

Assessing the risk of violence in women: are the HCR-20 and FAM sufficient in female forensic psychiatry services?

Introduction

Violence is a widespread issue in forensic psychiatry: defined here as an aggressive act, attempt or threat that is intentional, unwanted, nonessential and harmful^{1,2}. Previously, research of violence has focused solely on the male population and female violence, historically, has been deemed so uncommon it was not worth exploring³. Indeed, violence is still predominantly a male phenomenon; male gender is one of the best predictors of violence and the majority of violent offenders are male^{4,5}. However, this gender gap is narrowed in institutionalised settings, including forensic psychiatric hospitals^{6,7}. Additionally, the rates of violent female offending have been steadily increasing over time and women are now the fastest growing forensic population worldwide^{6,7}.

Some scholars argue that these official figures have only grown because changes in policing and criminal justice policies are increasingly identifying female offenders, rather than because of a rise in female violence^{8,9}. In fact, the official rates of female offending may not accurately reflect the rates of female violence. This is because female violence is often less visible than male violence, as it is more likely to occur privately between people in intimate or familial relationships¹⁰. In addition to this, the criminal justice system in the UK treats women more leniently than their male counterparts; for example, women are more likely to be sent to civil psychiatric institutions instead of being sentenced¹¹⁻¹³. Judges often view women as less accountable for their actions and put more emphasis on their mental health problems, drawing on societal stereotypes that women need protecting rather than punishing^{12,14,15}. This is exacerbated by the fact that female offenders are more likely to be first time offenders, to have a background of severe victimization and psychiatric problems, have dependent children, and adopt a positive and remorseful attitude in the courtroom^{16,17}. Whether or not female violence has increased, or just been recognised more in official figures, it is clearly a bigger issue than previously thought.

Not only is female violence a prevalent issue, but it is also distinguishable from male violence in terms of its nature, severity and risk. Female forensic patients are more likely to have committed arson and homicide, particularly neonaticide, whilst familicide and sexual offences are more common in men¹⁷⁻²⁰. However, the rates of child abuse, intimate partner violence and psychiatric inpatient violence are similar between males and females²¹⁻²³. The victims of female offenders are more likely to be friends or family members, whereas male victims are more likely to be strangers^{10,17,24,25}. Female violence is often indirect and reactive, motivated by relational frustration or self-defence, compared to male violence, which is antisocial, instrumental, sexually motivated, or due to peer pressure^{10,20,25-27}. Female violence is less likely to result in serious injury than male violence^{10,28}. Male patients are also more likely to have consumed alcohol or illicit drugs before their violent act, whereas women are more likely to be violent whilst on psychiatric medication¹⁰.

In terms of inpatient violence, females are more likely to be violent and manipulative towards staff and themselves, differing from males, who tend to be more violent towards other patients^{17,29}. In addition to this, female forensic patients often have more severe histories of emotional, physical and sexual abuse during childhood and adulthood compared to their male counterparts^{17,30}. They are also more likely to be diagnosed with emotionally unstable personality disorder (EUPD), major depressive disorder (MDD) and post-traumatic stress

disorder (PTSD), as opposed to male patients, who more often have antisocial or narcissistic personality disorder (ASPD) (NPD)^{17,29}.

The clear differences between male and female violence in both community and inpatient settings demonstrates the need for an increased focus on female violence. Although there have been recent advances in the assessment, classification and management of female offenders, female violence is still widely understudied⁷. A key area needed to understand female violence is its risk factors. As women are violent in more subtle, indirect ways, it can be difficult for staff to predict this violence¹⁷. If violence cannot be predicted, it is harder to prevent and manage³¹. One of the most commonly used tools in violence risk assessments is the Historical-Clinical-Risk-Management-20 version three (HCR-20^{V3}), accompanied by the female additional model (FAM)^{1,32,33}. These tools follow the Structured Professional Judgement (SPJ) model, assessing patients' historical and dynamic risk factors for violence based on a comprehensive review of the literature³⁴. Although the HCR-20^{V3} has been extensively researched³⁴⁻³⁷, its use in female patients is heavily disputed. This essay sets out to explore whether these assessment tools are sufficient to assess risk in female forensic patients.

An overview of the HCR-20^{V3} and FAM

The HCR-20^{V3} is a 20-item tool, which is recommended for use in both adult men and women¹. It has three subscales: the 10-item historical scale, the 5-item clinical scale and the 5-item risk management scale. The historical scale investigates the patient's history of problems with violence (as a child, adolescent or adult) (H1), other antisocial behaviour (as a child, adolescent or adult) (H2), relationships (intimate or non-intimate) (H3), employment (H4), substance use (H5), major mental disorder (psychotic, major mood or other) (H6), personality disorder (antisocial/psychopathic/dissocial or other) (H7), traumatic experiences (victimization/trauma, or adverse childrearing experiences) (H8), violent attitudes (H9) and treatment or supervision response (H10). The clinical scale investigates recent problems with insight (mental disorder, violence risk or need for treatment) (C1), violent ideation or intent (C2), symptoms of major mental disorder (psychotic, major mood or other) (C3), instability (affective, behavioural or cognitive) (C4) and treatment or supervision response (compliance or responsiveness) (C5). Finally, the risk management scale investigates potential future problems with professional services and plans (R1), living situation (R2), personal support (R3), treatment or supervision response (compliance or responsiveness) (R4) and stress or coping (R5).

There are seven steps to complete the HCR-20^{V3}. Firstly, the case information should be gathered, by interviewing the patient and reviewing their relevant files. The presence of the listed risk factors and any case-specific ones should then be rated as *No*, *Possible* or *Partially*, *Yes* or *Omit* if not enough evidence exists. Step three is to rate the relevance of each of these risk factors using a three-point scale: *Low*, *Moderate* or *High*. Next is risk formulation, where the clinician seeks to understand why a patient has previously acted violently, and why they may act violently in the future. Step five involves planning for likely scenarios based on a patient's risk factors, such as repeating a previous act of violence. This allows the clinician to consider how best to prevent and manage these potential scenarios. During step six management strategies are developed to address any important risk factors, including monitoring, supervision, treatment and victim safety planning strategies. The final step allocates the patient to either a *Low*, *Moderate* or *High* risk, depending on their number of relevant risk factors and the level of potential interventions required to minimise their risk.

