

Translating Into Practice Data About Violent Women

Jessica Ferranti, MD

There is a growing body of medical literature supporting the presence of unique risk factor profiles in women who are violent, of much higher violence risk, and who are psychiatric inpatients. Building on the existing literature on violence risk in women, Beck and colleagues contribute an excellent example of how skilled analysis of violence risk factors and typology of violence can translate to evidence-based strategies for management and treatment of aggression. Beck *et al.* postulate a possible unrecognized syndrome of cognitive impairment, chronic and severe aggression, and self-harm in a subgroup of highly aggressive women inpatients. This commentary locates new and old findings in Beck *et al.*, in the context of some relevant prior research and highlights some challenges in clinical translation, especially in the setting of intellectual disability and personality disorder.

J Am Acad Psychiatry Law 45:25–30, 2017

In the medical literature and the media at large, women are predominantly represented as victims rather than perpetrators of violence. Women who commit violence toward others are violating social, cultural, and psychological norms to a much higher extent compared with men; when women act violently, it is generally unexpected.¹ Studies have suggested that when dealing with stress and negative emotions such as anger, women are more likely than men to use internalized coping strategies.² Women are less likely to be physically violent toward others and are more likely to express aggression as introverted problems such as depression, anxiety, and substance misuse. Laboratory studies have provided evidence of gender differences in aggression in response to experimentally produced stress. Numerous studies have shown that the behavioral profiles associated with coping with stress differ in men and women, with higher levels of aggressive behaviors in men.^{3,4} Beck *et al.*,⁵ in their information study, contribute to an evolving body of medical literature that suggests

that the presence of mental disorder, disease, or defect decreases gender differences in risk of violence.⁶

Studies have shown that women who are psychiatric inpatients can be as violent as their male counterparts.^{7–9} A woman with mental illness is 27 times more likely than one without mental illness to be convicted of a violent crime.¹⁰ The absence of substantive gender differences when conducting violence risk assessment in psychiatric inpatients has also been shown in forensic settings.^{8,11} Yet, assessing and treating women who have the potential to be violent continues to be challenging, because most studies on violence risk focus on men. Similarly, violence risk assessment instruments are typically validated in male populations, making their validity for application to women questionable. Studies indicate that clinicians typically underestimate violence risk in women, especially those with psychiatric disorders.^{9,12}

Beck and colleagues' findings of a specific risk factor profile in a high-aggression subset of women in a forensic mental health facility contributes to our growing understanding of the factors that precipitate acts of physical violence in psychiatric inpatients. Perhaps equally important, their work suggests clinical strategies for management and treatment guided by their identification of the relevant factors and the typology of violence. In some

Dr. Ferranti is Associate Clinical Professor, Division of Psychiatry and the Law, Department of Psychiatry and Behavioral Sciences, University of California Davis Medical Center, Sacramento, CA. Address correspondence to: Jessica Ferranti, MD, Department of Psychiatry and Behavioral Sciences, UC Davis Medical Center, 2230 Stockton Boulevard, Sacramento, CA 95817. E-mail: jaferranti@ucdavis.edu.

Disclosures of financial or other potential conflicts of interest: None.

ways, Beck *et al.* show us the power of risk assessment and how it can pragmatically guide clinical practice and programs in an evidence-based way. Although their study does not specifically discuss outcome data based on treatment (that is not the focus of the paper), Beck and colleagues give us a glimpse at how they target treatment to address their core findings.

