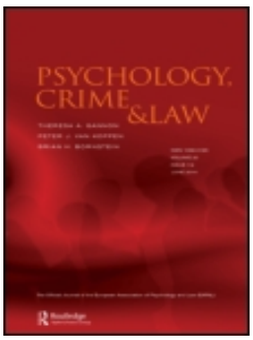

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Gender differences in violent offending: results from a multicentre comparison study in Dutch forensic psychiatry

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ABSTRACT

The past two decades, a disproportionate growth of females entering the criminal justice system and forensic mental health services has been observed worldwide. However, there is a lack of knowledge on the background of women who are convicted for violent offenses. What is their criminal history, what are their motives for offending and in which way do they differ from men convicted for violent offenses? In this study, criminal histories and the offenses for which they were admitted to forensic care were analyzed of 218 women and 218 men who have been treated between 1984 and 2014 with a mandatory treatment order in one of four Dutch forensic psychiatric settings admitting both men and women. It is concluded that there are important differences in violent offending between male and female patients. Most importantly, female violence was more often directed towards their close environment, like their children, and driven by relational frustration. Furthermore, female patients received lower punishments compared to male patients and were more often considered to be diminished accountable for their offenses due to a mental illness.

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Gender; violence; forensic; criminal history

Introduction

Attention to female offenders has grown substantially the past twenty years. Girls and women still represent only a minority of the forensic mental health and prison populations with admittance or incarceration rates varying between 6% and 10% (see for the most recent official statistics in the United Kingdom www.gov.uk/government, in Canada www.statcan.gc.ca; and in the United States of America www.bjs.gov). However, studies worldwide suggest that there has been a steady increase in the number of females being convicted for committing offenses, especially violent offenses (Heilbrun et al., 2008; Odgers, Moretti, & Reppucci, 2005). In addition, some types of violence are – at least – as common in women as in men, more specifically, child abuse (May-Chahal & Cawson, 2005), intimate partner violence (Nicholls, Pritchard, Reeves, & Hilterman, 2013), and inpatient violence by psychiatric patients (Dack, Ross, Papadopoulos, Stewart, & Bowers, 2013). Thus, violent behavior by females is a problem that cannot be ignored. Still, most of the tools and treatment programs that are currently being used in forensic

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mental health services and prisons have mainly been developed and validated in male samples. Most of the research in the forensic and criminological field is predominantly focused on male populations and it can be questioned whether the theoretical and empirical knowledge we have on male offenders is sufficiently valid and useful for female offenders. For example, important gender differences have been found in developmental pathways to offending, nature of offending, predictive accuracy of violence risk factors, and treatment needs (for an overview see de Vogel & Nicholls, 2016).

Furthermore, although research into this area is still scarce, important differences have been observed in the punishment of females compared to males. In general, there seems to be a tendency to treat female offenders more leniently than male offenders, leading to shorter prison sentences, treatment instead of punishment, and to more insanity defences (Crocker, Eizner-Favreau, & Caulet, 2002; Curry, Lee, & Rodriguez, 2004; Jeffries, Fletcher, & Newbold, 2003). Curry et al. (2004) describe several theories explaining this phenomenon. For example, the blameworthiness attribution asserts that judges make use of stereotypes; they see women as less to blame and put more emphasis on mental health problems. In a large-scale study in Sweden it was found that a higher percentage of the women referred to forensic evaluation were declared legally insane compared to men, even after controlling for confounding factors such as personality disorders (Yourstone, Lindholm, Grann, & Fazel, 2009). A cross-sectional study in the UK into female and male homicide offenders showed that gender, mental illness, and certain characteristics of the homicide influenced the outcome of legal processes (Flynn, Abel, While, Mehta, & Shaw, 2011). In this study, it was found that the courts were more lenient with women if the homicide victim was a child or relative, however, this was not true for male perpetrators. The fact that women are more often first offender or have children to take care of are other possible explanations. Also, it has been suggested that women have a more positive attitude in the courtroom and that they more often express regrets. Generally, women are seen as more vulnerable, more collaborative and less susceptible to reoffend than men.