The HCR-20^{V3} should assess for the risk of future violence, serious physical harm and imminent violence. This should be carried out every six months in inpatient settings.

The FAM provides additional guidelines to the HCR-20^{V3} for assessing the risk of violence in women³². This was developed after a thorough review of the current literature, as well as semi-structured interviews of mental health professionals. The FAM adds additional guidelines to two of the HCR-20^{V3}'s historical risk factors: H7 (presence of personality disorders) and H8 (traumatic experiences). Four new historical items are added: prostitution (H11), parenting difficulties (H12), pregnancy at a young age (H13) and suicidality/self-harm (H14). Two new clinical items are added: covert/manipulative behaviour (C6) and low self-esteem (C7). Two new risk management items are added: problematic childcare responsibility (R6) and problematic intimate relationship (R7). The FAM works similarly to the HCR-20^{V3}, but the final risk ratings are based on a 5-point scale: *Low*, *Low to Moderate*, *Moderate*, *Moderate to High* and *High* risk. As part of the FAM, evaluators should assess for the risk of self-destructive behaviour, victimization and non-violent criminal behaviour, as well as the risks required for the HCR-20^{V3}.

Evaluation of the HCR-20^{V3} and FAM

The HCR-20^{V3} has a high validity, reliability and clinical utility in forensic psychiatric settings³⁵⁻³⁷. However, its research has been criticised for its low sample sizes, and the fact that many of the studies are conducted by at least one of the originating authors³⁶. Despite this, it is still considered the best evidenced risk assessment of violence and is widely used^{33,35}. The validity of the HCR-20^{V3} in the female population remains ambiguous, with the majority of its evidence based on the male population³².

Rossdale, Tully & Egan's (2019) meta-analysis set out to understand whether the HCR-20 can predict violence in women³⁹. They systematically searched for research papers that assessed adult females using any version of the HCR-20 and measured their violent outcomes. These papers could also include males as participants but had to be able to extract the female data. This search only provided 12 studies. This meta-analysis was completed 24 years after the original HCR-20 was published⁴⁰. Therefore, in these 24 years of the HCR-20 being a widely used tool to assess risk³³, only 12 studies were found to have researched its use in females. This alone suggests that the use of the HCR-20 is under-researched in women. The outcome of this meta-analysis showed that the HCR-20 has moderate predictive validity in females. The authors concluded that while the HCR-20 may be applicable for females, it should be used with caution due to the lack of research.

However, the 12 studies included were found to be heterogeneous, due to differences in measurement outcomes, sample sizes, research settings, versions of HCR-20 and type of study design³⁹. This could mean that the studies are incomparable. Nevertheless, it is worth noting that heterogeneity may be inevitable when measuring subjective outcomes like violence⁴¹. The different settings used in these studies, however, may mean that they lack relevance to this essay, as some of them took place in civil psychiatric or prison settings, and not in forensic psychiatric units.

Furthermore, some forensic psychiatry studies disagree with Rossdale, Tully & Egan's results. In particular, Schaap, Lammers & de Vogel (2007) found that none of the subscale or total scores of the HCR-20^{V2} significantly predicted violent recidivism in Dutch female ex-patients. However, it only had a sample size of 45, and the quality of information for some of

the participants was poor⁴². A similar result was found in female offenders with personality disorders; the HCR-20^{V2} total score did not predict violent outcome, unlike their matched male counterparts⁴³. However, the HCR-20 final risk judgement did predict violence in both men and women. This suggests the SPJ method works well in female patients, perhaps because it encourages case-specific risk factors to be included. Interestingly, these additional risk factors highlighted by the SPJ method differed by gender, with new intimate partner, care for children and prostitution being the most common additional factors in women. These have now been incorporated into the FAM.

Other forensic psychiatry studies provide contrasting results. O'Shea *et al.* (2014) undertook a pseudo-prospective cohort study, which showed that the HCR-20^{V2} is a better predictor for inpatient violence in women than in men, especially for person-directed physical aggression³⁷. This was after controlling for age, diagnosis, ethnicity and time between admission and assessment. These results are supported by another meta-analysis, whereby studies with larger female populations showed greater effect sizes for the use of HCR-20^{V2} in predicting violence⁴⁴. This may be explained by the moderating effect of prevention strategies³⁷. Mental health professionals often view women as less dangerous than men, and so women are less likely to be physically restrained, receive early interventions or receive pro re nata (PRN) medications during aggressive outbursts^{29,45-47}. This highlights the fact that female violence is not prevented as effectively as male violence, and so women have more opportunities to express their aggression. This may be why the HCR-20^{V2} predicts violence better in women.

More recent studies that explore the validity of the HCR-20^{V3} also suggest that it is successful in predicting violence in females. Green *et al.* (2016), for example, found that gender was not a significant moderator in the relationship between the HCR-20^{V3} and inpatient violence⁴⁸. However, none of the HCR-20^{V3} subscale scores, or the total score, were significantly associated with violence in females, unlike the males. These results may be limited by the fact that the female sample size was much smaller (n=24) compared to the males (n=100).

Further studies have compared the validity of the different versions of the HCR-20 and the FAM. de Vogel *et al.* (2019) followed up 78 Dutch forensic psychiatric patients over 12 years, comparing the validity of six risk assessment tools in predicting violence and reoffending⁴⁹. The HCR-20^{V3} and the FAM ranked amongst the best of the tools for predicting reoffending, but only the clinical scale of the HCR-20^{V3} significantly predicted violence. The HCR-20^{V3} was found to have a higher predictive validity than the HCR-20^{V2}. The HCR-20^{V3} broadened the definition of H8 (traumatic experiences) to include victimization from adulthood as well as childhood, which is an important risk factor for women^{1,32}. de Vogel *et al.* also argued that the HCR-20^{V3} does a better job of distinguishing between problematic behaviour during different behavioural stages and traumatic experiences, which is important in females⁴⁹. This may explain why it performs better than the HCR-20^{V2} in female samples.

