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Victimization history in female forensic psychiatric patients with intellectual disabilities: Results from a Dutch multicenter comparative study

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ABSTRACT

Background: Victimization is highly prevalent in individuals with mild intellectual disability (MID) or borderline intellectual functioning (BIF) and is an important risk factor for mental health problems and violent behavior. Not much is known, however, about victimization history in women with MID-BIF admitted to forensic mental health care.
Aims: The aim of this multicenter study is to gain insight into victimization histories and mental health problems of female forensic psychiatric patients with MID-BIF.
Methods: File data were analyzed of 126 women with MID-BIF who have been admitted to one of five Dutch forensic psychiatric hospitals between 1990 and 2014 and compared to data of 76 female patients with average or above intellectual functioning and to a matched sample of 31 male patients with MID-BIF.
Results: All forensic patients had high rates of victimization, but women with MID-BIF showed an even higher prevalence of victimization during both childhood and adulthood and more complex psychopathology compared to female patients without MID-BIF. Compared to male forensic patients with MID-BIF, women with MID-BIF were more often victim of sexual abuse during childhood. During adulthood, the victimization rate in these women was more than three times higher than in men.
Conclusions: Victimization is a salient factor in female forensic patients with MID-BIF and more gender-responsive trauma-focused treatment is needed.

What this paper adds

The present study adds to the growing body of literature into victimization history of individuals with intellectual disabilities (ID), more specifically, female forensic psychiatric patients with mild intellectual disability (MID) or borderline intellectual functioning (BIF). This knowledge is relevant for further increasing awareness about the vulnerability of female forensic patients with MID-BIF and the need to set up strategies to prevent revictimization and develop better tailored treatment programs in forensic mental health care.

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Currently, most of the instruments and methods being used in forensic mental health care have only been tested on male patients. In general, gender differences have been found with respect to victimization history and mental health needs in patients admitted to forensic mental health care. Females have more complex psychopathology and more severe and enduring patterns of victimization in their history. There was hardly anything known, however, about female forensic psychiatric patients with MID-BIF and whether they differ with respect to victimization experiences from women with higher intellectual functioning and from male patients with MID-BIF. We found more severe victimization histories for female forensic psychiatric patients with MID-BIF compared to women with average or above intellectual functioning and to male patients with MID-BIF. Furthermore, some differences were found with respect to psychiatric characteristics, like more comorbidity, posttraumatic stress disorder and self-harming behavior. Overall, findings suggest that interventions in forensic mental health care should be better tailored to the specific characteristics and needs of female patients with MID-BIF.

1. Introduction

Individuals with intellectual disabilities (ID) are more likely to have experienced harmful or traumatic events that may disrupt normative development, attachment processes, or learning of prosocial attitudes and problem-solving skills (Mevissen & de Jong, 2010; Nieuwenhuis et al., 2019; Wigham & Emerson, 2015). Especially the prevalence of sexual abuse has been found to be substantially higher in individuals with ID (Byrne, 2018). Furthermore, there are indications that the range of potential traumatic experiences in individuals with ID is greater compared to people with higher levels of intellectual functioning (Martorell & Tsakanikos, 2008). Next to the higher prevalence and complexity of traumatic experiences, there are indications that individuals with ID have more difficulty coping with these experiences and consequences (Kildahl et al., 2019). This all may lead to a higher risk of developing serious mental health problems, including Posttraumatic Stress Disorder (PTSD), although adequate diagnosing may be more complex in individuals with ID, due to difficulties in communication and different manifestation of symptoms (Kildahl et al., 2019; Nieuwenhuis et al., 2019). Wigham et al. (2011) reviewed 15 studies into the effects of traumatic life events in individuals with ID and concluded that there are several effects that are absent from standardized general population measures, for instance, stereotypical behaviors, challenging behaviors and reduced self-care. Hence, it is more difficult to recognize and identify the effects of trauma in individuals with intellectual disabilities with the standardly used assessment tools. In their literature review, Mevissen et al. (2016) conclude that PTSD is largely underdiagnosed and undertreated in people with ID and they stress the need for more adapted tools and research in which also gender is taken into account. At present, there are only a few trauma tools available for adults with ID (Wigham, McKinnon et al., 2021), although there are some new promising developments (see Wigham, Hatton et al., 2021).

