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Karsten, Julie; de Vogel, Vivienne; Lancel, Marike

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Characteristics and offences of women with borderline personality disorder in forensic psychiatry: a multicentre study

Julie Karsten^a, Vivienne de Vogel^b and Marike Lancel^a

^aResearch Department Forensic Psychiatric Hospital, GGZ Drenthe, Assen, RA, The Netherlands; ^bVan der Hoeven Clinic, Utrecht, The Netherlands

ABSTRACT

Although female forensic patients diagnosed with borderline personality disorder (BPD) are generally considered taxing in clinical practice, little is known about their specific characteristics or offences. In this study, 156 female forensic psychiatric patients diagnosed with BPD were compared to 113 diagnosed otherwise. Information on demographic and psychiatric characteristics, victimization, index offences, and incidents during treatment was gathered from patient files. Risk factors for recidivism were assessed using the PCL-R and historical items of the HCR-20, including items from the new Female Additional Manual (FAM). Compared to non-BPD women, BPD women were more likely to have been abused as children and to have a history of outpatient treatment. While less likely to be convicted for (attempted) homicide, a higher percentage of BPD women was convicted for arson. Comorbid substance abuse was more frequent in the BPD group and incidents towards others and themselves were more violent in nature. The PCL-R and the H-scale of the HCR-20/FAM indicated several risk factors especially important for BPD women, such as poor behavioural control, impulsivity, and irresponsibility. The results support the clinical impression that women diagnosed with BPD are a subgroup within the female forensic psychiatric population, with specific focus points for treatment and management.

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Introduction

While women continue to make up only a small proportion of the offender population, the percentage of female delinquents in the justice system is rising internationally (Heilbrun et al., 2008; Minton & Golinelli, 2014). This development has elicited an increase in empirical research on women detained, especially in forensic psychiatric settings. Several studies have not only shown similarities, but also marked differences between male and female offenders and the offences they commit (Nicholls, Brink, Greaves, Lussier, & Verdun-Jones, 2009). For example, women are more likely to harm their partner, children or other family members, while men are more likely to harm friends, acquaintances and strangers (Bloom, Owen, & Covington, 2003; Monahan et al., 2001; Robbins, Monahan, & Silver, 2003). It has been argued that violence of women is more often reactive as opposed to instrumental (Verona & Carbonell, 2000).

Women in forensic psychiatric settings are diagnosed more often with borderline personality disorder (BPD) and less often with antisocial personality disorder (ASPD) than men (Nicholls et al., 2009; Strand & Belfrage, 2001). Some gender differences have been found on risk assessment instruments, such as the Historical, Clinical, Risk Management-20 (HCR-20; Webster, Douglas, Eaves, & Hart, 1997). Using the HCR-20, de Vogel and de Ruiter (2005) found that women in a Dutch sample were older at the time of their first violent incident, scored lower on psychopathy and had less negative attitudes, but also had experienced more relationship instability and were more impulsive than their male counterparts. These findings are important, since they can provide guidelines for patient management and reducing gender-specific recidivism risk.

Having only recently come to the attention of researchers, female patients in forensic psychiatric settings have thus far been studied as one homogeneous group, often compared to male patients. Differentiating between diagnoses (Capra, Forresi, & Caffo, 2014; Polaschek & Daly, 2013; Wilson, 2014) and offences (e.g. Hagenauw, Karsten, Akkerman-Bouwsema, de Jager, & Lancel, 2014) has been valuable in discerning various criminal trajectories and treatment needs for effectively lowering recidivism risk among men. Little is known about heterogeneity within the female population in forensic psychiatric settings, or even if a within group distinction is clinically useful.