Additionally, de Vogel *et al.* found that the FAM performed worse than the HCR-20^{V3}, and only slightly better than the HCR-20^{V2}, when predicting violence⁴⁹. Some of the FAM risk factors did correlate with general criminal offending, and past violent behaviour, but not necessarily with future violent behaviour. This is supported by Strand & Selenius (2019), who showed that the HCR-20^{V2} had a higher reliability when used without the FAM⁵⁰. The authors argued that some of the additional FAM risk factors were already explained by the

HCR-20^{V2} items. For example, R6 (problematic childcare responsibility) may lead to difficulties with R5 (stress or coping), and so the risk of R6 is already incorporated under the scoring of R5. Indeed, the most valuable risk factors in the FAM were found to be ones already present in the HCR-20^{V2}, whilst the least valuable were the newly added risk factors. Strand & Selenius also argue because some of the risk factors, like H14 (suicidality/self-harm), are present in a large majority of women (89% in this sample) they are not able to discriminate for the risk of violence. de Vogel *et al.* only measured violence after discharge, and Strand & Selinius only measured physical inpatient violence^{49,50}. Therefore, it is possible that the FAM can still be useful in predicting other types of violence, such as self-harm⁴⁹. The FAM may also have greater use in clinical practice, as it raises awareness of gender issues in the risk management and treatment of women⁵¹.

Overall, there is modest evidence supporting the use of the HCR-20 in the female forensic population and a lack of evidence supporting the use of the FAM. This is still a severely under-researched topic. Many of the discussed studies can be criticised for their methodology, and some are outdated. Researchers often struggle with sample sizes and high attrition rates, with many of the female participants dying before follow-up³². They combat this by reducing follow-up times, sampling participants from multiple hospitals and using a mixture of retrospective and prospective study designs. Some of the studies even had overlapping samples: de Vogel *et al.* (2019) and de Vogel & de Ruiter (2005) shared 15 participants^{43,49}. Therefore, no firm conclusions can be made until further research has been undertaken. However, if we can ascertain the specific risk factors for violence in women, and whether the HCR-20^{V3} and FAM incorporate these factors, then we can be more confident in the use of these risk assessment tools for female patients.

Female risk factors for violence

Victimization:

There are a wide variety of risk factors specific to violence in women. These gender-responsive risk factors are defined as ones that are not typically seen in men, occur at a greater frequency in women, or are factors which women are more sensitive to⁵². One of these is victimization; this comes under the HCR-20^{V3}'s H8 (traumatic experiences). This is divided into victimization/trauma and adverse childrearing experiences. The FAM splits this further and specifies whether victimization occurred before or after childhood. Victimization is defined as being the victim of damaging behaviour caused by another person¹.

Both female and male forensic patients commonly experience victimization in childhood^{17,30,48}. Studies suggest women were more likely to experience sexual abuse at this time, although it is unlikely all men report their sexual abuse^{17,53,54}. Victimization during childhood increases the risk of antisocial behaviours, personality disorders, mental health problems, risky sexual behaviours, substance abuse, and being revictimized later in life⁵⁵⁻⁵⁹. These are all risk factors included in the FAM. Specific childhood problems can lead to specific adult behaviours: parental divorce and witnessing domestic abuse are associated with future partner violence and repeated violent behaviour, whilst parental substance misuse and mental health problems are associated with future violent offences⁶⁰⁻⁶². Overall, child victimization is an important risk factor for violence, and this risk is stronger in women⁶².

Victimization after childhood is also related to violence and offending^{52,62,63}. Female forensic patients are more often victimized in adulthood than male patients, mostly by their intimate

partners¹⁷. Women are also more sensitive to trauma: they are more likely to develop PTSD after a traumatic event⁶⁴. Indeed, female violent offenders are more likely to have been mentally and physically abused as an adult than non-offenders⁶². Women who are victims of partner abuse are more likely to exhibit violent behaviour towards their partner and their children^{65,66}. These traumatic experiences can also lead to risky behaviours and substance misuse, which again are risk factors for violence^{32,67}.

Therefore, it is clear that both victimization during and after childhood are risk factors for violence. Experiencing victimization during multiple developmental stages is thought to worsen the risk of violence even further³². However, the HCR-20^{V3}'s H8 has not been found to predict violence in a sample of 24 insanity acquittees⁴⁸. This may be due to the small sample size. More research is required to understand whether the FAM's H8, with its additional guidelines, predicts violence in women.

Mental disorders:

A second gender-responsive risk factor is psychiatric and personality disorders⁵², which is mainly covered under H6 (major mental disorder), H7 (personality disorder) and C3 (symptoms of a major mental disorder). Female forensic patients are more likely to suffer from personality disorders and mood disorders, particularly EUPD, MDD and PTSD^{17,29,48}. Male patients suffer more from psychotic disorders, ASPD, NPD, addiction and sexual disorders^{17,29,48}. In addition, women are more likely to have had previous psychiatric care prior to their violent event^{30,54}. When assessing for these risk factors, the FAM and HCR-20^{V3} take into account both the diagnoses of the patient and their symptoms. This reduces the risk of excluding patients who have not been officially diagnosed yet⁵². However, neither H6, H7 or C3 predict violence in female forensic patients⁴⁸.

H6 (major mental disorders) includes psychotic, mood, neurodevelopmental and neurocognitive disorders. Unfortunately, PTSD is not included within these, even though this is very common in forensic female patients¹⁷. C3 assesses for the symptoms of these major mental disorders, and its guidelines state that psychotic symptoms should be prioritised over mood symptoms and coded first. This is effective in males, as psychosis is more common than mood disorders¹⁷. In females, however, MDD is the most common major mental disorder¹⁷ and it is also a strong predictor of female offending^{52,68}. This may affect the risk ratings of female patients. For example, if a female patient was experiencing apathy or anhedonia these would be coded as negative psychotic symptoms, rather than as symptoms of MDD. The risk of these symptoms, therefore, may be misunderstood.