Forensic psychiatric patients form a specific group in which trauma history is a relevant factor for treatment aimed at prevention of relapse into (violent) offending behavior. Numerous studies have found an association between trauma, especially victimization, and violent and general (re)offending, likely mediated by serious mental health problems (Augsburger et al., 2019; Braga et al., 2017; Jennings et al., 2012; see for further discussion 1.1). The relationship between victimization and offending has been found to be valid for both male and female forensic psychiatric patients, but is likely even stronger for women (Komarovskaya et al., 2011, see for further discussion 1.2). In the past two decades, substantially more research has been published on the assessment, management and treatment of female forensic psychiatric patients, finding more severe trauma histories as well as different and usually more complex mental health needs compared to males (Brown & Gelsthorpe, 2021; de Vogel & Nicholls, 2016). While acknowledging the advances in research, it can be stated that the present body of knowledge about female forensic patients is still limited. Virtually all of the standardly used diagnostic tools or instruments to assess the risk of recidivism, as well as treatment programs in forensic mental health services, have mainly been developed and validated in male samples. Investing in the implementation of assessment and treatment approaches that are specifically responsive to females' needs is thus still very much needed. This is valid in general, but probably even more so for female forensic psychiatric patients with ID who are considered to be a particularly vulnerable group with high risks of victimization and PTSD (Hayes, 2007; Lindsay et al., 2004; Nieuwenhuis et al., 2019; Taggart et al., 2008). More insight and adequate assessment and treatment of trauma and mental health problems for women with ID admitted to forensic mental health services is crucial, not only for the recovery, well-being and prevention of relapse in these women, but also for individuals in their environment, particularly their children. Research has yielded evidence for an intergenerational transfer by demonstrating that children of mothers who show antisocial or violent behavior have increased risks of developing mental health problems, including substance abuse and antisocial behaviors, violence or other risky behaviors (Kim et al., 2009).

In the present study, we examine victimization histories of women with mild intellectual disability or borderline intellectual functioning (MID-BIF) admitted to forensic mental health care in comparison to women with average or above intellectual functioning and to a small, matched sample of men with MID-BIF. First, we briefly summarize the literature into the relationship between victimization and (re)offending and into gender differences in victimization experiences.

1.1. The relationship between victimization and (re)offending

Multiple studies have found an association between victimization and (re)offending (see Augsburger et al., 2019; Jennings et al., 2012; Vitopoulos et al., 2019). In a meta-analysis comprising 33 prospective longitudinal studies in youth populations, it was concluded that maltreatment is significantly related to antisocial behavior later in life (Braga et al., 2017). Sexual and physical abuse were more strongly linked to violent behavior and history of neglect showed an increased risk of general antisocial behavior. Victimization is therefore included in many risk assessment tools like the widely used Historical Clinical Risk management Version 2 (Webster et al., 1997) or its revision (HCR-20^{V3}; Douglas et al., 2013). It should be noted though that the widely used theoretical Risk

Need Responsivity model (RNR; Bonta & Andrews, 2017) does not consider trauma history to be a direct risk factor, but more a responsivity factor, that is, a factor of relevance to forensic treatment engagement and success. Fritzon et al. (2021) recently tried to disentangle mechanisms underlying the relationship between trauma and criminogenic factors according to the RNR model. They concluded that trauma is important to consider as it is connected to other risk factors as identified by the RNR model, like substance abuse. Moreover, trauma symptomology may reduce the effectiveness of conventional approaches to treating risk factors.

The relationship between victimization history and offending is likely mediated by mental health problems. Empirical studies have shown that victimization during childhood is an important risk factor for developing different types of mental health problems, including substance abuse as a coping mechanism and self-harming behaviors (e.g., Pietrek et al., 2013; Power et al., 2016). An explanation may be that victimization can lead to deficits in interpersonal functioning, social problem solving and hostile attribution biases in children, which may eventually result in harmful behavior towards the self or others later in life (Levenson & Willis, 2019; Thornberry et al., 2012). Although empirical research is still scarce, this negative, potentially devastating impact of adverse childhood experiences has also been identified in individuals with ID (Kildahl et al., 2019; Vervoort-Schel et al., 2018). Concluding, although the dynamics and exact nature of the relationship between victimization and (re)offending needs more empirical study, it is clear that victimization is a salient factor for patients in forensic mental health care.

1.2. Gender differences in victimization experiences

The prevalence of victimization, especially sexual abuse, has been found to be significantly higher in justice-involved females compared to their male counterparts and has been identified as a specific explanatory factor for offending behavior in females (e.g., Baglivio, & Epps, 2016; Komarovskaya et al., 2011; Power et al., 2016). There are only a few empirical studies published into forensic female populations with MID-BIF. In a small cohort sample of 18 women referred to a service for justice-involved people with ID it was found that sexual abuse rates were higher than in male cohorts (Lindsay et al., 2004). Not only is a history of victimization more prevalent in females than in males, gender differences have been found with respect to the nature of victimization and the response to traumatic experiences. For instance, it has been found that boys more often witness violence, whereas girls are more often victimized directly (Reebye et al., 2000). Trauma usually started at a younger age for females and is more often 'betrayal trauma', that is, committed by someone they know and trust, like a family member (Komarovskaya et al., 2011). Moreover, females are found to have a more complex history of victimization compared to their male counterparts with more diverse forms of trauma and more enduring patterns of victimization (Bohle & de Vogel, 2017).