Many women in forensic psychiatry are diagnosed with BPD (Aderibigbe, Arboleda-Florez, & Crisante, 1996; de Vogel, Stam, Bouman, ter Horst, & Lancel, 2015). Because of the typical features of BPD, in particular interpersonal hostility, impulsivity, emotional instability, and self-harm, these patients are especially challenging even in general psychiatry, for both staff and other patients. In a state psychiatric hospital, BPD patients were more likely to cause management incidents than non-BPD patients, including self-harm or property damage, leading to episodes of restraint, seclusion or forced administration of medication (Leontieva & Gregory, 2013). Many are co-diagnosed with substance disorders and multiple Cluster B disorders (Warren et al., 2002). Furthermore, up to 91% of individuals with BPD report early victimization, experiencing emotional, physical, or sexual abuse during childhood, often multiple forms (Lieb, Zannarini, Schmah, Linehan, & Bohus, 2004; Ogata et al., 1990; Zannarini, Gunderson, Marino, Schwartz, & Grenkenburg, 1989).

Although a systematic review (Allen & Links, 2011) could not determine an independent association between BPD and violence in community-based studies, some associations have been demonstrated in forensic settings. Hernandez-Avila et al. (2000) reported that among men and women entering a substance abuse programme, those diagnosed with BPD reported a greater number of violent offences both pre- and post-treatment. Logan and Blackburn (2009) found in their study that women who had been incarcerated for a major violent offence were four times more likely to have a diagnosis of BPD than women whose index offence was one of minor violence. A history of childhood maltreatment, comorbid psychopathy or antisocial personality disorder has been suggested as predictors of violence in patients with BPD (Allen & Links, 2011).

Given the disruptive nature of the personality disorder and its direct or mediated association with severe violence, the question is if current knowledge on the characteristics, offences and treatment needs of forensic female patients in general is applicable to forensic female patients with BPD. In this study, we will compare women diagnosed with BPD to women diagnosed otherwise (non-BPD), regarding demographic and psychiatric characteristics, victimization, index offences, incidents during treatment, and risk factors for

recidivism. Special attention will be paid to factors known to predict violent recidivism using the Psychopathy Checklist-Revised (PCL-R) and the HCR-20 and its recent addition for women, the HCR-20 Female Additional Manual (FAM; de Vogel, de Vries Robbé, van Kalmthout, & Place, 2014). Data are drawn from an ongoing multicentre study covering the majority of women residing in forensic psychiatric hospitals in the Netherlands.

Methods

Subjects

Archival data from the hospital records of sufficient quality were collected for 275 female patients admitted to four Dutch psychiatric hospitals between 1984 and 2013: FPC Van der Hoeven, FPC Oldenkotte, FPK de Woenselse Poort and FPK Assen. These patients have committed a crime but are not or only partially accountable because of a mental illness. Nearly half (40.0%) were still admitted at one of these hospitals at the time of this study. Of the 275 female patients, six were excluded from analyses because of incomplete information on diagnoses on axis II. Of the remaining 269 women, 156 (58%) had a diagnosis of BPD (BPD women) and 113 (42%) had a different diagnosis (non-BPD women). Non-BPD women were mostly diagnosed with personality disorder Not Otherwise Specified with subthreshold traits of varying personality disorders (51.9%), a psychotic disorder (42.5%), and/or ASPD (18.9%). BPD women did not differ from non-BPD women in year of admittance. For the PCL-R and HCR-20/FAM analyses only, 19 additional patients had to be excluded because of missing data on these instruments. The additionally excluded patients did not differ from included patients regarding BPD status.

Measures

General checklist

A general checklist was derived from the literature on violence and crime by women. Using this checklist, information on demographics, index offences psychiatric history, the Psychopathy Checklist-Revised (PCL-R), the historical items of the HCR-20/FAM, and violent and non-violent incidents registered during treatment was gathered from patient files. The index offence is defined as the offence for which the patient was admitted to the psychiatric forensic hospital.