Summarizing, substantial gender differences have been found in the nature of violence and in judicial consequences and punishment. While recognizing that knowledge into female offending has expanded strongly in the past two decades, it needs to be acknowledged that our understanding of female violent offending is still hindered by a lack of theoretical and empirical investigations of this population. In particular, studies directly comparing male and female offenders are scarce. Many questions remain largely unanswered and more in-depth insight is needed about female violence to be able to provide more gender-responsive treatment in forensic settings and prevent recidivism. This is also important with respect to breaking the intergenerational cycle of violence. Children of antisocial and violent mothers are at serious risk to be hindered in their development and have increased risks of multiple problems, including substance abuse, mental health problems, antisocial, violence and other risky behaviors (Felitti et al., 1998; Kim, Capaldi, Pears, Kerr, & Owen, 2009).

In 2012, researchers from four Dutch forensic psychiatric settings started a research project to gain more knowledge about the background and needs of female forensic psychiatric patients in comparison to their male counterparts. In this ongoing research project, data is collected that may be used to improve risk assessment procedures and encourage gender-responsive treatment in forensic psychiatric care, but possibly also in general psychiatry or in the prison system. Previously, this population has been described mainly with

respect to their psychiatric characteristics (de Vogel, Stam, Bouman, ter Horst, & Lancel, 2016). The present study will focus specifically on the criminal histories and analyses of the index offenses (i.e. the offenses for which they were admitted to forensic care). The results will compare 218 female patients and 218 matched male patients. First, we will briefly summarize the literature into female violence.

Female violence

Research in forensic populations has shown that the nature, severity, frequency, and victims of violent offences committed by women are significantly different from those committed by men (Nicholls, Brink, Greaves, Lussier, & Verdun-Jones, 2009; Robbins, Monahan, & Silver, 2003). It should be emphasized that these studies are usually conducted in already convicted samples, thus may not reflect gender differences in violent behavior in the general population. Most importantly, female violence is more often reactive and relational and less often characterized as instrumental (i.e. robbing someone to obtain money or drugs) or sexual. Furthermore, violence by women less often results in serious injuries and is less visible and more subtle, for instance, in intimate partner violence, child abuse, and violence against relatives (Odgers et al., 2005). The most common victims of violence by girls are siblings and peers and the most common victims by adult women are partners or child(ren) (Batchelor, 2005). Women compared to men are more likely to use knives or so-called personal weapons, such as hands and teeth when they commit violence (Koons-Witt & Schram, 2003). Furthermore, women seem to have different motives for violent offending than men, although the literature investigating this subject is still sparse. Claimed motives for violence by females are, for example, jealousy, relational frustration and self-defence, whereas motives for males are more often seen as antisocial, ego driven or resulting from peer pressure (Kruttschnitt & Carbone-Lopez, 2006; Langhinrichsen-Rohling, McCullars, & Misra, 2012).

Several studies and theoretical models state there are gender differences in developmental pathways into offending (Fontaine, Carbonneau, Vitaro, Barker, & Tremblay, 2009). For example, it has been found that girls compared to boys usually have a delayed onset of criminal behavior (Moffit, Caspi, Rutter, & Silva, 2001). Trauma history, substance abuse, family dysfunction, and mental illness have been identified as gender-specific explanatory factors for offending (Brennan, Mednick, & Hodgins, 2000). Although these factors have also been found to constitute important explanatory factors or risk factors for males, their relative impact seems to be stronger for females (Odgers et al., 2005).

Present study

In the present study, criminal characteristics will be compared of 218 women and 218 men who have been admitted between 1984 and 2014 with a mandatory treatment order in one of four Dutch gender-mixed forensic psychiatric settings. Criminal histories will be analyzed, as well as the characteristics of the index offenses for which these patients were admitted. Differences will be explored between female and male offenders with respect to criminal history, index offense and victim type, use of weapons, alleged motives for offending and punishment. Based on the literature described above, four hypotheses were formulated. Compared to male forensic patients: (1) female forensic

patients women are older when committing their first offense (see Moffit et al., 2001); (2) female forensic patients more often have victims within their close environment (see Robbins et al., 2003); (3) female forensic patients are more often motivated by relational motives and less often by instrumental or sexual motives (see Langhinrichsen-Rohling et al., 2012); and (4) female forensic patients are punished more leniently (see Jeffries et al., 2003).

