

# Predicting and Preventing Aggression and Violence Risk in High-Risk Girls:

## Lessons Learned and Cautionary Tales from the Gender and Aggression Project

Stephanie R. Penney & Zina Lee

**Y**outh violence is a serious public health concern when viewed in light of the costs incurred by the medical, social service, and criminal justice systems. Since the late 1980s, there has been a steady increase in violent crimes committed by youth in both Canada and the U.S.<sup>1</sup> Although more recent rates of youth violence are decreasing,<sup>2</sup> they have remained significantly above the averages recorded in the early to mid-1980s. Rates of official violent offending among adolescent girls in particular have been increasing at faster rates compared to boys,<sup>3</sup> and self-report data shows that the gap between girls and boys' rate of engagement in violence is closing.<sup>4</sup>

In light of these trends, assessing and reducing violence risk among youth are high-priority objectives. Increasing knowledge surrounding the precursors of youth violence represents an essential step in this regard, as well as in the development of research-based prevention and intervention approaches. Several large-scale, longitudinal research studies have responded to this need, identifying numerous risk factors at the individual, family, school, peer, and community levels that predict future violence and criminality.<sup>5</sup> Accurately assessing and identifying those youth who are likely to commit future violence also has implications for many decisions made within the juvenile justice system (e.g., decisions regarding waiver to adult court, sentencing, and release).

Significant advances in adult violence risk assessment have paved the way for the development of similar tools with adolescents. However, the vast majority of existing risk assessment schemes for use with adolescents do not factor in gender rele-

vant information; that is, the assumption in most measures is that the factors contributing to violence operate in a similar manner across males and females. As members of our research team have noted, however, this assumption has not been empirically tested via prospective studies including sufficient numbers of female participants.<sup>6</sup> Given that most risk assessment measures include variables based on their predictive ability in all-male samples, it is possible that qualitatively different risk factors are required to predict violence among females, or that similar risk factors exist, which carry differential significance in male and female samples. The next section of this review outlines some of the key challenges involved in assessing violence risk in girls, and the caveats of extending our current knowledge base—based largely on males—to young females.

### CHALLENGES OF VIOLENCE RISK ASSESSMENT IN GIRLS

There are several reasons why a specialized focus is required for girls in the study of aggression and why “gender-tailored” tools may be required to optimize violence prediction. A growing body of literature suggests that the risk factors, causal mechanisms, and manifestation of violence in girls may differ substantially from models that have been designed for boys.<sup>7</sup> With respect to the expression of aggression, it is well known that physical forms of violence are much less common among girls versus boys, while social and relational forms of aggression (e.g., spreading rumors, gossip) are more equally visible among girls and boys.<sup>8</sup> Further, research shows that female aggression is more likely to ensue in the context of romantic or

### Footnotes

1. REBECCA KONG, CAN. CENTRE FOR JUST. STAT., CANADIAN CRIME STATISTICS 1996, CATALOGUE NO. 85-002-XPE, VOL. 17, NO. 8, at 11 (1997); HOWARD N. SNYDER, MELISSA SICKMUND, & EILEEN POE-YAMAGATA, OFF. OF JUVENILE JUST. & DELINQUENCY PREVENTION, JUVENILE OFFENDER AND VICTIMS: 1996 UPDATE ON VIOLENCE 14 (1996).
2. HOWARD N. SNYDER, OFF. OF JUVENILE JUST. & DELINQUENCY PREVENTION, JUVENILE ARRESTS 2001, JUVENILE JUSTICE BULLETIN 1 (2003).
3. CHARLES PUZZANCHERA, ANNE L. STAHL, TERRENCE A. FINNEGAN, NANCY TIERNEY & HOWARD N. SNYDER, OFF. OF JUVENILE JUST. & DELINQUENCY PREVENTION, JUVENILE COURT STATISTICS 1998 12 (2003); JOSEF SAVOIE, CAN. CENTRE FOR JUST. STAT., YOUTH VIOLENT CRIME, CATALOGUE NO. 85-002-XPE, VOL. 19, NO. 13, at 4 (1999).
4. KATHLEEN MAGUIRE & ANN L. PASTORE, SOURCEBOOK OF CRIMINAL JUSTICE STATISTICS 1998 (1999); U.S. DEP'T OF HEALTH & HUM.

SERVICES, YOUTH VIOLENCE: A REPORT OF THE SURGEON GENERAL (2001).

5. David P. Farrington et al., *Criminal Careers up to Age 50 and Life Success up to Age 48: New Findings from the Cambridge Study in Delinquent Development*, 299 GR. BRIT. HOME OFF. RES. DEV. & STAT. DIRECTORATE 1, 4-5 (2006); Todd I. Herrenkohl, Eugene Maguin, Karl G. Hill, J. David Hawkins, Robert D. Abbott & Richard F. Catalano, *Developmental Risk Factors for Youth Violence*, 26 J. ADOLESCENT HEALTH 176, 178 (2000); ROLF LOEBER, DAVID P. FARRINGTON, MAGDA STOUTHAMER-LOEBER & WELMOET B. VAN KAMMEN, ANTISOCIAL BEHAVIOR AND MENTAL HEALTH PROBLEMS: EXPLANATORY FACTORS IN CHILDHOOD AND ADOLESCENCE (1998).
6. Candice L. Odgers, Marlene M. Moretti & N. Dickon Reppucci, *Examining the Science and Practice of Violence Risk Assessment with Female Adolescents*, 29 LAW & HUM. BEHAV. 7, 11, 13 (2005).
7. *Id.* at 9-10, 16.
8. MARION K. UNDERWOOD, SOCIAL AGGRESSION AMONG GIRLS (2003).