Psychopathy checklist-revised

The PCL-R (Hare, 2003) is a clinical rating scale for psychopathic personality traits with 20 items, rated on a three-step scale from 0 'item does not apply' to 2 'item definitely applies'. Although this instrument was not designed as a risk-assessment tool, it is often used as such, because of its association with recidivism in male samples (Salekin, Rogers, & Sewell, 1996). The ratings are based on a semi-structured interview and collateral information. The total score ranges from 0 to 40, and a cut-off score for a diagnosis of psychopathy is usually set at 30 for clinical use, although a cut-off score of 25 or 26 has generally proven useful for research purposes (Hare, Clark, Grann, & Thornton, 2000; Hildebrand, 2004). In addition to the sum score, several factor solutions have been suggested for analysis. The most prominent is the original two-factor solution (Hare,

Harpur, Hakstian, Forth, & Hart, 1990), the first factor being selfish, callous, and remorseless use of others, and the second being a chronically unstable and antisocial lifestyle. Another prominent solution is the three-factor solution by Cooke and Michie (2001), with (1) an arrogant and deceitful interpersonal style factor, (2) a deficient affective experience factor, and (3) an impulsive and irresponsible behavioural style factor. The reliability of the PCL-R has been demonstrated in female samples (Bolt, Hare, Vitale, & Newman, 2004), although findings on validity in terms of predicting violent crime by women are mixed at best, as reviewed by Nicholls, Ogloff, Brink, and Spidel (2005).

HCR-20/FAM

The HCR-20 (Webster et al., 1997) is a structured professional judgement checklist used for the assessment of future violence with 20 items, rated on a three-step scale from 0 'item does not apply' to 2 'item definitely applies'. The HCR-20 contains three scales: historical, clinical, and risk. The historical scale refers to static items generally considered unchangeable; the clinical scale refers to present, dynamic, or changeable items, and the risk scale refers to future, speculative items. Although sum scores are used for research purposes, the professional judgement used in clinical practice is not based on sum scores, but on careful consideration of the individual items. The professional judgement of risk of recidivism can be low, moderate or high. Research on predicting the recurrence of violent behaviour found the predictive validity of the HCR-20 total scores and professional judgements not as good for women as for men (de Vogel & de Ruiter, 2005; Garcia-Mansilla, Rosenfeld, & Nicholls, 2009).

To increase the predictive validity of the HCR-20 for women and to provide clinicians with female-specific guidelines for risk assessment and management, the FAM (de Vogel, de Vries Robbé, van Kalmthout, & Place, 2012; de Vogel et al., 2014) was developed as an addition to the HCR-20 and the more recent HCR-20^{V3} (Douglas, Hart, Webster, & Belfrage, 2013). The FAM encompasses nine additional female-oriented risk factors and additional guidelines for five HCR-20 items and two HCR-20^{V3} items. For the present retrospective study, only the historical items of the HCR-20 and FAM have been coded.

Procedure

Data were gathered from hospital records by researchers trained in the use of the PCL-R and HCR-20/FAM (see also de Vogel et al., 2014). In case of multiple admissions and/or multiple hospitals, the most recent hospital record was used.

Analyses

F-tests and chi-square tests were performed to analyse differences between BPD women and non-BPD women. Because data were extracted from clinical patient files, some variables could not be derived for every patient. Only variables with less than 10% missing values were included in order to avoid biased results (Bennett, 2001). Because the registration of incidents during treatment varied between hospitals, BPD and non-BPD women were matched on hospital and duration of admittance (± 2 months) for this part of the analyses, resulting in a smaller dataset ($n = 150$).

Results

Demographic and psychiatric and characteristics

Demographic and psychiatric characteristics are listed in Table 1. There were a number of significant differences between BPD and non-BPD women. Regarding demographics, BPD were more often of Dutch origin than non-BPD women. With respect to psychiatric characteristics, a higher percentage of BPD women had been treated in an outpatient setting in childhood and/or adulthood, although most women had some form of previous treatment. Substance abuse, both alcohol and drugs, was more prevalent in BPD women, but non-BPD women were more frequently diagnosed with narcissistic personality disorder or a psychotic disorder, as was expected because of grouping based on diagnoses. However, there was no significantly different distribution of APD diagnoses across the two groups.