Females are more likely to appraise a traumatic event as distressing and report more intense feelings of fear, horror, and helplessness compared to males (Valdez & Lilly, 2014). Men and women also appear to differ in their coping with a traumatic event. Men show more problem-focused coping, whereas emotion-focused, defensive, and avoidant coping are more common in women (Olff, 2017). Women are found to be more susceptible to developing PTSD following exposure to a potentially traumatic event and report a higher level of PTSD symptoms than men (Komarovskaya et al., 2011; Olff et al., 2017).

In conclusion, although a history of victimization is an important factor for both females and males, there are notable gender differences in the type and patterns of victimization, and also in the cognitive appraisals and emotional reactions to traumatic events warranting gender-responsive interventions and risk management strategies (Covington & Bloom, 2007). Not much is known, however, about the specific group of female forensic psychiatric patients with MID-BIF. Considering the overall higher prevalence of victimization in people with ID, it can be assumed that this is even more urgent for this group to further examine, understand and subsequently apply the knowledge into treatment approaches.

1.3. The present study

The present study aims to gain more knowledge about the victimization histories of forensic women with MID-BIF by examining data from a Dutch multicenter research project into gender differences in forensic mental health care. In 2012, this research project started with the overall aim of gaining more insight into female forensic patients' background, especially risk and protective factors for relapse, to eventually improve gender-responsive treatment (de Vogel, Stam, Bouman, ter Horst, & Lancel, 2016). The goals of the present study are to examine whether there are differences between female forensic psychiatric patients with and without MID-BIF and whether there are gender differences in a subgroup of forensic patients with MID-BIF. Based on the extant literature, the following hypotheses will be tested:

H1. Female forensic psychiatric patients with MID-BIF will show higher prevalence of victimization compared to female forensic psychiatric patients with average or above intellectual functioning.

H2. Female forensic psychiatric patients with MID-BIF will show higher prevalence of victimization compared to male forensic psychiatric patients with MID-BIF.

As there is currently limited knowledge about female forensic psychiatric patients with MID-BIF, we will also provide information about psychopathology and their treatment history.

2. Method

2.1. Design and procedure

Data were gathered in a multicenter retrospective file study. Files were analyzed of 126 women and 31 men with MID-BIF (IQ between 50–85) and 76 women without MID-BIF (IQ above 95) who have been admitted between 1990 and 2014 to one of five Dutch gender-mixed forensic psychiatric facilities, including a secure forensic treatment facility for individuals with MID-BIF called Trajectum ($n = 36$ women and $n = 31$ men with MID-BIF). These five hospitals are located in different regions of the Netherlands and all apply their own treatment approach, but usually, patients reside in living groups and treatment consists of an extensive program including psychotherapy (mostly cognitive-behavioral), work, education, arts, and sports (for more information about the Dutch forensic system and treatment philosophy, see de Boer and Gerrits, 2007d). IQ was usually measured with the WAIS, although diagnostic procedures differed per setting. In order to obtain a clear contrast, women with an IQ between 85 and 95 were omitted from the analyses in the present study. The 31 men with MID-BIF (IQ between 50–85) were matched to 31 women with MID-BIF on year of birth, year of admittance and judicial status.

The files were studied by a group of ten trained researchers (psychologists and criminologists) who coded a questionnaire (see 2.3.1) and several risk assessment tools. The files that were used for coding were comprehensive and consisted of psychological examinations, police reports and treatment evaluations. Each researcher rated the quality of the file information on a 0 (insufficient) - 100 (excellent) semantic differential scale. The rating of this scale was based on the availability of reliable information about the entire lifespan and the availability of information to code the risk assessment tools. A score of 50 was defined as acceptable and all cases with a code below 50 were excluded from the analyses. In the overall project, this was the case for 17 of 297 women and five of 275 men (de Vogel et al., 2016) The quality of the included case files in the present study was generally judged as good with a mean score of 78 out of a maximum score of 100 ($SD = 13.7$, range = 50–100).

2.2. Sample

The majority of the total sample was of Dutch descent (83.5 %). The mean age at the time of admission of the 126 women with MID-BIF was 35.3 years ($SD = 9.3$, range = 17–62), which was not significantly different from the women without MID-BIF (mean age 33.5, $SD = 10.9$, range = 18–65). Of the group of women with MID-BIF, 38 (30.2 %) were reported to have an IQ between 50 and 70 (MID) and 88 (69.8 %) between 70 and 85 (BIF). Of the women without MID-BIF 46 (60.5 %) were reported to have an IQ between 95–115, 27 (35.5 %) above 115 and 3 (3.9 %) above 130. The matched groups of 31 female and 31 male patients with MID-BIF did also not differ significantly on their mean age at admission; 32.0 ($SD = 10.0$, range = 17–49) for the women and 33.0 ($SD = 9.7$, range = 18–52) for the men.