Method

Procedure

The present study is part of an ongoing multicenter research project into gender differences in criminal and psychiatric characteristics and violence risk factors of forensic psychiatric patients (see de Vogel et al., 2016). In the first phase of this project, files were coded of 297 female forensic psychiatric patients. In the second phase, these women were matched with male forensic psychiatric patients on three criteria: year of birth, year of admittance and judicial status. The reason for matching on these variables was to control for confounding factors, such as changes in assessment and treatment over time or differences in judicial status. For the present study, only patients were included who were admitted with a tbs-order (*terbeschikkingstelling*: translated as 'detained under treatment order'). A tbs-order is a judicial measure that can be imposed on an offender by court when the following conditions are met: (1) the offender committed a serious violent or sexual violent offense, (2) the offender can be considered diminished accountable for the offense due to the presence of a mental illness, and (3) there is a high risk of recidivism. The accountability for the offense and the risk of recidivism are assessed by two independent mental health professionals: a psychologist and a psychiatrist. Usually, the tbs-order is imposed in combination with a preceding prison sentence, except in cases of full unaccountability.

We analyzed the data of 218 women and 218 men who have been admitted between 1984 and 2014 in one of four Dutch gender-mixed forensic psychiatric settings: Van der Hoeven Kliniek, Oldenkotte, De Woenselse Poort and FPK Assen GGZ Drenthe. In these four settings, nearly all of the Dutch female tbs patients reside. Official permission to study the patient files was provided by the board of directors of these settings. Differences between women and men were tested with Chi-square tests and Student's *t*-tests.

Instruments

An extensive questionnaire was designed for this research project based on a literature review of violence in women and includes demographic variables, psychiatric variables, offense history and index offense(s), various risk assessment tools, and registered incidents during treatment. These questionnaires were filled in retrospectively by trained researchers (psychologists and criminologists) based on the available file information. In general, the file information was extensive and contained, for example, police records, diagnostic reports, and treatment evaluations. The quality of the file information was rated on a 0 (insufficient) – 100 (excellent) scale based on the availability

of reliable information about the entire lifespan preferably from multiple sources. The quality of the files was generally judged as good with a mean score of 81.1 (SD = 12.2, range 50–100) for the 218 women and 81.8 (SD = 10.1, range 50–100) for the 218 men.

Typology of motivation for offending

In this study, a recently developed typology of motivation for offending was used. This typology is inspired by a motivation taxonomy by Coid (1998) that was developed based on research in 260 male and female inmates from maximum security hospitals and prisons in England. The development of the present typology is described into more details elsewhere (Klein Tuente, de Vogel, & Stam, 2014). We coded the primary alleged motive and categorized it into one of six clusters: *Mad* (e.g. psychotic, compulsive urge to kill), *Bad* (e.g. power, dominance, illicit gain), *Sad* (e.g. cry for help, despair), *Relational frustration* (e.g. revenge, jealousy), *Coping* (e.g. hyperirritability), and *Sexual* (e.g. paraphilia). It should be noted that more motives may be present at the same time, however, for the current study, we only analyzed the primary motive. The codings are based on the narratives derived from police files regarding the index offense, as well as psychological reports for court. The interrater reliability of this typology was studied for 30 women and 50 men whose files were coded by three independent raters (de Haas, 2014). A substantial agreement was found for the motivation cluster *Mad* (Fleiss' Kappa[1] for men $\kappa = .77$ and for women $\kappa = .54$, $p < .01$). For the other motivation clusters (i.e. *Bad*, *Sad*, *Relational frustration*, *Coping*, and *Sexual*) fair to moderate agreement was found (for men $\kappa =$ between .23 and .61 and for women $\kappa =$. between .18 and .57, all $p < .01$).