Victimization

Most women were abused emotionally, physically, or sexually before the age of 17, especially BPD women (81.7%) compared to non-BPD women (67.3%; $\chi^2(1, N = 263) = 7.23, p = .007$). In comparison, BPD women were more often abused emotionally (61.6% and 41.3%; $\chi^2(1, N = 260) = 10.48, p = .001$) or sexually (63.6% and 39.4%; $\chi^2(1, N = 260) = 14.81, p < .001$), but not physically (41.1% and 34.9%). A higher percentage of BPD women was abused in more than one way compared to non-BPD women (60.8% and

Table 1. Demographic and psychiatric characteristics of non-BPD women ($n = 113$) and BPD women ($n = 156$).

	Non-BPD % (n)	BPD % (n)
Demographic		
Mean age upon index admission, M (SD)	35.3 (9.8)	34.9 (9.6)
Dutch nationality	78.8 (89)	88.5 (138)*
Raised in foster or children's home	8.9 (10)	9.6 (15)
No secondary education	10.9 (12)	13.1 (20)
Unemployed at the time of the index offence	61.7 (66)	66.2 (100)
Single at the time of the index offence	51.3 (58)	63.2 (98)
Psychiatric		
Prior outpatient treatment	55.9 (62)	69.0 (107)*
Childhood	13.0 (14)	18.2 (28)
Adulthood	48.7 (55)	56.4 (88)
Prior inpatient admission	72.3 (81)	81.4 (127)
Childhood	22.2 (24)	30.5 (47)
Adulthood	68.1 (77)	77.6 (121)
Antisocial personality disorder	18.0 (20)	13.1 (20)
Narcissistic personality disorder	5.4 (6)	0.6 (1)*
Psychotic disorder	44.1 (49)	23.4 (36)***
Substance abuse	54.9 (67)	76.8 (119)**
Alcohol	41.1 (46)	56.1 (87)*
Drugs	59.4 (92)	46.4 (52)*
Major depressive disorder	10.6 (12)	16.7 (26)
Anxiety disorder	15.9 (18)	18.6 (29)

Note: Chi-square tests were used for all variables, with the exception of mean age upon index admission, for which an F -test was used.

* $p < .05$.

** $p < .01$.

*** $p < .001$ (two-tailed).

35.5%; $\chi^2(1, N = 263) = 16.42, p < .001$). Both groups were most often abused by one or both parents (70.8% and 65.2%) or another relative (16.7% and 20.3%), differences between the groups were not significant.

Although childhood abuse did not significantly predict abuse in later life ($F(1, 243) = 1.00, p = .32$), many BPD women (62.3%) and non-BPD women (53.4%) were abused as adults, either physically (40.4% and 40.8%), sexually (35.6% and 27.2%), and/or emotionally (10.3% and 10.7%), mostly by one or several romantic partners (78.2% and 87.8%). Differences between the two groups were not significant.

Index offence

BPD and non-BPD women differed in their index offences (Table 2). While BPD women were as likely to be convicted for (sexual) assault or property offences as non-BPD women, they were less likely to be convicted for (attempted) homicide, and more likely to be convicted for firesetting. Indeed, most firesetting offences (82.2%) were committed by BPD women. In line with this finding, offences of BPD women resulted more frequently in material damage than offences of non-BPD women. The offences of BPD women, compared to those of non-BPD women, were less often directed at a person, specifically children. Nevertheless, the majority of offences in both groups was directed at a person, often a family member. Although the majority of women committed their offences without an accomplice, BPD women were more likely to have committed the offence on their own than non-BPD women.

Incidents during treatment

In the subsample matched with respect to hospital and duration of admittance ($n = 150$), BPD women were more likely than non-BPD women to be involved in incidents during treatment (94.6% and 84.3%; $\chi^2(1, N = 144) = 4.10, p = .04$), especially incidents violent in nature (74.7% and 48.0%; $\chi^2(1, N = 150) = 11.24, p = .001$). More specifically, BPD women, compared to non-BPD women, were more often verbally abusive (61.3% and 38.7%; $\chi^2(1, N = 150) = 7.71, p = .006$) and marginally more often threatening (49.3% and 33.3%; $\chi^2(1,$

Table 2. Index offences of non-BPD women ($n = 113$) and BPD women ($n = 156$).