The majority of the sample was convicted to a mandatory treatment order, called TBS-order (terbeschikkingstelling: translated as 'detained under a treatment order'; see de Boer & Gerrits, 2007). The TBS-order is imposed by court on people who have committed a serious violent offense and are considered to be at high risk for re-offending and who have diminished responsibility for the offense because of severe psychopathology. Every one or two years the court re-evaluates the patient based on hospital reports, including structured risk assessment, to determine whether the risk of recidivism is still too high and mandatory treatment needs to be continued. Other patients were admitted with some form of civil commitment. The civil commitment usually implies temporary admittance of psychiatric patients who have shown severe aggressive or disruptive behaviour in their previous psychiatric setting as a result of which the treatment relationship was disturbed. Women with MID-BIF were significantly more often admitted with a civil commitment than women with average or above intellectual functioning (26 [20.6 %] versus 2 [2.7 %], $p < .01$) and less often with the TBS-order (78 [61.9 %] versus 62 [82.7 %], $p < .05$).

Offenses for which the women were admitted to forensic mental health care were mainly arson (30.6 %), (attempted) homicide (19.8 %), and violent offenses (16.5 %). Women with MID-BIF were less often convicted of homicide as their index-offense (13.9 % versus 28 %, $\chi^2(1, N =) = 9.032$, $p = .003$, *Phi* −.21).

2.3. Instruments

2.3.1. General questionnaire

A questionnaire including questions relating to personal background, criminal history, psychiatric history and victimization history was developed for this multicenter research project based on a literature review. With respect to victimization history, a distinction was made between victimization during childhood (i.e., before the age of 17) and victimization during adulthood (i.e., age 17 and older). The age of 17 was chosen in accordance with the definition of the risk factor *Early Maladjustment* in the standardly used HCR-20. Furthermore, a distinction was made between different types of victimization: emotional abuse, physical abuse, physical neglect, and sexual abuse. For every patient with a history of victimization it was determined whether there were one, two, three or four types of victimization present.

To reduce the possible influence of biases, specific definitions of the different types of victimization were used. The concept of emotional abuse is relatively broad. For the present study, we adopted the definition of emotional abuse from the CARE-NL (de Ruiter, & de Jong, 2005). In the CARE-NL emotional abuse is defined as all forms of abuse and neglect by a parent or caregiver that could result in negative emotional or mental disorders. Witnessing domestic violence during childhood was also considered a form of emotional abuse since it is strongly associated with elevated levels of adverse behavior and emotional problems (Johnson et al., 2002; Meltzer

et al., 2009). Physical abuse involves all types of physical violence directed at the victim, such as hitting, kicking, biting, pinching, and scratching. Furthermore, a distinction is made between physical abuse and physical neglect. Physical neglect is a more passive form of child abuse where parents fail to meet the child's needs and it involves providing insufficient physical care as well as providing insufficient physical supervision (de Ruiter, & de Jong, 2005). Sexual abuse is defined as involving all sexual activities that a child (or adult) cannot comprehend, for which he or she is developmentally unprepared, or for which he or she has not given consent (or cannot give consent), and/or violates the law (Kellogg, 2005). Sexual abuse can include a wide spectrum of activities ranging from rape to less physically intrusive types of sexual abuse.

2.3.2. Historical Clinical Risk management-20 (HCR-20)

The HCR-20 (Webster et al., 1997) is a widely used tool to assess the risk of future violence, including ten historical risk factors (Historical scale) and ten dynamic risk factors (Clinical and Risk management scale) that are scored on a three-point scale: 2 (definitely present), 1 (possibly present), or 0 (absent) (see Table 3 for the Historical items). Research in different settings and countries in predominantly male populations demonstrated that the HCR-20, or its revision the HCR-20^{V3} (Douglas et al., 2013) can be used reliably and validly (see for overviews Douglas & Shaffer, 2021; Douglas et al., 2017). In the Netherlands, the HCR-20 – and since 2014 the HCR-20^{V3} – is one of the mandatory tools to use yearly for forensic psychiatric patients with a mandatory treatment order. In the present study, which started in 2012, the HCR-20 was coded, for most of the sample only the Historical scale (de Vogel et al., 2016)

2.3.3. Female Additional Manual (FAM)

The FAM (de Vogel et al., 2014) was developed as a supplement to the HCR-20 or HCR-20^{V3} to assess the risk of violent behavior in women. The instrument contains additional guidelines to some historical items of the HCR-20 / HCR-20^{V3} and eight new items with specific relevance to women that are coded in the same manner as the HCR-20 items (see Table 3 for the Historical items of both the HCR-20 and FAM). Next to the final risk judgment of violence towards others, there are three additional risk judgments: the risk for self-destructive behavior, victimization, and non-violent criminal behavior. To date, only a few studies have been published into the value of the FAM. These studies have shown good interrater reliability and moderate predictive validity for recidivism in females, but no incremental validity to the HCR-20^{V3} (de Vogel et al., 2019). The FAM items of particular relevance for the present study are H8a *Problematic circumstances during childhood* and H15 *Victimization after childhood.* These FAM items were constructed in addition to the HCR-20 Historical item H8 *Early maladjustment* that includes both problematic circumstances and problematic behavior during the whole lifespan, to be able to differentiate between circumstances and behavior and between childhood and adulthood. Interrater reliability of the HCR-20 / FAM Historical items was previously established for 25 of the 275 women in this overall research project and found to be good (ICC = .93, $p < .001$ (de Vogel et al., 2016).