H7 (personality disorders) is divided into antisocial/psychopathic and other disorders. This is split further in the FAM, whereby the other personality disorders are classified into cluster B (apart from antisocial)/traits of suspiciousness and other disorders. Highlighting cluster B disorders is important, as EUPD, ASPD and NPD all have a positive association with violence in women, as well as cluster A symptoms, such as paranoia⁶⁹. EUPD is the most commonly diagnosed personality disorder in violent women, and its symptoms can include instability, intense interpersonal relationships, suicidality/self-harm and covert/manipulative behaviour^{32,70}. These are included as separate risk factors in the HCR-20^{V3} and FAM.

Instability is coded under C4, and includes affective, behavioural and cognitive instability. Female forensic patients score highly here, particularly for impulsivity, a behavioural instability⁷¹. This is a key symptom of EUPD and is one of the strongest predictors of

violence in females^{37,70}. Affective and cognitive instability are indicated by other symptoms of EUPD, including reactivity of mood, chronic feelings of emptiness, inappropriate anger and unstable sense of self⁷⁰. C4 is therefore an important risk factor. Indeed, it is one of the only items on the HCR-20^{V3} that has a positive association with violence⁴⁸.

Another symptom of EUPD is relationship problems. This comes under R7 (problematic intimate relationship) and H3 (relationships), which is then divided into intimate and non-intimate relationships. H3 is focused on past problematic relationships, whereas R7 is focused on potential or current ones. These are coded if the patient has or will have difficulties establishing and maintaining stable personal relationships, which results in a lack of positive, social or emotional support. Forensic female patients have been shown to rate higher on H3 and R7 than their male counterparts^{17,43,48} and are more likely to have abusive, violent partners that are addicted to illicit substances⁶². This relationship dysfunction is then related to criminal behaviour^{52,63}, an association which is greater in women⁶⁸. Additionally, mental health professionals notice that many women commit offences together with their partners and can be introduced to crime by their partner³². This further links problematic relationships with crime.

Although problematic relationships are linked to violence, the H3 is not⁴⁸. This may be due to methodology error, as the H3 was not associated with violence in males either. The R7 and the H3, however, seem to focus on different aspects of a relationship. The R7 indicators include oppressive and abusive relationships characterized by many conflicts, with an inability to not be in a relationship. These are very relevant to female patients, as they incorporate aspects of EUPD⁷⁰. The H3 indicators, on the other hand, are much broader and include social isolation, frequent break-ups and manipulation. Therefore, the R7 may have a stronger association with violence than the H3 in females, but more research is required to confirm this.

The FAM defines C6 (covert/manipulative behaviour) as a deliberate attempt to hurt another person through social relationships or by affecting others' social status. This is separated from the presence of EUPD in H7, as it is a dynamic risk factor instead of an historical one, and so must have been present within the past 6 months to be coded. The FAM authors validate this item using interviews with mental health professionals. These professionals frequently mention that, in clinical practice, covert behaviour often provokes other patients into violence and other antisocial behaviours. They state that female patients are very skilled at manipulating their environment and often use their sexuality to manipulate others. Although this does not directly increase the patient's risk of violence, this behaviour can lead to victimization and can cause conflicts with others. Indeed, female patients do show more manipulative behaviours than males and their aggression is usually expressed in a more indirect ways^{17,26}. More research is needed to determine if this can predict violence.

The FAM's H14, self-harm and suicidality, is more common in females than males in forensic populations. This may be due to the high prevalence of EUPD and MDD¹⁷. Motz (2001) explains that female aggression is typically internalised and directed towards the self and is expressed by self-harm and suicide attempts⁷². This aggression may later be directed towards others. This relationship between a history of self-harm or suicidality and violence has been supported by research^{29,62}. Therefore, self-harm and suicidality are both risk factors for violence and a way for female patients to express violence. Indeed, the FAM does determine the risk of self-destructive behaviour as an outcome measure.

C7 (low self-esteem) can also be related to MDD and EUPD⁷⁰. This factor is increased in female forensic patients¹⁷ and is linked to female offending and prison misconduct⁵². Mental health professionals have noticed that women act out their negative beliefs about themselves by displaying violent behaviours towards themselves and others³². This link between low self-esteem and violence has been corroborated in girls and adolescents^{73,74}, but there is a lack of evidence in adults. Additionally, low self-esteem is linked to other risk factors for violence, such as victimization and substance abuse^{32,63,75}.

Prostitution and Pregnancy:

H11 (prostitution) is defined as the act of performing sexual activities in exchange for money³². This can be voluntary or forced and is more common in females (de Vogel et al., 2015). The FAM authors argue that forced prostitution indicates that a woman is particularly vulnerable and suggestable, and so is likely to have antisocial friends or partners. These problematic relationships are a further risk factor for violence, as discussed earlier. On the other hand, voluntary prostitution may be used to fund a substance misuse problem, or it can indicate an antisocial attitude. These risk factors come under H2 and H5 on the HCR-20^{V3}. Furthermore, prostitution leaves a woman vulnerable to victimization, another risk factor, and she may have to use violence to defend herself³².

Pregnancy at a young age is coded for under H13 and has a strong association with criminal behaviour⁷⁶. If the child is given up for adoption this acts as a further risk factor for violence, as it can evoke strong emotions⁷². Furthermore, this may hinder a woman's development, and negatively affect her finances, education and social relationships³².

Parental stress:

This last gender-responsive risk factor is covered under H12 (parenting difficulties) and R6 (problematic childcare responsibility). R6 is a dynamic risk factor, and it is much broader than H12, as it does not only concern parenting skills but also problems with desired childcare responsibility. This includes the burden of taking care of children, and the consequences of limited contact with said children, due to detention or hospital admissions. On the other hand, the H12 is concerned with problems of raising and taking care of children. These items are both more common in female forensic patients¹⁷.