Given the high prevalence of emotional dysregulation and intellectual disability in a high-aggression sample that predominantly engaged in reactive (affective) violence, the authors suggest a heightened role for psychotherapeutic work in these patients that is informed by dialectical behavioral therapy (DBT). They also seem to imply a lesser role for pharmacologic interventions for aggression, given the conspicuous absence of any commentary on psychopharmacology in their paper. At a time when insurance companies and systems demand rapid treatments, cost containment, and efficiency, the subtle suggestion of Beck *et al.* that skilled therapeutic programming is key will not be welcome news for some. Psychotherapy programs require time, staff training, and competent practitioners. In contrast, medications are fast and efficient, but only when they work. Regardless of the economic tensions inherent in our contemporary health care system, it is worthwhile to take stock of what we know about violence risk assessment (and what we do not know) and to appraise realistically, not only our available interventions, but also our limitations. Translation of science to clinical utility is the ultimate goal. However, the professions of psychiatry and psychology have a difficult time with accepting limitations, and we have arguably been complicit in perpetuating the notion among the general public that there is always something that can be done, something that can be prevented. We could benefit from reflecting on our neurology colleagues, who work with the same organ, (i.e., the brain) and who are very skilled at identification of pathological brain processes, but are equally good at acknowledging when they cannot formidably change things. Clinical neurology reminds us, sometimes painfully, that clinical translation of data to treatment is not a given, especially with an organ as complex as the brain. Personality pathology and intellectual disability are perhaps our “stroke lesions” and psychotherapy our “physical medicine and rehabilita-

tion.” The question to ask ourselves, and that which is essentially posited by Beck and colleagues, is what can we identify to understand pathology and how can we practically intervene to improve outcomes?

Psychosocial Profiles

Beck and colleagues report on their finding of a homogeneous risk factor profile in a subset of the most highly aggressive women in a forensic inpatient setting. This work is a valuable contribution to improving identification, treatment, and management of violent women in the community, as well as in forensic settings. Although the importance of intellectual disability in the high-aggression subset of women may be arguably the most striking finding of their study, Beck and colleagues make other interesting observations of the psychosocial characteristics of their samples. Their discovery of highest levels of childhood adversity and conduct problems in the developmental years of the high-aggression group adds to a weighty body of literature that shows that acts of violence by women are born not just out of adverse life conditions but out of extreme and adverse life conditions. Women who engage in violence have repeatedly been shown to have more psychosocial stressors throughout life than their male counterparts.^{2,13–16} Beck and colleagues write:

From the standpoint of childhood adversity, almost 90 percent of patients in the high-aggression trajectory group experienced some sort of sexual or physical abuse and 94 percent had been placed outside of the home at least temporarily by age 11; by age 12, most had experienced the onset of psychiatric symptoms [Ref. 5, p 000].

It is a stark picture of an aberrant and unfortunate developmental pathway. Females who are raised in traumatic environments tend to have problems with emotional dysregulation, affect intolerance, and impulsivity. Women with higher levels of aggressivity are most likely to exhibit self-harming behaviors but, when compared with men, are still much less likely to engage in externalized physical violence toward others in the general population.

Intellectual Disability and Violence

The finding by Beck *et al.* of an extremely high rate of intellectual impairment in the high-aggression sample is perhaps a new look at an old finding. It has been well-established in the existing literature that low intellectual functioning is an important risk fac-

tor for violence in both men and women.¹⁷ Several studies suggest that the rate of aggressive behaviors in the intellectually disabled population is around 9 percent.^{17,18} However, the prevalence of aggression in individuals with profound intellectual disability or multiple disabilities has been reported to be as high as 45 percent.¹⁹ In a prior meta-analysis, McClintock *et al.*²⁰ identified a series of risk factors for externalized aggression among intellectually disabled populations (both men and women) that included male gender, expressive communication deficits, and a diagnosis of autism.²⁰ Conversely, Jones *et al.*,²¹ in a 2008 study, found that externalized aggressive behaviors in intellectually disabled populations are associated with female gender and living in shared-care settings or with a paid caretaker (not family), not with having a severe physical disability, vision impairment, and urinary incontinence. Beck *et al.* appeared to support that intellectual disability may confer a disproportionate risk of externalized violence for women. They wrote:

. . . Many patients had been placed in special education classes by the time they were in middle school, and most carried diagnoses involving borderline intellectual functioning or mild intellectual disability [Ref. 5, p 000]. . . . From a diagnostic and symptomatic standpoint, 89 percent of patients with a high-aggression trajectory manifested intellectual impairment . . . [Ref. 5, p].