2.4. Statistical analyses

Data were analyzed with SPSS 27.0. Differences between women with and without MID-BIF and between women and men with MID-BIF with respect to their victimization history, and also general, criminological and psychiatric characteristics were examined with Student's *t*-tests and Chi-square analyses with supplementary *z* tests to compare column proportions.

2.5. Ethical considerations

Official permission to study the patient files for the overall retrospective multicenter project was provided by the board of directors

Table 1
Treatment history and DSM-IV classifications of women with and without MID-BIF.

	Women with MID-BIF ($n = 126$)	Women without MID-BIF ($n = 76$)	χ^2	*p*-value	*Phi*
Treatment childhood (< 17 years)	59 (46.8)	22 (28.9)	8.388	.015	.20
Treatment adulthood, prior to current admission	123 (97.6)	64 (84.2)	12.398	<.001	.25
Treatment dropout of those who have been in treatment	97 (77)	53 (69.7)	11.60	.021	.24
History of self-harming behavior	66 (52.4)	26 (34.2)	6.311	.012	.18
DSM-IV classifications					
Axis I disorder	3 (2.4)	4 (5.3)	1.177	.278	−08
Axis II disorder	11 (8.7)	20 (26.3)	18.054	<.001	−.24
Both Axis I and II	73 (57.9)	24 (31.6)	18.054	<.001	.25
Borderline Personality Disorder	73 (57.9)	35 (46.7)	2.560	.278	.11
Antisocial Personality Disorder	14 (11.2)	13 (17.6)	3.114	.211	.21
Narcissistic Personality Disorder	0 (0.0)	2 (2.7)	11.127	.065	.24
PTSD	31 (24.6)	5 (6.6)	10.516	<.001	.23
Substance abuse or dependence	75 (59.5)	27 (35.5)	10.921	<.001	.23
Both PTSD and substance abuse	19 (15.1)	4 (5.3)	4.527	.033	.15

Note. Differences were tested with Chi-square analyses. All two-tailed. Not all variables could be coded for all of the cases, the percentages reported are the valid percentages.

of the participating settings. For the patients with MID-BIF residing in Trajectum, the facility for individuals with MID-BIF ($n = 36$ women and $n = 31$ men), official (written and/or oral) permission was obtained from patients and / or their legal representatives.

3. Results

3.1. DSM-IV classifications and treatment history of women with MID-BIF

Women with MID-BIF had more often received treatment in childhood and in adulthood compared to women with average or above intellectual functioning (see Table 1). In the majority of women in both groups who had been in treatment, previous treatment had been terminated prematurely, mostly because of violent incidents, violations of rules, running away or suicide attempts. With respect to DSM-IV classifications, it was found that women with MID-BIF were more often classified with both Axis I and Axis II disorders, PTSD, substance dependence or abuse. The combination of PTSD and substance dependence or abuse was also more prevalent in women with MID-BIF, although all effect sizes were small.

3.2. Victimization history women with and without MID-BIF

Overall, both women with and without MID-BIF showed a serious victimization history, although the prevalence of emotional and sexual abuse during both childhood and adulthood was significantly higher in women with MID-BIF than in women with average or above intellectual functioning (see Table 2).

3.3. Historical risk factors women with and without MID-BIF

There were similarities, but also some significant differences with medium effect sizes between women with and without MID-BIF in the codings on the historical risk factors of the HCR-20/FAM (see Table 3). Women with MID-BIF received higher mean scores on the risk factors Major Mental illness, Problematic circumstances during childhood, Parenting difficulties, Suicidality / self-harm and Victimization after childhood (from the age of 17) and lower mean scores on the item Personality disorder.

3.4. Differences in victimization between women and men with MID-BIF

Table 4 shows the gender differences in victimization between the matched samples of 31 women and 31 men with MID-BIF. Both women and men had often become victim in their childhood, however, women had more often experienced childhood sexual abuse. The overall prevalence of victimization in adulthood was more than three times higher in women, and women were more likely to have

Table 2
Prevalence and complexity of victimization during childhood (before the age of 17) and adulthood (17 years or older) for women with and without MID-BIF.