In terms of parenting difficulties, this has been linked to violence towards children and intimate partners^{77,78}. Motz (2001) suggests that childcare can remind women of their own experiences with abuse and neglect, which can evoke strong negative feelings, leading women to abuse their own children⁷². Additionally, women can see parenting difficulties as a justification to abuse their partner, especially if they feel their role as a parent is ineffective and that the demands of their children dominate their lives⁷⁸. Indeed, there is a positive association between parental stress and crime^{52,63}.

Problematic childcare is particularly common amongst the forensic population, as 24-31% of female offenders have at least one child, and visitations and custody are difficult to maintain whilst incarcerated^{79,80}. This may cause feelings of failure or disappointment³². Limited contact with children can cause high levels of stress and psychological problems⁵² and losing custody of children can lead to intense feelings of anger and sorrow⁸¹. Furthermore, unrealistic expectations of contact with children may lead to feelings of anger towards the child's foster family, which can increase one's risk of violence³². Many female offenders also

have financial difficulties, substance abuse problems and minimal assistance⁸². These women are at a particular risk of offending, perhaps due to feelings of stress and anxiety about being able to provide for their children^{81,82}. Additionally, if a woman has previously neglected or abused her children, childcare responsibility will increase her risk for future violence towards any children under her care⁷².

Concluding remarks:

The use of the FAM as an 'add on' to the HCR-20^{V3} may be problematic. The FAM defend this by arguing that male and female risk factors are largely similar, and that the HCR-20^{V3} already has predictive validity for female patients. However, many of the HCR-20^{V3} risk factors are still primed for male patients. Some of these may not be relevant, and some could be framed to better fit female patients. Adding the FAM and the HCR-20^{V3} together for females seems to say that females are just males but with added factors. This ignores the fact that women are their own complex beings, with their own motives and risks for violence. Nevertheless, the FAM should be commended for not only assessing the risk of violence, but also the risk of non-violent criminal behaviour, victimization and self-destructive behaviour. It is important to recognise that women express their aggression in different ways to men.

Overall, it is unclear whether the FAM and the HCR-20^{V3} are sufficient in female forensic psychiatric services. While the HCR-20^{V3} does seem to be able to predict female violence, it has mainly been validated in male patients and does not include any of the female-specific risk factors. More research is required in order to validate the FAM and the authors advise caution for this reason. Furthermore, many of the FAM risk factors have not been shown to be related to future violence, but rather to general criminal offending or previous violence. This is an important topic, as the consequences of not effectively measuring risk can be huge. Without understanding a patient's risk factors for violence, it is impossible to develop effective management strategies to reduce their risk. This is particularly important for women, as risk of violence can be transferred between mothers and children⁷². This essay calls for further research into the potential risk factors of female violence and for future studies to investigate the validity of the FAM and its items.

Bibliography:

1. Douglas KS, Hart SD, Webster CD, et al. HCR-20V3: Assessing risk for violence: User guide. Mental Health, Law, and Policy Institute, Simon Fraser University; 2013.
2. Hamby S. On defining violence, and why it matters. *Psychology of violence* [Internet]. 2017 [cited 2022 September 27]; 7(2):167-180. doi: 10.1037/vio0000117.
3. Buss AH. *The Psychology of Aggression*. New York: Wiley; 1961.
4. Monahan J. Major mental disorder and violence: Epidemiology and risk assessment. In: Pinard GF, Pagani L, editors. *Clinical assessment of dangerousness: Empirical contributions*. Cambridge: Cambridge University Press; 2001. p. 89-102.
5. West HC, Sabol WJ, Greenman SJ. *Prisoners in 2009*. United States: Bureau of Justice Statistics; 2010.

6. Nicholls TL, Cruise KR, Greig D, et al. Female offenders. In: Cutler BL, Zapf PA, editors. *APA handbook of forensic psychology: criminal investigation, adjudication, and sentencing outcomes*. Washington, DC: American Psychological Association; 2015. p. 79-123. doi: 10.1037/14462-004
7. de Vogel V, Nicholls TL. Gender matters: An introduction to special issues on women and girls. *The International Journal of Forensic Mental Health* [Internet]. 2016 [cited 2022 September 27]; 15(1):1-25. doi: 10.1080/14999013.2016.1141439
8. Javadini S, Sadeh N, Verona E. Gendered social forces: A review of the impact of institutionalized factors on women and girl's criminal justice trajectories. *Psychology, Public Policy, and Law* [Internet]. 2011 [cited 2022 September 27]; 17:161-211. doi: 10.1037/a0021957
9. Schwartz J, Steffensmeier DJ, Feldmeyer B. Assessing trends in women's violence via data triangulation: Arrests, convictions, incarcerations & victim's reports. *Social problems* [Internet]. 2009 [cited 2022 September 27]; 56:494-525. doi: 10.1525/sp.2009.56.3.494
10. Robbins PC, Monahan J, Silver E. Mental disorder, violence and gender. *Law and Human Behaviour* [Internet]. 2003 [cited 2022 September 27]; 27:561-571. doi: 10.1023/B:LAHU.0000004886.13268.f2
11. Flynn S, Abel K, While D et al. Mental illness, gender and homicide: A population-based descriptive study. *Psychiatry Research* [Internet]. 2011 [cited 2022 September 27]; 185:368-375. doi: 10.1016/j.psychres.2010.07.040
12. de Vogel V, de Spa E. Criminele voorgeschiedenis en delictanalyse bij vrouwelijke terbeschikkinggestelden: Een vergelijking met mannen [Criminal histories and offense analyses of women in forensic psychiatry: A comparison with men]. *Panopticon* [Internet]. 2015 [cited 2022 September 27]; 36:433-448. Dutch.
13. Yourstone J, Torun L, Grann M, et al. Gender differences in diagnoses of mentally disordered offenders. *International Journal of Forensic Mental Health* [Internet]. 2009 September [cited 2022 September 27]; 8(3):172-177. doi: 10.1080/14999010903199316
14. Curry TR, Lee G, Rodriguez SF. Does victim gender increase sentence severity? Further explorations of gender dynamics and sentencing outcomes. *Crime & Delinquency* [Internet]. 2004 July [cited 2022 September 27]; 50(3): 319-343. doi: 10.1177/0011128703256265
15. Koons-Witt BA, Schram PJ. The prevalence and nature of violent offending by females. *Journal of Criminal Justice* [Internet]. 2003 [cited 2022 September 27]; 31(4):361-371. doi: 10.1016/S0047-2352(03)00028-X
16. Beyens K. Over ridders, stoute, zotte en zieke vrouwen [About knights, bad, foolish and mad women]. In Schandevyl E, Bollen S, de Metsenaere M, editors. *Haar recht. Vrouwe Justitia feministisch bekeken [In her right. Vrouwe Justitia in a feminist perspective]*. Brussels, Belgium: VUBPRESS; 2009. p. 89-106.