The notably high percentage of intellectual disability in the most aggressive women in the study falls in line with other studies that suggest that the presence of a mental disorder, disease, or defect confers a disproportionate degree of violence risk in affected women versus their male counterparts.^{6,21}

Personality Disorder, Women, and Violence

Beck *et al.*⁵ affirmed the importance of borderline personality traits, (e.g., impulsivity, affect intolerance, and intense anger), in women who exhibit externalizing behaviors, such as violence toward others and self-harm.²² Difficulty tolerating frustration and negative affect commonly lead to primitive acting-out behaviors, including violence. The prevalence of borderline personality disorder in women who commit acts of violence has been well studied. In an important work, Logan and Blackburn²² found that, in women, personality pathology is the only measure that is significantly associated with criminal offending behavior. They reported that women incarcer-

ated for a serious violent offense are four times more likely to have a diagnosis of borderline personality disorder. Kuo and Linehan²³ have written extensively on the psychopathology of borderline personality disorder, including the difficulty of managing aggressive behavior. Numerous studies have now provided evidence for the association of a borderline personality disorder diagnosis in women with violence toward others.^{5,13,22,25,27,29,39} Problems in relationships with others and tendency to form unstable and chaotic emotional attachments with others may account for some of the frequency of violence in women with borderline personality disorder.

Beck *et al.* indicated that most of the violence perpetrated by the women in the study was reactive or impulsive violence induced by interpersonal stressors. This finding concurs with prior studies that indicate that impulsive violence committed by women is usually the result of interpersonal conflict within the social framework of the woman's life, typically involving parents, husbands, romantic partners, and children as the victims.^{3,24,25} Compared with men, women are more likely to commit impulsive violent crimes at home.²⁶ However, the high-aggression women in the study by Beck *et al.* had a high rate of early placement outside of the home, with 94 percent placed outside of the home at least temporarily by age 11. For these women, institutions had long been their "home," and mental health staff their caretaking (parental) objects. These psychodynamic factors, imbued in a life history marked by displacement, perhaps contribute to higher rates of interpersonal violence due to emotional dysregulation within the institutional treatment setting.

Beck and colleagues noted that few patients in their high-aggression subgroup had extensive arrest histories or displayed overtly antisocial or psychopathic behavior. Instead, most displayed impulsivity and aggressive behaviors that were reactive to interpersonal conflict. Prior studies have shown that violent women are more likely to have been given a diagnosis of borderline personality disorder and are less likely to have been given a diagnosis of conduct disorder or antisocial personality disorder.^{13,27-29} Research to date suggests that the rate of antisocial personality disorder is lower in women than in men across a range of institutional, forensic, and community settings.³⁰ In community samples of psychiatric patients and nonpatients, two- to five-fold times higher rates of antisocial personality disorder

der are typically found in men versus women. Gender differences in the expression of antisocial and aggressive behaviors such as conduct disorder in adolescents and antisocial personality disorder in adults is an active area of research investigation. However, research on psychopathy in women may be challenged, because it is often conducted on incarcerated populations where there may be gender biases in sentencing that lead to fewer incarcerated female psychopathic individuals.³¹

Major Mental Disorder

Another, equally noteworthy, negative finding of Beck *et al.* should be pointed out. What was not found to be a primary factor leading to violence in the samples of highly aggressive women? The answer: the symptoms of Axis I major mental illness (i.e., psychotic illnesses such as schizophrenia or bipolar spectrum illnesses) as key precipitants of the most violent incidents. This absence of finding is important for several reasons, the most important of which is its contribution to our understanding of the role (and often lack of substantive role) played by major mood disorders and psychotic disorders in most violent acts. Beck *et al.* suggested that the predominant factors in the high-aggression subset were congenital cognitive impairment (intellectual disability) and personality trait factors, both of which typically led to impulsive acting out in response to frustration intolerance and affect dysregulation.