	Women with MID-BIF ($n = 126$)	Women without MID-BIF ($n = 76$)	χ^2	*p*-value	*Phi*
Victimization during childhood	*n* (%)	*n* (%)			
Emotional abuse	88 (72.7)	37 (50.7)	9.653	.002	.22
Physical abuse	49 (40.8)	24 (32.9)	1.222	.269	.08
Physical neglect	17 (14.2)	7 (9.6)	0.873	.350	.07
Sexual abuse	72 (60.0)	29 (39.7)	7.479	.006	.20
Total	105 (83.3)	50 (65.8)	10.465	.005	.30
No Victimization	20 (16.7)	24 (32.9)	14.252	.001	−.23
1 type of Victimization	24 (20.0)	21 (28.8)	1.951	.162	−.10
2 types of Victimization	43 (35.8)	12 (16.4)	8.373	.004	.21
3 types of Victimization	33 (27.5)	14 (19.2)	1.706	.191	.09
4 types of Victimization	3 (2%)	2 (2.7)	0.010	.919	−.07
Victimization during adulthood					
Emotional abuse	27 (23.3)	4 (5.7)	9.694	.002	.23
Physical abuse	48 (41.4)	25 (35.7)	0.588	.443	.06
Physical neglect	0	0	–	–	–
Sexual abuse	50 (43.1)	15 (21.4)	9.022	.003	.22
Total	85 (68.0)	32 (42.7)	22.082	< .001	.37
No Victimization	31 (26.7)	38 (54.3)	14.212	< .001	−.28
1 type of Victimization	50 (43.1)	22 (31.4)	2.508	.116	.12
2 types of Victimization	30 (25.9)	8 (11.4)	5.595	.018	.17
3 types of Victimization	5 (4.3)	2 (2.9)	0.255	.614	.04
Victimization in both childhood and adulthood	71 (56.3)	24 (31.6)	13.036	< .001	.25

Note. Differences were tested with Chi-square analyses. All two-tailed. Not all variables could be coded for all of the cases, the percentages reported are the valid percentages.

Table 3
Mean scores on FAM / HCR-20 Historical risk factors of women with and without MID-BIF.

FAM / HCR-20 Historical items		Women with MID-BIF ($n = 126$)	Women without MID-BIF ($n = 76$)	*t*	*p*-value	*Hedges'g*
H1	Previous violence	1.61	1.78	1.881	.061	.28
H2	Young age at first violent incident	1.06	1.09	0.375	.708	.05
H3	Relationship instability	1.77	1.73	−0.497	.620	.06
H4	Employment problems	1.60	1.46	−1.450	.149	.22
H5	Substance use problems	1.42	1.21	−1.580	.116	.23
H6*	Major mental illness	1.29	0.96	−2.642	.009	.39
H7*	Psychopathy FAM cut-off (Partly 14; Yes 23)	0.69	0.77	−0.778	.437	.11
H8a	Problematic circumstances during childhood	1.70	1.35	−3.595	.000	.53
H8b**	Problematic behavior during childhood	1.08	1.04	−0.280	.780	.05
H9*	Personality disorder	1.56	1.76	2.174	.031	.31
H10*	Prior supervision failure	1.52	1.41	−0.930	.354	.14
H11**	Prostitution	0.50	0.43	−0.598	.550	.09
H12**	Parenting difficulties	1.91	1.68	−2.295	.024	.46
H13**	Pregnancy at young age	.040	0.42	0.150	.881	.03
H14**	Suicidality / self-harm	1.37	1.04	−2.703	.007	.39
H15**	Victimization after childhood (from the age of 17)	1.25	0.80	−3.421	.001	.50

Note. * HCR-20 item with additional guidelines for women. ** FAM item. The item *Parenting difficulties* was coded only for those who had had children to take care of ($n = 63$ and 26).

Table 4
Prevalence and complexity of victimization during childhood (before the age of 17) and adulthood (17 years or older) for women and men with MID-BIF.

	Women with MID-BIF ($n = 31$)	Men with MID-BIF ($n = 31$	χ^2	*p*-value	*Phi*
Victimization during childhoodn (%)					
Emotional abuse	23 (79.3)	24 (77.4)	0.032	.859	.02
Physical abuse	12 (41.4)	10 (32.3)	0.537	.464	.10
Physical neglect	5 (17.2)	2 (6.5)	1.693	.193	.17
Sexual abuse	17 (58.6)	7 (22.6)	8.109	.004	.37
Total	27 (87.1)	25 (80.6)	2.012	.156	.18
No Victimization	2 (6.8)	6 (19.4)	6.268	.180	−.32
1 type of Victimization	6 (20.7)	12 (38.7)	2.317	.128	−.20
2 types of Victimization	13 (44.8)	9 (29.0)	1.610	.205	.16
3 types of Victimization	7 (24.1)	3 (9.7)	2.256	.133	.19
4 types of Victimization	1 (3.4)	1 (3.2)	0.002	.962	.01
Victimization during adulthood					
Emotional abuse	8 (27.6)	6 (23.1)	0.147	.702	.05
Physical abuse	14 (48.3)	1 (3.8)	13.644	< .001	.50
Physical neglect	0	0	–	–	–
Sexual abuse	12 (41.4)	0 (0.0)	13.761	< .001	.50
Total	22 (73.3)	6 (19.4)	22.110	< .001	.55
No Victimization	7 (24.1)	20 (76.9)	15.284	< .001	−.53
1 type of Victimization	11 (37.9)	5 (19.2)	2.324	.127	.21
2 types of Victimization	10 (34.5)	1 (3.8)	8.042	.005	.38
3 types of Victimization	1 (3.4)	0 (0.0)	0.913	.339	.13
Victimization in both childhood and adulthood	19 (61.3)	6 (19.4)	11.33	.003	.43