17. de Vogel V, Stam J, Bouman Y, et al. Violent women: A multicentre study into gender differences in forensic psychiatric patients. *The Journal of Forensic Psychiatry & Psychology* [Internet]. 2015 November [cited 2022 September 27]; 27(2):1–24. doi: 10.1080/14789949.2015.1102312
18. Klier CM, Grylli C, Amon S, et al. Is the introduction of anonymous delivery associated with a reduction of high neonaticide rates in Austria? A retrospective study. *BJOG: An International Journal of Obstetrics & Gynaecology* [Internet]. 2012 December [cited 2022 September 27]; 120:428–434. doi: 10.1111/1471-0528.12099
19. Johnson MP. Conflict and Control: Gender Symmetry and Asymmetry in Domestic Violence. *Violence Against Women* [Internet]. 2006 [cited 2022 September 27]; 12(11):1003–1018. doi: 10.1177/1077801206293328
20. Cortoni F, Hanson RK, Coache M-E. The recidivism rates of female sexual offenders are low: A meta-analysis. *Sexual Abuse a Journal of Research and Treatment* [Internet]. 2010 December [cited 2022 September 27]; 22(4):387-401.
21. Dack C, Ross J, Papadopoulos C, et al. A review and meta-analysis of the patient factors associated with psychiatric in-patient aggression. *Acta Psychiatrica Scandinavica* [Internet]. 2013 April [cited 2022 September 27]; 127(4):255-68. doi: 10.1111/acps.12053.
22. May-Chahal C, Cawson P. Measuring child maltreatment in the United Kingdom: A study of the prevalence of child abuse and neglect. *Child Abuse Neglect* [Internet]. 2005 September [cited 2022 September 27]; 29(9):969-84. doi: 10.1016/j.chiabu.2004.05.009
23. Nicholls TL, Pritchard MM, Reeves KA, et al. Risk assessment in intimate partner violence: A systematic review of contemporary approaches. *Partner Abuse* [Internet]. 2013 [cited 2022 September 27]; 4(1):76–168. doi: 10.1891/1946-6560.4.1.76
24. Cooper A, Smith EL. Homicide trends in the United States, 1980–2008. In: Bureau of Justice Statistics, editor. *Homicide trends in the United States*. Washington, DC: US Department of Justice; 2011. p. 18-20, 27-28.
25. Batchelor, S. ‘Prove me the bam!’: Victimization and agency in the lives of young women who commit violent offences. *Probation Journal* [Internet]. 2005 December [cited 2022 September 27]; 52(4):358–375. doi: 10.1177/0264550505058034
26. Monahan J, Steadman H, Silver E, et al. *Rethinking risk assessment: The MacArthur study of mental disorder and violence*. New York: Oxford University Press; 2001.
27. de Vogel V, de Spa E. Gender differences in violent offending: Results from a multicentre comparison study in Dutch forensic psychiatry. *Psychology, Crime & Law* [Internet]. 2019 [cited 2022 September 27]; 25(7):739–751. doi: 10.1080/1068316X.2018.1556267

28. Odgers CL, Moretti MM, Reppucci ND. Examining the science and practice of violence risk assessment with female adolescents. *Law and Human Behaviour* [Internet]. 2005 [cited 2022 September 27]; 29:7–27. doi: 10.1007/s10979-005-1397-z
29. Nicholls TL, Brink J, Greaves C, et al. Forensic psychiatry inpatients and aggression: An exploration of incidence, prevalence, severity and interventions by gender. *International Journal of Law and Psychiatry* [Internet]. 2009 February [cited 2022 September 27]; 32(1):23-30. doi: 10.1016/j.ijlp.2008.11.007
30. Strebb J, Lutz M, Dudeck M, et al. Are women really different? Comparison of men and women in a sample of forensic psychiatric inpatients. *Frontiers in Psychiatry* [Internet]. 2022 March 23 [cited 2022 September 27]; 13:857468. doi: 10.3389/fpsy.2022.857468
31. Daffern, M. The predictive validity and practical utility of structured schemes used to assess risk for aggression in psychiatric inpatient settings. *Aggression and Violent Behavior* [Internet]. 2007 [cited 2022 September 27]; 12(1):116–130. doi: 10.1016/j.avb.2006.03.005
32. De Vogel V, de Vries Robbé M, van Kalmthout W, et al. Female Additional Manual (FAM). Additional guidelines to the HCR-20 for assessing risk for violence in women. English version. Utrecht (NL): Van der Hoeven Kliniek; 2012.
33. Singh JP, Desmarais SL, Hurducas C, et al. International perspectives on the practical application of violence risk assessment: A global survey of 44 countries. *International Journal of Forensic Mental Health* [Internet]. 2014 [cited 2022 September 27]; 13: 193-206. doi: 10.1080/14999013.2014.922141
34. Hart SD, Douglas KS, Guy LS. The structured professional judgement approach to violence risk assessment: Origins, nature, and advances. In: Boer DP, editor. *The Wiley handbook on the theories, assessment and treatment of sexual offending*. Hoboken, NJ: John Wiley & Sons, 2016.
35. Douglas KS, Belfrage H. Interrater reliability and concurrent validity of the HCR-20 Version 3. *The International Journal of Forensic Mental Health* [Internet]. 2014 [cited 2022 September 27]; 13(2):130–139. doi: 10.1080/14999013.2014.908429
36. Judges R, Egan V, Broad G. A Critique of the Historical Clinical Risk-20, Version 3, Risk Assessment Instrument. *Journal of Forensic Psychology Practice* [Internet]. 2016 [cited 2022 September 27]; 16(4):304-320. doi: 10.1080/15228932.2016.1196102
37. O’Shea LE, Picchioni MM, Mason FL, et al. Differential predictive validity of the Historical, Clinical and Risk Management scales (HCR-20), for inpatient aggression. *Psychiatry Research* [Internet]. 2014 December 15 [cited 2022 September 27]; 220(1-2):669-678. doi: 10.1016/j.psychres.2014.07.080
38. Douglas KS, Hart SD, Webster CD, et al. Historical-Clinical-Risk Management-20, Version 3 (HCR-20V3): Development and Overview. *International Journal of*