	Non-BPD % (n)	BPD % (n)
(Attempted) Homicide	58.3 (63)	40.8 (62)**
(Sexual) Assault	21.3 (23)	15.8 (24)
Arson	12.0 (13)	39.5 (60)***
Property	8.3 (9)	3.9 (6)
Accomplice	18.5 (20)	9.8 (15)*
Offence resulted in material damage	14.3 (15)	42.6 (63)***
Offence directed at a person	89.2 (99)	73.7 (112)**
Own or other child	26.1 (29)	14.5 (22)*
(Ex-) Partner or relative	20.7 (23)	26.3 (40)
Stranger	19.8 (22)	15.1 (23)

Note: Chi-square test.

* $p < .05$.

** $p < .01$.

*** $p < .001$ (two-tailed).

$N = 150$) = 3.96, $p = .05$) and physically violent (41.3% and 28.0%; $\chi^2(1, N = 150) = 2.94$, $p = .09$) towards others. A higher percentage of BPD women engaged in self-harm than non-BPD women, like cutting or scratching, or swallowing objects not intended for ingestion (66.2% and 31.1%; $\chi^2(1, N = 148) = 18.28$, $p < .001$). BPD and non-BPD women did not differ with regard to secretive behaviour towards staff members (53.5% and 56.2%), sexual incidents (10.7% and 13.3%), or victimization by other patients (9.7% and 8.1%).

PCL-R

Overall, BPD women scored significantly higher on the PCL-R than non-BPD women (Table 3). Compared to non-BPD women, BPD women were rated to have more behavioural problems, poorer behavioural control, a greater lack of realistic, long-term goals, to be more impulsive, less responsible, and their conditional releases to have been revoked more often. These items contribute to the higher score of BPD women on Hare's factor 2 (unstable and antisocial lifestyle) and Cooke and Michie's factor 3 (impulsive and irresponsible behavioural style). In addition, the items loading on these factors, BPD women were rated to have a lower sense of self-worth and to take less responsibility for their own actions.

Table 3. PCL-R scores of BPD non-women ($n = 108$) and BPD women ($n = 142$).

	Non-BPD <i>M</i> (<i>SD</i>)	BPD <i>M</i> (<i>SD</i>)
Item 1: glibness/superficial charm	.31 (.60)	.20 (.48)
Item 2: grandiose sense of self-worth	.36 (.60)	.19 (.45)*
Item 3: need for stimulation/proneness to boredom	.65 (.77)	.71 (.76)
Item 4: pathological lying	.48 (.63)	.57 (.66)
Item 5: conning/manipulative	.94 (.77)	1.06 (.72)
Item 6: lack of remorse or guilt	1.17 (.76)	1.27 (.70)
Item 7: shallow affect	.96 (.77)	.98 (.79)
Item 8: callous/lack of empathy	1.05 (.70)	.94 (.69)
Item 9: parasitic lifestyle	.57 (.67)	.54 (.63)
Item 10: poor behavioural controls	1.13 (.79)	1.54 (.63)***
Item 11: promiscuous sexual behaviour	.70 (.84)	.74 (.81)
Item 12: early behavioural problems	.28 (.52)	.47 (.73)*
Item 13: lack of realistic, long-term goals	.91 (.80)	1.19 (.76)**
Item 14: impulsivity	1.27 (.74)	1.59 (.58)***
Item 15: irresponsibility	1.01 (.78)	1.33 (.69)**
Item 16: failure to accept responsibility for own actions	1.25 (.77)	1.59 (.56)***
Item 17: many short-term marital relationships	.34 (.64)	.56 (.82)*
Item 18: juvenile delinquency	.20 (.48)	.25 (.56)
Item 19: revocation of conditional release	.88 (.90)	1.25 (.84)**
Item 20: criminal versatility	.35 (.63)	.34 (.57)
PCL-R total score	14.82 (6.97)	17.29 (5.94)**
Hare's factor 1	6.53 (3.47)	6.80 (2.90)
Hare's factor 2	6.90 (3.70)	8.85 (3.37)***
Cooke and Michie's factor 1	2.10 (1.82)	2.03 (1.52)
Cooke and Michie's factor 2	5.35 (2.81)	5.97 (2.34)
Cooke and Michie's factor 3	3.50 (2.03)	4.16 (1.80)**
PCL-R ≥ 25 , n (%)	9 (8.3)	19 (13.4)
PCL-R ≥ 30 , n (%)	4 (3.7)	2 (1.4)