Note. Differences were tested with Chi-square analyses. All two-tailed. Not all variables could be coded for all of the cases, the percentages reported are the valid percentages.

experienced victimization during both childhood and adulthood compared to their male counterparts.

4. Discussion

The present study is one of the first to examine victimization history in female forensic psychiatric patients with MID-BIF. We compared victimization histories between women with MID-BIF and women with average or above intellectual functioning and between a small sample of matched women and men with MID-BIF who have been admitted to one of five Dutch forensic psychiatric hospitals between 1990 and 2014. Overall, victimization rates were high in both women with and without MID-BIF and also for the small group of men with MID-BIF. The rates of childhood victimization found in the present study are higher than rates that are found in large scale population studies worldwide (see Stoltenborgh et al., 2015). Still, although we found many similarities, the women with

MID-BIF showed even more severe victimization histories compared to their male counterparts and to women with average or above intellectual functioning. They were more likely to have experienced emotional and sexual abuse compared to women without MID-BIF and there was more often a pattern of victimization throughout the life course, confirming Hypothesis 1. These findings are in line with research that indicate that people with MID-BIF have a higher chance of being victimized than people with average or above intellectual functioning (Byrne, 2018; Mevissen & de Jong, 2010; Nieuwenhuis et al., 2019; Wigham & Emerson, 2015).

The comparison between women and men with MID-BIF showed that the overall prevalence of victimization during childhood was equally high, however, women were more likely to have experienced sexual abuse. During adulthood women experienced significantly more often sexual and physical abuse than men with MID-BIF. The pattern of victimization during their life span continued more often in women than in men. These findings confirm Hypothesis 2 and are in line with the sparse research into gender differences in samples with ID (Lindsay et al., 2004; Nieuwenhuis et al., 2019). More generally, the findings correspond to the literature into gender differences in victimization in justice-involved populations and point to the need for more gender-responsive trauma-informed care in forensic mental health services (Brown & Gelsthorpe, 2021; de Vogel & Nicholls, 2016). It should not be discarded though that the prevalence of victimization in male forensic psychiatric patients is still alarmingly high compared to male non-offenders and that trauma should be an important intervention target in males too (Bohle & de Vogel, 2017; Vitopoulos et al., 2019), albeit in a somewhat different way. For traumatized women it has been suggested that treatment should focus predominantly on enhancing self-esteem, self-efficacy, interpersonal relationships and on improving emotional regulation (Covington & Bloom, 2007), whereas traumatized men would likely benefit most from emotion and behavior regulation training and social skills development (Topitzes et al., 2012). More research is needed into gender differences in treatment needs, and more generally into the implementation and potential effects of trauma treatment and trauma-informed care, as this in still in its infancy in forensic mental health care for individuals with and without ID (e.g., Levenson & Willis, 2019).

Next to the differences in victimization histories, we found some differences in DSM-IV classifications and risk factors between women with MID-BIF and women with average or above intellectual functioning. Women with MID-BIF were more often classified with both Axis I and II disorders, PTSD and substance abuse and had more often received treatment during both childhood and adulthood. Furthermore, they more often had a history of self-harming behavior and showed more parenting difficulties. Overall, it can be concluded that although all female patients had disturbing backgrounds, women with MID-BIF seem to have more complex problems and mental health needs. The differences are largely in line with previous studies and studies in samples with ID (Cooper et al., 2007; Gore, & Dawson, 2009; Lindsay et al., 2004; Taggart et al., 2008).

4.1. Clinical implications and future directions

The findings from the present study emphasize the need for better tailored treatment programs for female forensic patients with MID-BIF, which should be trauma-informed and gender-responsive. In order to provide the best possible treatment, it is first important to recognize possible traumatic events and its consequences, including PTSD, with validated tools. This may be more challenging in people with ID (Nieuwenhuis et al., 2019; Wigham et al., 2021), although several tools have recently been adapted or developed for this specific group (see Mevissen et al., 2016, 2020; Wigham, Hatton et al., 2021). Next to difficulties to adequately classify mental health needs in individuals with ID, this may be further complicated for females with ID because of potential gender bias in assessment. Gender bias is a construct that refers to beliefs, attitudes, and/or predispositions that involve preconceived and stereotypical ideas about the roles, abilities, and characteristics of women and men (APA, 2018, p. 31). Gender bias can be a major issue in both forensic and non-forensic mental health assessment processes and may lead to the inappropriate use and overuse of certain diagnoses in women, like the borderline personality disorder. As forensic assessment is often focused on screening for externalizing disorders, psychopathy and risk factors, internalizing disorders like depression, anxiety or PTSD may be missed. It is important for practitioners to always be cognizant of potential gender bias (see the *Guidelines for Psychological Practice with Girls and Women*, APA, 2018).

