have lower levels of aggression but a higher tendency for manipulative behavior than do men.[21,49] The prevalence of homicide is similar between men and women, both in the present study and according to national data for Italy. All other types of crime, in contrast, including attempted murder, injury, sexual abuse, stalking, other offenses against the person, and crimes against property, are committed predominantly by men.[64]

This study has the following limitations: first, the sample sizes were small and therefore did not provide optimal power for statistical analysis. Moreover, ratings were conducted by five different raters in the same setting. Second, this was a study of a national sample of women defined as dangerous to society for psychiatric reasons by the Italian Penal Code, who were admitted to a high-security hospital. However, the comparison group was a sample of men from northwest Italy, who nonetheless were comparable in sample size, age, diagnosis, and legal status. We cannot rule out some gender bias in court adjudication of the male and female groups. This study does not control for criminality with a comparison group of nonoffending females, a consideration for future study.

Conclusions

The purpose of our study was to investigate the potential role of gender in the etiology of psychopathy, as suggested by several previous findings in the literature. First, there are consistent and relatively large mean-level gender differences in psychopathy and antisocial behavior. Whereas psychopathy in

males is associated with antisocial personality disorder, in females it is more strongly tried to borderline personality disorder. Second, highly antisocial women (e.g., female offenders) exhibit greater levels of environmental deprivation, victimization, and mental health problems relative to their male counterparts. This finding has led some investigators to speculate that women require a greater "loading" of risk factors to exhibit psychopathic features or that environmental factors play a greater role in female relative to male psychopathy and antisocial behavior. In contrast, Moffitt *et al.*[67] analyzed data from a large epidemiological sample and concluded that the lower rates of antisocial behavior in women were primarily attributable to women's experiencing lower levels of the risk factors for antisocial behavior (at least at the population level). Also, in terms of correlates, previous studies found that the associations between psychopathy facets and various criterion variables are largely consistent across men and women.[19]

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