Sample

The mean age at admission of the female patients was 35.5 years (SD = 9.7, range = 18–65) and the mean age of the male patients was 34.9 years (SD = 9.8, range = 18-67), which was not significantly different. Significantly more female patients were of Dutch descent in comparison with male patients (82.1% and 69.3%, respectively, χ^2 (1, $N = 436$) = 9.772, $p = .002$). Overall, both female and male forensic patients had a problematic history with a high prevalence of unemployment, financial problems, victimization, complex psychiatric problems and multiple previous treatment failures. In general, these problems were more severe in the female population compared to the male population (see for a more detailed description of this sample and their psychiatric characteristics de Vogel et al., 2016).

Results

Criminal history

Table 1 presents the criminal histories of the female and male forensic psychiatric patients. Most of the female and male patients had had contacts with law enforcement before their index offense. About half of all female patients had been convicted prior to the index offense, which is significantly lower compared to the male patients. Convicted female

Table 1. Criminal histories of female and male forensic psychiatric patients.

	N = 218 women	*N* = 218 men	*p*-value
Previous contacts law enforcement	160 (73.4%)	189 (86.7%)	<.001
Previously convicted	118 (54.1%)	181 (83.0%)	<.001
Mean age at first conviction in years	24.9 (SD = 8.8, range 12–63)	20.8 (SD = 7.2, range 12–59)	<.001
Mean number of previous convictions	3.9 (SD = 4.4, range = 1–23)	5.8 (SD = 5.3, range = 1–32)	<.001
Type offense first conviction			
Homicide	2 (1.7%)	5 (2.8%)	ns
Sexual offense	1 (0.9%)	25 (13.8%)	<.001
Violent offense	31 (26.7%)	52 (28.7%)	ns
Property offense	49 (42.2%)	76 (42.0%)	ns
Arson	16 (13.8%)	6 (3.3%)	<.001
Other (e.g. drugs, traffic offenses)	17 (14.6%)	17 (9.4%)	ns

Notes: Differences were tested with Chi-square analyses and Student's *t*-tests. All two-tailed. Not all variables could be coded for all of the cases, the percentages reported are the valid percentages. Examples of contacts with law enforcement without conviction are: frequently calling the police, public intoxication, breaking the public peace, false accusations.

patients were older at first conviction and had significantly less average previous convictions than convicted male patients. The first offense in both female and male patients often concerned a property or violent offense. For female patients, the first offense was more often arson, whereas male patients were more often convicted for a sexual offense as first offense.

Index offense

Table 2 shows that the most common index offenses for which they were admitted to forensic psychiatry by female patients were arson and (attempted) homicide. Male compared to female patients more frequently committed sexual and violent offenses (for example, assault, robbery). Notable is that female patients more often committed homicide offenses than male patients. The relatively high prevalence of filicide by female patients ($n = 24$, 11.0%) compared to their male counterparts ($n = 3$, 1.4%) may account for this (numbers are not reported in the table). Usually, the victims of female perpetrators were someone from their close environment like their children, (ex)partner, a family member or their supervisors. Significantly more male patients committed offenses with a stranger victim. Male patients more often had multiple victims, usually in cases of child molesting or violent offenses and more often female victims compared to female patients. Female patients compared to male patients more often had no direct victim involved in the index offense, which was usually the case in offenses like arson.

The majority of both female and male patients committed the index offense alone; in 13% of the cases, one or more co-offenders – usually male – was involved. About a third of both female and male patients committed the index offense while under the influence of substances like alcohol or drugs. Almost a quarter of female and male patients were deemed psychotic when committing the index offense.

In more than half of the cases of both female and male patients, a weapon or multiple weapons were used during the index offense. Most often these weapons were sharp objects, such as a knife or glass fragments. Male patients more often used a fire-arm compared to female patients, whereas female patients more often used

Table 2. Characteristics index offenses of female and male forensic psychiatric patients.