- Forensic Mental Health [Internet]. 2014 [cited 2022 September 27]; 13:93-108. doi: 10.1080/14999013.2014.906519
39. Rossdale S-V, Tully RJ, Egan V. The HCR-20 for Predicting Violence in Adult Females: A Meta-Analysis. *Journal of Forensic Psychology Research and Practice* [Internet]. 2019 November 01 [cited 2022 September 27]; 20(1):15-52. doi: 10.1080/24732850.2019.1681875
 40. Webster CD, Douglas KS, Eaves D, et al. *The HCR-20 scheme: The assessment of dangerousness and risk*. Burnaby, Canada: Simon Fraser University and Forensic Psychiatric Services Commission of British Columbia; 1995.
 41. Higgins JPT, Thompson SG, Deeks JJ, et al. Measuring inconsistency in meta-analyses. *The British Medical Journal* [Internet]. 2003 [cited 2022 September 27]; 327(7414):557–560. doi: 10.1136/bmj.327.7414.557
 42. Schaap G, Lammers S, de Vogel V. Risk assessment in female forensic psychiatric patients: a quasi-prospective study into the validity of the HCR-20 and PCL-R. *The Journal of Forensic Psychiatry & Psychology* [Internet]. 2009 [cited 2022 September 29]; 20(3): 354-365. doi: 10.1080/14789940802542873
 43. de Vogel V, de Ruiter C. The HCR-20 in personality disordered female offenders: A comparison with a matched sample of males. *Clinical Psychology and Psychotherapy* [Internet]. 2005 [cited 2022 September 29]; 12(3):226–240. doi: 10.1002/(ISSN)1099-0879
 44. O’Shea L, Picchioni MM, Mitchell A, et al. Moderators of the predictive efficacy of the historical, clinical and risk management-20 for aggression in psychiatric facilities: Systematic review and meta-analysis. *Aggression and Violent Behavior* [Internet]. 2013 [cited 2022 September 29]; 18(2):55–270.
 45. Wynn R. Medicate, restrain or seclude? Strategies for dealing with violent and threatening behaviour in a Norwegian University Psychiatric Hospital. *Scandinavian Journal of Caring Sciences* [Internet]. 2002 [cited 2022 September 29]; 16:287-291
 46. Lam JN, McNiel DE, Binder RL. The relationship between patients’ gender and violence leading to staff injuries. *Psychiatric Services* [Internet]. 2000 [cited 2022 September 29]; 51:1167-1170
 47. Stewart D, Bowers L, Simpson A, et al. Manual restraint of adult psychiatric inpatients: a literature review. *Journal of Psychiatric and Mental Health Nursing* [Internet]. 2009 [cited 2022 September 29]; 16:749-757.
 48. Green D, Schneider M, Griswold H, et al. A Comparison of the HCR-20V3 Among Male and Female Insanity Acquittes: A Retrospective File Study. *International Journal of Forensic Mental Health* [Internet]. 2016 [cited 2022 September 29]; 15(1):48-64. doi: 10.1080/14999013.2015.1134726
 49. de Vogel V, Bruggeman M, Lancel M. Gender-Sensitive Violence Risk Assessment: Predictive Validity of Six Tools in Female Forensic Psychiatric Patients. *Criminal*

- Justice and Behavior [Internet]. 2019 [cited 2022 September 29]; 46(4):528–549. doi: 10.1177/0093854818824135
50. Strand SJM, Selenius H. Assessing risk for inpatient physical violence in a female forensic psychiatric sample – comparing HCR-20v2 with the female additional manual to the HCR-20v2. *Nordic Journal of Psychiatry* [Internet]. 2019 January 04 [cited 2022 September 29]; 73(4-5):248-256. doi: 10.1080/08039488.2019.1613447
 51. de Vogel V, Louppen M. Female offenders. In: Roesch R, Cook AN, editors. *Handbook of forensic mental health services*. London, England: Routledge; 2017. p. 369-400
 52. van Voorhis P, Wright EM, Salisbury E, et al. Women’s risk factors and their contributions to existing risk/needs assessment: The current status of a gender-responsive supplement. *Criminal Justice and Behavior* [Internet]. 2010 [cited 2022 September 29]; 37:261-288. doi: 10.1177/0093854809357442
 53. Logan, C. Sexual deviance in females: Psychopathology and theory. In: Laws DR, O’Donohue W, editors. *Sexual deviance: Theory, assessment and treatment*. 2nd edition. New York: Guilford Press; 2008.
 54. Rossegger A, Wetlil N, Urbaniok F, et al. Women convicted for violent offences: Adverse childhood experiences, low level of education and poor mental health. *BMC Psychiatry* [Internet]. 2009 [cited 2022 October 02]; 9:81.
 55. Bowles MA, DeHart D, Webb JR. Family influences on female offenders’ substance use: The role of adverse childhood events among incarcerated women. *Journal of Family Violence* [Internet]. 2012 [cited 2022 October 02]; 27:681-686. doi: 10.1007/s10896- 012-9450-4
 56. Finkelhor D, Omrod RK, Turner HA. Poly-victimization: A neglected component in child victimization. *Child Abuse and Neglect* [Internet]. 2007 [cited 2022 October 02]; 31:7-26. doi:10.1016/j. chiabu.2006.06.008
 57. Loper AB, Mahmoodzadegan N, Warren JI. Childhood maltreatment and cluster B personality pathology in female serious offenders. *Sexual Abuse: A Journal of Research and Treatment* [Internet]. 2008 [cited 2022 October 02]; 20:139-160.
 58. Miller S, Malone PS, Dodge KA. Developmental trajectories of boys’ and girls’ delinquency: Sex differences and links to later adolescent outcomes. *Journal of Abnormal Child Psychology* [Internet]. 2010 [cited 2022 October 02]; 38:1021-1032. doi: 10.1007/s10802-010- 9430-1
 59. Pietrek C, Elbert T, Weierstall R, et al. Childhood adversities in relation to psychiatric disorders. *Psychiatry Research* [Internet]. 2013 [cited 2022 October 02]; 206:103-110. doi: 10.1016/j. psychres.2012.11.003
 60. Moretti MM, Bartolo T, Craig S, et al. Gender and the transmission of risk: A prospective study of adolescent girls exposed to maternal versus paternal interparental