Treatment and Management Strategies

Beck and colleagues' discussion of the complex interaction of possible genetic predisposition, poor and (in most cases) abusive environment, and congenital cognitive impairment is interesting. They wonder whether an "unrecognized syndrome" underlies the violence, based on the homogenous profile of their high-aggression subset. Clinical translation is ultimately the goal of almost all biomedical science, but in this case, it is difficult to see how applying a syndromic nomenclature would have clinical utility. Treatment options for known developmental and neurocognitive disorders remain sparse and outcomes often unsatisfying. In terms of stratifying risk of violence, it is important to remember that people cannot be reduced to a number on a structured measure, a diagnosis, or a set of gene markers, just as two individuals with the same IQ

score are not necessarily similar in any other way. However, translating the nature and extent of functional impairments such as communication and learning disabilities, to inform the creation and appropriate application of treatments is very important. The presence of communication and learning disabilities can make standardized testing more difficult and applying psychotherapy more challenging and may confound other diagnoses.

A Cochrane review published in 2015 was a meta-analysis of six studies based on adult populations with developmental disorders and "outwardly directed aggressive behavior" (Ref. 32, p 8). The researchers concluded that the evidence for the effectiveness of behavioral and cognitive-behavioral interventions in people who are intellectually disabled is limited; however, there was some evidence that mindfulness may be helpful in reducing aggression.³² Concordantly, Beck and colleagues reported that an inpatient program modeled on DBT principles has shown promise in reducing violent incidents. They comment on the deficits in early attachment to primary caretakers and postulate that attachment theory may be useful in understanding the development of aggressive behaviors. We know that deficits in early attachment to a sufficient maternal object have been shown to be especially harmful to girls. For example, in a study by Raine *et al.*,³³ maternal rejection at age one was shown to predict violent crime at age 18 in women. Violent parental modeling in the home and exposure to violence between parents have been shown to contribute to externalizing problems such as violence and intergenerational transmission of antisocial behavior in both males and females.^{34,35} Agreeing with findings in Beck *et al.*, another study has shown that psychiatric illness is common in the parents of females who are violent.³ A psychodynamic approach based in object relations theory, transference-based psychotherapy, has established the efficacy of treatment of borderline personality disorder;³⁶ however, there is no evidence to date to support the use of transference-based psychotherapy in cases of intellectual disability.

Beck *et al.* did not address pharmacologic interventions. In fact, what medications (if any) the patients in the study were taking or the possible use of medications (voluntary or involuntary) in the seclusion/restraint protocol, is not discussed in the study at all, leaving one to wonder about a host of variables that could fill in the picture. Pharmacological treat-

ments for aggression in individuals with intellectual disability and borderline personality disorder remain somewhat nebulous. Atypical antipsychotic drugs have been the most commonly used agents in both diagnostic categories, but studies have indicated that the efficacy of such treatments for aggression is not clear. For example Willner³⁷ reported that, with the possible exception of risperidone, there is little reliable evidence that antidepressants, mood stabilizers, or antipsychotic medication are effective treatments for aggression in those with intellectual disability. Several studies have supported that clozapine reduces both self-directed and outwardly directed aggression in patients with borderline personality disorder and does so independent of the presence or absence of psychotic symptoms.^{38,39} Several small studies, contradicting Willner's findings, suggest that clozapine can also have significant antiaggression effects in people with intellectual disabilities. Although antidepressants have not generally been found to be effective in reducing aggression in borderline personality disorder, atypical antipsychotic medications and mood stabilizing medications (e.g., lamotrigine, topiramate, and divalproex) have demonstrated efficacy for reducing aggression over placebo.^{40,41} High rates of obesity and hypothyroidism were reported by Beck *et al.* and are interesting to consider in light of hormonal effects on mood. The finding of high rates of hypothyroidism in the high-aggression subset could suggest a biological (i.e., hormonal) etiology for some symptoms of mood dysregulation, sleep disturbance, and irritability and could lead to decreased emotional resilience under stress. However, a significant confounding factor could be psychotropic medication side effects that can cause metabolic abnormalities and hypothyroidism, depending on the pharmacologic agent.