Furthermore, it is advised to pay more attention to detecting self-harming behavior and risks of revictimization during treatment. Self-harming behavior is not always observed by staff, and it is advised to screen systematically for it in order to be able to deliver appropriate interventions to prevent it (Völlm & Dolan, 2009). The routine use of reliable and validated gender-sensitive tools for risk assessment is also recommended. The FAM includes the risk of self-destructive behavior and of victimization next to violence risk, which may be particularly important for these women. In addition, it is strongly advised to conduct repeated intimate partner violence assessments in case of intimate relationships during treatment in gender-mixed settings.

As said, treatment should be gender-responsive and trauma-informed. Trauma-informed care should be seen as an overall model in which trauma awareness is the core principle with an emphasis on safety and trustworthiness (Covington & Bloom, 2007). A number of specific treatment models have been developed for use with justice-involved females focusing on recovery from trauma and enlarging coping skills to prevent revictimization. Examples are *Beyond Trauma* and *Beyond violence* (Covington, 2003, 2013) and *Seeking safety* (Najavits, 2002). The latter program has also been adapted for use in men and for individuals with MID-BIF (see Luteijn et al., 2020). There is not much empirical research yet, but overall these programs are widely accepted and considered valuable. More generally, Eye Movement Desensitization Reprocessing (EMDR) is considered to be the most promising treatment in individuals with ID, although this is predominantly based on case studies, systematic empirical research is still scarce (see e.g., Keesler, 2020).

In the literature on gender-responsive treatment, scholars have provided several recommendations for treatment of females next to the strong focus on trauma treatment, for example, focus on developing strengths, enlarging systems for social support, and the relevance of relational safety (de Vogel & Nicholls, 2016; Logan & Taylor, 2017). In general, it has been demonstrated that treatment effects are more robust when gender-specific factors are conceptualized as responsivity factors (Ashley et al., 2003). Research thus far has yielded promising results for gender-responsive programs in reducing risk of relapse or official recidivism (e.g., Bartlett et al.,

2014). However, most of these studies have been conducted in prison samples and not much is known about forensic psychiatric samples, let alone about forensic psychiatric patients with MID-BIF.

Educating professionals working in forensic mental health care about differences between male and females with MID-BIF and training them in, for instance, coping with self-harming behaviors is important, as well as frequent team interactions/intervisions, coaching, and support from managers. The complex interactions between victimization history, mental illnesses, self-harming behaviors, and also substance abuse and gender necessitate more theoretical discussion. It is crucial to conduct more empirical and qualitative studies into gender differences in samples with MID-BIF and to invest in monetary and technical support for the implementation of gender-sensitive assessment and gender-responsive programming.

4.2. Study limitations

Several limitations of the present study should be mentioned here. First of all, the present study relied solely on file information. Although the files were generally extensive and of good quality, there were differences between institutions, most importantly, in the instruments and methods used to determine intellectual functioning (IQ) and the DSM-IV classifications. Furthermore, not all information was available or considered reliable. It is very well possible that there have been gender biases, for instance, in the reported DSM classifications. The results with regard to these variables should therefore be interpreted with caution. Second, the sample in the present study was a selective group of patients that had been admitted to forensic psychiatric hospitals. More research is needed into gender differences in other justice-involved samples with MID-BIF, for instance, in youth or outpatient settings or in prison. Third, the statistical results should be interpreted with caution as the female groups that were compared were unequal in numbers and the matched groups of women and men with MID-BIF were small. Also, the multiple comparisons that were made may have potentially biased the results.

5. Conclusion

Although the results from the present study require replication, it can be concluded that there are similarities, but also relevant differences in victimization histories between women with MID-BIF and women with average or above intellectual functioning and between women and men with MID-BIF, and these have implications for forensic treatment. Hence, we comply with the conclusion of Taggart et al. (2008) that females with MID-BIF are a particularly vulnerable group and with the call by several scholars (e.g., Logan & Taylor, 2017) about the necessity of gender-sensitive assessment and gender-responsive treatment of justice-involved individuals. Offering the most optimal treatment for female forensic psychiatric patients with MID-BIF is important not only for the prevention of recidivism, but also for the prevention of revictimization of these vulnerable women and their offspring.

Data availability

Data will be made available on request.

Disclosure statement

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CRediT authorship contribution statement

Vivienne de Vogel: Conceptualization, Methodology, Formal analysis, Writing - original draft. **Robert Didden:** Conceptualization, Methodology, Writing - review & editing.

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