Note: *F*-test.

* $p < .05$.

** $p < .01$.

*** $p < .001$ (two-tailed).

HCR-20/FAM

BPD women had higher total scores on the historic scale of the HCR-20 than non-BPD women, both with or without the additional FAM items (Table 4). As could be expected based on the grouping criterion, all BPD women but not all non-BPD women had a personality disorder and thus higher scores on the personality disorder item. We therefore repeated the comparison of total scores excluding the personality disorder item as a sensitivity analysis, which still resulted in higher total scores of BPD women. BPD women were more likely to have substance use problems, had higher psychopathy scores, showed more signs of early maladjustment and were more likely to have previously failed to respond to supervision or treatment, but were less likely to have been pregnant at a young age.

Discussion

In this study, female forensic psychiatric patients with a diagnosis of BPD were compared to female patients with different diagnoses. So far, female forensic psychiatric patients have largely been studied as a single, homogeneous group, often compared to male counterparts (Monahan et al., 2001; Nicholls et al., 2009). Although BPD and non-BPD women were similar in many ways, this study, including the majority of women detained in forensic psychiatric hospitals in the Netherlands since 1984, shows there are differences as well, with implications for patient management and treatment.

Most women were abused either physically, emotionally, and/or sexually in childhood and/or adulthood. BPD women were more often abused in childhood than non-BPD women, emotionally and sexually, and were more frequently the victim of multiple types of abuse. Notably, emotional abuse in childhood has been linked to BPD

Table 4. HCR-20/FAM Historic scale scores of BPD non-women ($n = 108$) and BPD women ($n = 142$).

	Non-BPD <i>M</i> (<i>SD</i>)	BPD <i>M</i> (<i>SD</i>)
Item 1: previous violence	1.80 (.51)	1.79 (.47)
Item 2: young age at first violent incident	1.03 (.63)	1.10 (.62)
Item 3: relationship instability	1.74 (.54)	1.84 (.46)
Item 4: employment problems	1.49 (.67)	1.64 (.57)
Item 5: substance use problems	1.06 (.95)	1.38 (.84)**
Item 6: major mental illness	1.11 (.93)	1.00 (.82)
Item 7: psychopathy	.65 (.73)	.89 (.70)**
Item 8: early maladjustment	1.13 (.69)	1.35 (.51)**
Item 9: personality disorder	1.44 (.74)	2.00(.00)***
Item 10: prior supervision failure	1.24 (.93)	1.55 (.77)**
Item 11 (FAM): prostitution	.045 (.79)	.52 (.82)
Item 12 (FAM): parenting difficulties [†]	1.79 (.57)	1.87 (.41)
Item 13 (FAM): pregnancy at young age	.57 (.83)	.37 (.73)*
Item 14 (FAM): suicidal behaviour/self-harm	1.19 (.87)	1.37 (.83)
Item 15 (FAM): victimization after childhood	.85 (.93)	1.06 (.92)
HCR-20 H-scale	12.67 (3.48)	14.54 (2.86)***
HCR-20/FAM H-scale	16.84 (4.71)	18.79 (3.77)***

Note: *F*-test.

* $p < .05$.