Conclusions

The recent literature on violence indicates that certain populations of women with mental illness have the potential to be as violent as their male counterparts who have mental illness. Beck and colleagues have given us important information about the characteristics specific to a subgroup of highly aggressive women inpatients. These data offer an opportunity for improved identification, intervention, and treatment of women at risk of hurting themselves and others. Awareness of gender differences in the risk factor profiles of women is essential for accurate de-

tection and prevention of violence in our communities, and it is essential to knowing where we can intervene and, perhaps, where we cannot. More research on violence in women is needed across various community and institutional settings. Beck and colleagues' work is an excellent example of how analyzing risk factors and typology of violence has the potential to translate into evidence-based management and treatment of aggression.

References

1. Coontz PD, Lidz CW, Mulvey EP: Gender and the assessment of dangerousness in the psychiatric emergency room. *Int'l J L & Psychiatry* 17:369–76, 1994
2. Yourstone J, Lindholm T, Kristiansson M: Women who kill: a comparison of the psychosocial background of female and male perpetrators. *Int'l J L & Psychiatry* 31:374–83, 2008
3. Verona E, Reed A 2nd, Curtin JJ, *et al*: Gender differences in emotional and overt/covert aggressive responses to stress. *Aggress Behav* 33:261–71, 2007
4. Verona E, Kilmer A: Stress exposure and affective modulation of aggressive behavior in men and women. *J Abnorm Psychol* 116: 410–21, 2007
5. Beck N, Hammer JH, Robbins S, *et al*: Highly aggressive women in a forensic psychiatric hospital. *J Am Acad Psychiatry Law* 45: 16–23, 2017
6. Maden T: *Treating Violence: A Guide to Risk Management in Mental Health*. Oxford, New York: Oxford University Press, 2007
7. Lam JN, McNeil DE, Binder RL: The relationship between patients' gender and violence leading to staff injuries. *Psychiatr Serv* 51:1167–70, 2000
8. Robbins PC, Monahan J, Silver E: Mental disorder, violence, and gender. *Law & Hum Behav* 27:561–71, 2003
9. Skeem J, Schubert C, Stowman S, *et al*: Gender and risk assessment accuracy: underestimating women's violence potential. *Law & Hum Behav* 29:173–86, 2005
10. Hodgins S: Mental disorder, intellectual deficiency, and crime: evidence from a birth cohort. *Arch Gen Psychiatry* 49:476–83, 1992
11. Nicholls TL, Brink J, Greaves C, *et al*: Forensic psychiatric inpatients and aggression: an exploration of incidence, prevalence, severity, and interventions by gender. *Int'l J L & Psychiatry* 32: 23–30, 2009
12. Skeem JL, Mulvey EP, Odgers C, *et al*: What do clinicians expect? Comparing envisioned and reported violence for male and female patients. *J Consult Clin Psychol* 73:599–609, 2005
13. Ferranti J, McDermott BE, Scott CL: Characteristics of female homicide offenders found not guilty by reason of insanity. *J Am Acad Psychiatry Law* 41:516–22, 2013
14. Dean K, Walsh E, Moran P, *et al*: Violence in women with psychosis in the community: prospective study. *Br J Psychiatry* 188: 264–70, 2006
15. Taylor PJ, Bragado-Jimenez MD: Women, psychosis and violence. *Int'l J L & Psychiatry* 32:56–64, 2009
16. Tripodi SJ, Pettus-Davis C: Histories of childhood victimization and subsequent mental health problems, substance use, and sexual victimization for a sample of incarcerated women in the US. *Int'l J L & Psychiatry* 36:30–40, 2013
17. Cooper SA, Smiley E, Jackson A, *et al*: Adults with intellectual disabilities: prevalence, incidence and remission of aggressive behaviour and related factors. *J Intell Disabil Res* 53:217–32, 2009