Index offense	*N* = 218 women	*N* = 218 men	*p*-value
Homicide (lethal)	59 (27.1%)	33 (15.1%)	<.001
Attempted homicide	57 (26.1%)	35 (16.1%)	<.001
Violent offense	29(13.3%)	55 (25.2%)	<.001
Arson	60 (27.5%)	27 (12.4%)	<.001
Sexual offense	9 (4.1%)	62 (28.4%)	<.001
Victims index offense			
No direct victim	35 (16.2%)	19 (8.7%)	<.001
(Ex)partner	34 (15.8%)	32 (14.7%)	ns
Child (biological/step/adopted)	30 (13.9%)	3 (1.4%)	<.001
Other child	8 (3.7%)	15 (6.9%)	ns
Parent(s)	9 (4.2%)	6 (2.8%)	ns
Family member	7 (3.2%)	4 (1.8%)	ns
Friend / acquaintances	43 (19.9%)	39 (17.9%)	ns
Supervisor / treatment staff	17 (7.9%)	8 (3.7%)	ns
Stranger	26 (12.0%)	68 (31.2%)	< .001
Mean number of victims	1.47 (SD = 1.4, range 0–11)	2.0 (SD = 3.2, range 0–35)	.026
More than 5 victims	5 (2.3%)	41 (18.8%)	<.001
Victim(s): male	97 (59.9%)	88 (49.4%)	.054
Victim(s): female	99 (61.1%)	127 (71.3%)	.046
Victims: both male and female	34 (21.1%)	37 (20.6%)	ns
Mean age index offense in years	33.1 (SD = 9.8, range 17–64)	30.7 (SD = 8.8, range 17–60)	ns
Index offense with co-offender(s)	29 (13.3%)	28 (12.8%)	ns
Co-offender: male	26 (89.7%)	24 (85.7%)	ns
Index offense under influence of substances	69 (31.7%)	80 (36.7%)	ns
Index offense under influence psychosis	50 (22.9%)	53 (24.3%)	ns
Weapon use	*N* = 124	*N* = 125	
	56.9%	57.3%	
Firearm	6 (4.8%)	21 (16.8%)	<.001
Sharp object (e.g. knife, glass)	89 (71.8%)	76 (60.8%)	ns
Blunt object (e.g. hammer)	18 (14.5%)	21 (16.8%)	ns
Medication/poison	7 (5.6%)	1 (0.8%)	.011
More than 1 type of weapon	27 (21.8%)	23 (18.4%)	ns

Notes: Differences were tested with Chi-square analyses and Student's *t*-tests, all two-tailed. Not all variables could be coded for all of the cases, the percentages reported are the valid percentages.

medication or poison as a weapon. The latter happened rarely, mostly in offenses against their children.

Assumed motives

The assumed motives of the female and male patients are shown in Table 3. Male patients were more often assumed by the raters to commit their index offense out of a need for power, dominance or personal gain or with a sexual motive. For example, violent offending in an attempt to obtain money or to dominate another person. In female patients, relational motives or a cry for help was more often assumed by the raters to be the primary motive for the index offense.

Table 3. Assumed motivations for the index offense.

Motivation clusters	*N* = 218 women	*N* = 218 men	*p*-value
Mad (e.g. psychotic, compulsive urge to kill)	45 (20.6%)	52 (24.0%)	ns
Bad (e.g. power, dominance, illicit gain)	44 (20.2%)	66 (30.3%)	< .001
Sad (e.g. cry for help, despair)	44 (20.2%)	6 (2.8%)	< .001
Relational frustration (e.g. revenge, jealousy)	61 (28.0%)	33 (15.1%)	< .001
Coping (e.g. hyperirritability)	21 (9.6%)	30 (13.8%)	ns
Sexual (e.g. paraphilia)	3 (1.4%)	30 (13.8%)	< .001

Note: Differences were tested with Chi-square analyses, all two-tailed.

Table 4. Punishment for the index offense.