** $p < .01$.

*** $p < .001$ (two-tailed).

[†]Not applicable to all patients (non-BPD $n = 67$, BPD $n = 71$).

symptomatology in adulthood, mediated or moderated by impairment in emotion regulation (Carvalho Fernando et al., 2014; Kuo, Khoury, Metcalfe, Fitzpatrick & Goodwill, 2015; Wingenfeld et al., 2011), which is associated with violent crime (Robertson, Daffern, & Bucks, 2014). The majority of women had been treated before in an outpatient setting, especially BPD women, suggesting a psychiatric vulnerability even before the current admission. BPD women might benefit from the inclusion of trauma in their treatment or from emotion regulation training, focused on tolerating emotions and decreasing impulsivity.

BPD was the most common diagnosis in our sample. Given that BPD was used to group our sample, we expected to find psychotic disorders and Cluster B personality disorders other than BPD to be mainly represented in the non-BPD group. This was the case for psychotic disorders and narcissistic personality disorder, but not for APD. The high proportion of APD in our forensic BPD sample may be explained by Allen and Links' (2012) observation that among BPD patients, comorbid APD is a predictor of violence. The same may be true for the high levels of comorbid substance abuse, prevalent in most, but in particular in BPD women. This finding is in line with research reporting an association between BPD and substance abuse (Warren et al., 2002). Substance abuse has been found to predict reactive criminal thinking (Walters, 2012) and recidivism (Hakansson & Berglund, 2012; Robbins et al., 2003), which is perhaps of even greater importance for women already emotionally unstable. Focus on substance abuse problems may therefore be especially important in the treatment of BPD women in forensic settings.

There were marked differences in index offences and incidents after admission between BPD and non-BPD women. Concerning the index offences, BPD women more often acted alone and committed more arson and less (attempted) homicide, resulting in relatively more often material damage and less often harm to a person. In fact, over 80% of fire setting offences by women was committed by women diagnosed with BPD. This does not mean that BPD women in forensic psychiatry or female forensic psychiatric patients in general, are unlikely to harm others. Their acts may simply be less 'visible' than those of men, occurring disproportionately against family members, without response from the police (Robbins et al., 2003). After admission, most women were involved in a violent or non-violent incident. This result is in line with the earlier finding that in forensic psychiatric settings, women are just as likely to perpetrate inpatient aggression as men (Nicholls et al., 2009). BPD women were slightly more likely to cause management incidents than non-BPD women, as in general psychiatry (Leontieva & Gregory, 2013), but more notable was that incidents caused by BPD women were more violent in nature, especially verbally. These incidents ranged from simple profanity and threats of violence to physical struggles with makeshift weapons made out of furniture, cutlery, broken glass or, in one case, thumbtacks. Additionally, BPD women also engaged more often in self-harm, like cutting or scratching. Compared to non-violent incidents, such as hiding a cell phone, these incidences are more likely to require immediate attention and may be more taxing on staff members, fortifying the reputation of BPD women as challenging patients. Thus, as in general psychiatry, threatening behaviour and self-harm should be a particular point of attention in the management and treatment of women diagnosed with BPD in forensic psychiatry.

PCL-R scores have been found to predict recidivism (Salekin et al., 1996), also in female offenders (Eisenbarth, Osterheider, Nedopil, & Stadtland, 2012). In a recent study, the predicted validity of the PCL-R for physical violence during treatment was good for men and

moderate for women. When verbal violence was included in the definition of violence, the predictive validity of the PCL-R was good for both men and women (de Vogel & Lancel, submitted). In this study, BPD women had significantly higher scores on the PCL-R than non-BPD women, but neither typically reached the clinical or research threshold for psychopathy based on men. BPD women scored higher in particular on items loading on Hare's factor 2 (unstable and antisocial lifestyle) and Cook and Mitchie's factor 3 (impulsive and irresponsible behavioural style). Additionally, BPD women indicated a lower sense of self-worth and a lower acceptance of responsibility for their actions. These observations point towards the partial overlap between the concepts of BPD and psychopathy. While the origin may be very different, the behavioural outcome, i.e. impulsive and irresponsible behaviour, can be similar, especially in women (Sprague, Javdani, Sadeh, Newman, & Verona, 2012). BPD women had higher scores on the historical items of the HCR-20/FAM as well, also indicating higher risk of recidivism. Apart from the expected difference on the personality disorder item, BPD women were more likely to have substance use problems and had higher psychopathy scores, as was also reflected by the elevated scores on the PCL-R. Furthermore, compared to non-BPD women, BPD women showed more signs of early maladjustment, such as fighting in school and substance abuse, and were more likely to have previously failed to respond to treatment or supervision. Surprisingly, they were less likely to have been pregnant at a young age. In summary, scores on the PCL-R and HCR-20/FAM suggest reducing recidivism risk particularly in BPD women by treating substance abuse and features loading on Hare's factor 2, such as impulsivity.