- violence. *Journal of Research on Adolescence* [Internet]. 2014 [cited 2022 October 02]; 24:80-92. doi: 10.1111/jora.12065
61. Pollock JM, Mullings JL, Crouch BM. Violent women: Findings from the Texts women inmates study. *Journal of Interpersonal Violence* [Internet]. 2006 [cited by 2022 October 02]; 21:485-502.
 62. Weizmann-Henelius G, Viemerö V, Eronen M. Psychological risk markers in violent female behavior. *International Journal of Forensic Mental Health* [Internet]. 2004 [cited 2022 October 02]; 3:185-196.
 63. Salisbury EJ, van Voorhis P, Spiropoulos GV. The predictive validity of a gender-responsive needs assessment. *Crime & Delinquency* [Internet]. 2009 [cited 2022 October 02]; 55:550-585.
 64. Valdez CE, Lilly MM. Biological sex, gender role, and criterion A2: Rethinking the “gender” gap in PTSD. *Psychological Trauma: Theory, Research, Practice, and Policy* [Internet]. 2014 [cited 2022 October 02]; 6:34–40. doi: 10.1037/a0031466
 65. Margolin G, Gordis EB, Medina A, et al. The co-occurrence of husband-to-wife aggression, family-of-origin aggression, and child abuse potential in a community sample. Implications for parenting. *Journal of Interpersonal Violence* [Internet]. 2003 [cited 2022 October 02]; 18:413-440.
 66. Swan S, Gambone LJ, Fields AM, et al. Women who use violence in intimate relationships: The role of anger, victimization, and symptoms of posttraumatic stress and depression. *Violence and Victims* [Internet]. 2005 [cited 2022 October 02]; 20:267-285.
 67. Rheingold AA, Acierno R, Resnick HS. Trauma, posttraumatic stress disorder, and health risk behaviors. In: Schnurr PP, Green BL. editors. *Trauma and health*. Washington, DC: American Psychological Association; 2004. p. 217-243.
 68. Benda BB. Gender differences in life-course theory of recidivism: A survival analysis. *International Journal of Offender Therapy and Comparative Criminology* [Internet]. 2005 [cited 2022 October 02]; 49:325-342.
 69. Warren JI, Burnette ML, South SC, et al. Personality disorders and violence among female prison inmates. *The Journal of the American Academy of Psychiatry and the Law* [Internet]. 2002 [cited 2022 October 02]; 30:502-509.
 70. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders* [Internet]. 5th edition. Washington, DC: American Psychiatric Publishing; 2013. [Cited 2022 October 02].
 71. Strand S, Belfrage H. Comparison of hcr-20 scores in violent mentally disordered men and women: Gender differences and similarities. *Psychology, Crime & Law* [Internet]. 2008 January 07 [cited 2022 October 02]; 7(1):71-79. doi: [10.1080/10683160108401784](https://doi.org/10.1080/10683160108401784)

72. Motz A. *The psychology of female violence. Crimes against the body*. East Sussex: Brunner-Routledge; 2001.
73. Larivière M. *The relationship between self-esteem, criminality, aggression, and violence: A meta-analysis*. Ottawa, Canada: Carleton University; 1999. Unpublished.
74. Wong TML, Slotboom A, Bijleveld CCJH. Risk factors of delinquency of adolescent and young adult females: A European review. *European Journal of Criminology* [Internet]. 2010 [cited 2022 October 02]; 7:266-284.
75. Hubbard DJ, Matthews B. Reconciling the differences between the “Gender-responsive” and the “What works” literatures to improve services for girls. *Crime and Delinquency* [Internet]. 2008 [cited 2022 October 02]; 54:225-258.
76. Messer J, Maughan B, Quinton D, et al. Precursors and correlates of criminal behaviour in women. *Criminal Behaviour and Mental Health* [Internet]. 2004 [cited 2022 October 02]; 14:82-107.
77. de Ruiter C, de Jong EM. CARE-NL. Richtlijn voor gestructureerde beoordeling van het risico van kindermishandeling [CARE-NL. Guideline for the structured assessment of risk for child abuse]. Enschede: FEBO druk; 2005. Dutch
78. Simmons CA, Lehmann P, Dia DA. Parenting and women arrested for intimate partner violence. *Journal of Interpersonal Violence* [Internet]. 2010 [cited 2022 October 02]; 25:1429-1448.
79. Ministry of Justice. *Female offenders and child dependents*. London, England: Ministry of Justice; 2015.
80. Bloom BE, Owen B, Convington SS. *Gender-responsive strategies: Research, practice, and guiding principles for women offenders*. Washington DC: National Institute of Corrections; 2003.
81. van Voorhis P, Salisbury E, Wright EM, et al. *Achieving accurate pictures of risk and identifying gender responsive needs: Two new assessments for women offenders*. Washington, DC: United States Department of Justice: National Institute of Corrections; 2008.
82. Greene S, Haney C, Hurtado A. Cycles of pain: Risk factors in the lives of incarcerated mothers and their children. *The Prison Journal* [Internet]. 2000 [cited 2022 October 02]; 80:3-23. doi: 10.1177/ 0032885500080001001