	N = 218 women	*N* = 218 men	*p*-value
Penalties: mean months imprisonment	18.4 (SD = 26.1, range 0–216)	23.4 (SD = 27.4, range 0–204)	.05
Dismissal from prosecution	61 (28.0%)	26 (12.0%)	< .001
Accountability	*N* = 181 women	*N* = 160 men	
Slightly diminished accountable	3 (1.7%)	14 (8.8%)	< .001
Diminished accountable	77 (42.5%)	94 (58.8%)	< .001
Strongly diminished accountable	62 (34.3%)	33 (20.6%)	< .001
Completely unaccountable	39 (21.5%)	19 (11.9%)	< .001

Notes: Differences were tested with Chi-square analyses and Student's *t*-tests, all two-tailed. Accountability was unknown for 37 women and 58 men. Dismissal from prosecution is decided by court, usually when an offender is seen as completely unaccountable for the offense. These offenders are generally referred to psychiatric treatment.

Punishment

Table 4 demonstrates that the average length of imprisonment that was imposed in combination with the tbs-order for the index offense was significantly shorter for the female patients than for the male patients. Furthermore, female patients were more often judged as strongly diminished accountable or not accountable at all for their index offenses because of a mental illness and therefore dismissed from prosecution. Being in a psychotic state at the time of the offense is one of the most important reasons to conclude upon unaccountability (Spaans, Barendregt, Haan, Nijman, & de Beurs, 2011). However, no gender differences were found with respect to the psychotic state during the index offense.

Discussion

This study aims to add meaningfully to the extant literature on violent offending by examining gender differences in a sample of 218 female and 218 matched male forensic psychiatric patients from multiple Dutch forensic settings. Overall, it was found that there are similarities in offending, but also notable gender differences. All hypotheses were confirmed. Compared to male patients (1) female patients were older when committing their first offense; (2) female patients had more victims within their close environment, like their own children and less often stranger victims; (3) female patients were more often driven by relational motives and less often by instrumental or sexual motives; and (4) female patients were punished more leniently. All findings are largely in line with previous studies in forensic and criminal justice populations.

In accordance with several other studies about criminal history, it was found that female patients compared to male patients were less often previously convicted, had a lower number of previous convictions and were older at their first offense (e.g. Block, Blokland, Van der Werff, Van Os, & Nieuwbeerta, 2010; Moffit et al., 2001). Both female and male patients most often had a property offense or violent offense as first conviction. Female patients were more often previously convicted for arson and male patients more often for sexual offenses. The same was found with respect to the index offenses for which they were admitted to forensic mental health care. Female patients committed less sexual and violent index offenses, but instead more arson and (attempted) homicide than male patients. These findings resemble earlier studies (e.g. Coid, Kahtan, Gault, & Jarman, 2000; Cortoni, Hanson, & Coache, 2010). A substantial part of the homicide

cases by female patients involved filicide. In general, filicide – especially towards very young children is more often committed by mothers than fathers. Usually, serious mental health problems, like depression or suicidality play an important role in these offenses and most of these mothers do not have a criminal history (e.g. see McKee, 2006; Putkonen et al., 2010). Timely assessment and analyses of risk factors and adequate treatment in general psychiatry could be important to help prevent filicide. Good communication and collaboration between different mental health settings, particularly between forensic and general settings, is vital.

Overall, the victims of the index offenses of the female patients were significantly more often within their close environment, whereas their male counterparts more frequently committed offenses against strangers. This finding is consistent with prior literature (e.g. Batchelor, 2005; Robbins et al., 2003). The finding that female patients less often use firearms corresponds with the results of Koons-Witt and Schram (2003). The motive for committing a violent offense is one of the most intriguing aspects, but at the same time, one of the most complex issues to examine. Although preliminary, the results of the current study show that female patients are more often motivated by relational problems or that the offense is seen as a cry for help, whereas male patients are more often motivated by criminal or sexual motives. These results are consistent with the limited prior literature (Kruttschnitt & Carbone-Lopez, 2006; Langhinrichsen-Rohling et al., 2012). More theoretical and empirical research is definitely needed into this topic. Asking perpetrators about their possible motives for offending should be an essential part of this type of research. More in-depth insight into motives for serious offending may yield relevant information for treatment aimed at preventing future violence. A better understanding of the motive is a central aspect of the offense scenario procedure, in which (the lead-up to) the index offense is meticulously analyzed. This analysis is subsequently used for relapse prevention programs.