Strengths, weaknesses, and future research

This study has several strengths. First, data were collected from the majority of female forensic psychiatric patients in the Netherlands, from 1984 to today, resulting in a large and representative dataset. A wide range of data were collected, covering backgrounds, offences, inpatient incidents and risk assessments, enabling the exploration of subgroups within the female population. However, this study has several drawbacks as well. Given the explorative nature of the study and the many variables examined, multiple analyses were performed, increasing the risk of false positives. In future research, more pointed comparisons can be made, focusing on for example BPS-specific incidents. Studying specific factors leading up to incidents and the effectiveness of various forms of incident management could lead to valuable tools in the management of this challenging patient group.

Summary and clinical implications

This study supports the clinical impression that women diagnosed with BPD form a subgroup within the female forensic psychiatric population. Compared to other female patients, they were more likely to have been abused as children, emotionally and/or sexually, and to have a history of outpatient treatment. While they were less likely to be convicted for (attempted) homicide, they were more likely to be convicted for arson. Comorbid substance abuse was more frequent in the BPD group and management incidents more violent in nature, both towards others and themselves. The PCL-R and the HCR-20/FAM indicated several risk factors especially important for BPD women, including substance abuse, poor behavioural control, impulsivity, irresponsibility and failure to

accept responsibility for their actions. These factors are often seen in BPD patients in general psychiatry, but as they are also predictors of criminal behaviour, treatment becomes even more vital in forensic psychiatry.

An intervention that addresses many of the criminogenic factors is dialectical behaviour therapy (DBT), developed by Linehan (1993a, 1993b) as an intervention for BPD in the non-forensic population. Guidelines have been suggested for adapting and implementing DBT in forensic settings (Gee & Reed, 2013; Nee & Farman, 2005; Sampl, Wakai, & Trestman, 2010). Most trials in forensic settings report challenges in the implementation of DBT, but also promising results. A short, 16-week adaptation resulted in improvements on self-reported aggression and anger at 6-month follow-up, although not immediately post-treatment. The investigators also report improvements on coping skills, problem solving, and accepting responsibility, as well as a decrease in disciplinary tickets (Shelton, Sampl, Kesten, Zhang, & Trestman, 2009). Other studies, with DBT programmes ranging from 12/16 weeks to at least 1 year, have demonstrated results directly after treatment, including reduced self-harm, violence, borderline symptomatology, and impulsivity, as well as improved emotion control, locus of control and overall mental health post-treatment (Gee & Reed, 2013; Nee & Farman, 2005). Another promising intervention is schema-focused therapy (SFT), developed by Young (1999). Designed for non-forensic settings, SFT has been shown effective in the treatment of BPD in general psychiatry, decreasing BPD-specific and general psychopathologic dysfunction and improving quality of life (Farrell, Shaw, & Webber, 2009; Giesen-Bloo et al., 2006). Bernstein, Arntz, and de Vos (2007) have published a modification of the SFT model and recommendations for the implementation of SFT in forensic clinical practice, but no clinical SFT trials in forensic settings have been reported to date. Evidence for effective treatment for BPD remains scarce even in general psychiatry. Yet the most promising interventions should be explored and adapted, as they could not only lower BPD symptomatology and increase wellbeing, but also reduce recidivism risk in forensic psychiatry.

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The authors declare that they have no relevant or material financial interests that relate to the research described in this paper.

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