Commentary

18. Borthwick-Duffy SA: Prevalence of destructive behaviors. a study of aggression, self-injury, and property destruction, in *Destructive Behavior in Developmental Disabilities*. Edited by Thompson T, Gray DB. Thousand Oaks, CA: Sage Publications, 1994
19. Poppe P, Van der Putten AJ, Vlaskamp C: Frequency and severity of challenging behaviour in people with profound intellectual disability and multiple disabilities. *Res Dev Disabil* 31:1269–75, 2010
20. McClintock K, Hall S, Oliver C: Risk markers associated with challenging behaviours in people with intellectual disabilities: a meta-analytic study. *J Intel Disabil Res* 47:405–16, 2003
21. Jones S, Cooper SA, Smiley E, *et al*: Prevalence of, and factors associated with, problem behaviours in adults with intellectual disabilities. *J Nerv Ment Dis* 196:678–86, 2008
22. Logan C, Blackburn R: Mental disorder in violent women in secure settings: potential relevance to risk for future violence. *Int'l J L & Psychiatry* 32:31–8, 2009
23. Kuo JR, Linehan MM: Disentangling emotion processes in borderline personality disorder: physiological and self-reported assessment of biological vulnerability, baseline intensity, and reactivity to emotionally evocative stimuli. *J Abnorm Psychol* 118: 531–44, 2009
24. Monahan J: *MacArthur Violence Risk Assessment Study: Rethinking Risk Assessment*. the MacArthur Study of Mental Disorder and Violence. New York: Oxford University Press; 2001
25. Weizmann-Henelius G, Viemero V, Eronen M: The violent female perpetrator and her victim. *Forensic Sci Int* 133:197–203, 2003
26. Meloy JR: Empirical basis and forensic application of affective and predatory violence. *Aust N Z J Psychiatry* 40:539–47, 2006
27. Beck JC: Delusions, substance abuse, and serious violence. *J Am Acad Psychiatry Law* 32:169–72, 2004
28. Rutherford MJ, Alterman AI, Cacciola JS, *et al*: Gender differences in diagnosing antisocial personality disorder in methadone patients. *Am J Psychiatry* 152:1309–16, 1995
29. Weizmann-Henelius G, Putkonen H, Gronroos M, *et al*: Examination of psychopathy in female homicide offenders: confirmatory factor analysis of the PCL-R. *Int'l J L & Psychiatry* 33:177–83, 2010
30. Dolan M, Vollm B: Antisocial personality disorder and psychopathy in women: a literature review on the reliability and validity of assessment instruments. *Int'l J L & Psychiatry* 32:2–9, 2009
31. Freiburger TL: The effects of gender, family status, and race on sentencing decisions. *Behav Sci & L* 28:378–95, 2010
32. Ali A, Hall I, Blickwedel J, *et al*: Behavioral and cognitive-behavioral interventions for outwardly-directed aggressive behavior in people with intellectual disabilities. *Cochrane Database Syst Rev* 7:CD003406, 2015
33. Raine A, Brennan P, Mednick SA: Birth complications combined with early maternal rejection at age 1 year predispose to violent crime at age 18 years. *Arch Gen Psychiatry* 51:984–8, 1994
34. Ehrensaft MK, Cohen P: Contribution of family violence to the intergenerational transmission of externalizing behavior. *Prevent Sci* 13:370–83, 2012
35. Logan JE, Leeb RT, Barker LE: Gender-specific mental and behavioral outcomes among physically abused high-risk seventh-grade youths. *Public Health Rep* 124:234–45, 2009
36. Clarkin JF, Levy KN, Lenzenweger MF, *et al*: Evaluating three treatments for borderline personality disorder: a multiwave study. *Am J Psychiatry* 164:922–8, 2007
37. Willner P: The neurobiology of aggression: implications for the pharmacotherapy of aggressive challenging behavior by people with intellectual disabilities. *J Intel Disabil Res* 59:82–92, 2015
38. Frogley C, Taylor D, Dickens G, *et al*: A systematic review of the evidence of clozapine's anti-aggressive effects. *Int J Neuropsychopharmacol* 15:1351–71, 2012
39. Beri A, Boydell J: Clozapine in borderline personality disorder: a review of the evidence. *Ann Clin Psychiatry* 26:139–44, 2014
40. Latalova K, Prasko J: Aggression in borderline personality disorder. *Psychiatry Quart* 81:239–51, 2010
41. Abraham PF, Calabrese JR: Evidenced-based pharmacologic treatment of borderline personality disorder: a shift from SSRIs to anticonvulsants and atypical antipsychotics? *J Affect Disord* 111: 21–30, 2008