One of the most notable findings of the present study is that male patients received higher prison sentences and female patients were more often seen as strongly diminished accountable or unaccountable for their offenses and more often dismissed from prosecution. These results are in line with the findings of Yourstone et al. (2009) who found that a higher percentage of the female patients referred to forensic evaluation were declared legally insane compared to male patients. Of particular note, offenses committed by female patients were not less serious as it more often concerned lethal homicide offenses, and female patients were not more often psychotic during the offense, whereas this is usually the reason to conclude upon unaccountability (Spaans et al., 2011). An explanation for the more lenient punishment may be that female patients were more often first offenders. Another plausible explanation is that psychopathology is more complex and more visible in female patients compared to male patients. Besides, female patients more often show openly suicidal behavior and generally, their history of traumatization is even more harrowing compared to male patients, especially with respect to sexual traumatization (see de Vogel et al., 2016). Possibly, stereotypes play a role: a woman who demonstrates antisocial behavior deviates from standard social norm and, therefore, 'must be insane'. Future research into predictors of punishment are needed; preferably in large samples and with multivariate analyses that take into account variables like psychopathology, type of offenses and criminal history.

Future recommendations

Based on the results of the current study, several recommendations may be provided for both future research and policies. Generally, it is important to continue research into gender differences in violent offending with the aim to gain more insight that may be used to improve current practices in forensic psychiatric care and the criminal justice system. Acknowledging gender differences and possible gender biases is important to provide for the best gender-responsive treatment, thereby preventing (repeated) violence and the intergenerational transfer. Previous results from the current study showed that most of the female forensic psychiatric patients have an extensive psychiatric history with many failed treatment attempts (see de Vogel et al., 2016). Timely and adequate risk assessment and risk management may help preventing violent offending or further deterioration of these women. Therefore, it is vital to enlarge knowledge about forensic issues like risk assessment in general psychiatry. More generally, intensive collaboration and sharing knowledge is needed between criminal justice settings and forensic mental health care, both in adult and juvenile settings. Educating policymakers and administrators about gender differences in violent offending and in violence risk assessment could be valuable.

In the current project, several topics have or will be further examined, for example, subgroups of female offenders (e.g. arsonists, mothers who commit filicide) or relating to psychopathology (psychopathy, borderline personality disorder, mental disabilities). International comparison studies will be useful. Furthermore, research comparing this forensic sample to a more general offender or prison sample or to general psychiatric sample could yield more refined insights into gender-specific aspects of violence and antisocial behavior. In addition, research into juvenile populations is relevant, as this may provide more insight into possible gender differences in developmental trajectories. Finally, it would be interesting to examine the topic violence by women broader in society, for example, into more subtle, hidden forms of violence (e.g. domestic violence) or into more general female offending (e.g. fraud).

Limitations

Several limitations to this study should be acknowledged. Most importantly, files were not always complete, hence, not all variables could be retrieved. For example, the exact numbers of previous offenses and the number of victims or the victim's age were not always known. The coding of the alleged motives was not always possible. Furthermore, for some variables, for instance, weapon use, the numbers were small. Moreover, the interrater reliability of the new typology was – albeit significant – not good for all scales. Therefore, the results should be interpreted with great caution. Another limitation was that the matching of female patients and male patients was not always perfect. It should be noted again that this multicentre research project aimed to investigate gender differences, therefore, we only matched on three variables (age, year of admittance and judicial status). For the current study, it would probably have been better to also match on other variables like psychopathology or history of psychiatric treatment. These variables could be crucial, especially, when examining differences in punishment. Finally, it is important to emphasize that the current study investigated a highly selective sample of women and men

admitted to forensic psychiatry for committing serious offenses and having serious psychological problems. Thus, the results could not be generalized to the total population of female and male offenders or to general psychiatric patients. Nevertheless, the results yield new insights in gender differences in nature, seriousness and motives for violence which may be used for prevention and early detection of problems in forensic and general psychiatry.

Note

1. We used the following as standards for strength of agreement for the kappa coefficient: ≤0 = poor, .01–.20 = slight, .21–.40 = fair, .41–.60 = moderate, .61–.80 = substantial, and .81–1 = almost perfect (Landis & Koch, 1977).

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