family relationships<sup>9</sup> and that the victims of girls' violence are more likely to be an acquaintance, friend, or partner compared to boys.<sup>10</sup>

The picture of violence among adolescent females is further complicated by the possibility that the developmental course of aggression differs for males and females. Researchers typically make the distinction between two types of antisocial behavior pathways. The first pathway is characterized by early involvement in antisocial behavior that persists ("life-course persistent"), while the second pathway is restricted to youth who tend to get in trouble only in adolescence ("adolescence-limited"). Although researchers such as Terrie Moffitt have argued that the classic distinction between these two pathways is equally applicable to males and females,<sup>11</sup> some have doubted whether the early onset category applies to females. Instead, it has been suggested that a "delayed onset" pattern in girls is equivalent to the early onset pattern shown in boys, since these girls show comparable severity to early onset boys in terms of negative prognosis and stability of problem behaviors.<sup>12</sup> More recent research has identified an early onset group of girls who show a range of negative outcomes into late adolescence and adulthood (e.g., early pregnancy, welfare assistance, psychological and physical aggression);<sup>13</sup> nevertheless, it is still found that most girls do not begin engaging in aggressive and antisocial behaviors until adolescence. Thus, the debate continues regarding whether early onset conduct problems are stronger predictors of future violence in males as compared to females, and the impact this would have on assessing risk in females (since many instruments rely on early markers of behavior problems given their predictive ability in all-male samples).

Although it is unlikely that well-established risk factors for violence in boys have no relevance for girls, recent research points to the existence of unique risk factors associated with female aggression (e.g., trauma, victimization, and dysfunctional relationships)<sup>14</sup> as well as differences in the strength of traditionally male predictors when applied to high-risk females (e.g., incarcerated girls).<sup>15</sup> Unfortunately, very few studies have included an adequate number of girls in their samples, and even fewer have conducted the statistical analyses necessary to determine whether the same variables possess comparable predictive capacity across gender. This limitation will necessarily affect the validity of existing risk assessment tools with adolescent females, given their reliance on risk factors that have

demonstrated utility in all-male samples.

Our research team has been working toward addressing whether existing violence risk assessment tools are equally applicable to girls and whether there are risk factors specific to the needs of high-risk females. In particular, we have investigated the role of personality pathology and victimization in sustaining girls' aggression and violence. In addition to assessing the utility of female-specific domains of risk, several aspects of our methodological approach have allowed us to address important gaps in the literature pertaining to female violence: (1) Definitions have been expanded to include covert and relational acts of aggression alongside overtly physical acts of violence, (2) The context of aggression has been expanded to include acts perpetrated towards family members and romantic partners, and (3) The types of victimization experiences that many high-risk females encounter have been specified and distinguished from one another (e.g., maternal versus paternal maltreatment, physical versus psychological abuse).

**[W]e have investigated the role of personality pathology and victimization in sustaining girls' aggression and violence.**

#### **PERSONALITY PATHOLOGY AND VIOLENCE: ANTISOCIAL PERSONALITY DISORDER AND PSYCHOPATHY**

Among adults, the relation between specific forms of personality pathology and aggression is well documented. Personality disorders (PDs) are defined as inflexible and pervasive behavioral patterns that cause significant interpersonal and social difficulties.<sup>16</sup> Specifically, the symptoms and consequences of most PDs involve disruptions in key relationships due to maladaptive styles of interacting with others. In particular, antisocial, narcissistic, histrionic, and borderline PDs, referred to collectively as Cluster B PDs, are most often implicated in aggression and violence. This is perhaps unsurprising, given that the defining symptoms of these PDs include problems with regulating negative emotions, experiencing heightened levels of anger and irritability, behaving impulsively, and lacking empathy.<sup>17</sup>

Antisocial Personality Disorder (APD) is defined broadly as

9. MARGARET SHAW & SHERYL DUBOIS, CORRECTIONAL SERVICE OF CANADA, UNDERSTANDING VIOLENCE BY WOMEN: A REVIEW OF THE LITERATURE, FEDERALLY SENTENCED WOMEN PROGRAM REPORT NO. 23 (1995); Murray A. Straus & Ignacio L. Ramirez, *Gender Symmetry in Prevalence, Severity, and Chronicity of Physical Aggression Against Dating Partners by University Students in Mexico and USA*, 33 *AGGRESSIVE BEHAV.* 281, 284-287 (2007).

10. John Archer, *Sex Differences in Aggression Between Heterosexual Partners: A Meta-Analytic Review*, 126 *PSYCHOL. BULL.* 651, 664 (2000).

11. Terrie E. Moffitt, *Adolescence-limited and Life-course-persistent Antisocial Behavior: A Developmental Taxonomy*, 100 *PSYCHOL. REV.* 674, 675 (1993).

12. Persephanie Silverthorn & Paul J. Frick, *Developmental Pathways to Antisocial Behavior: The Delayed-Onset Pathway in Girls*, 11

DEV. & PSYCHOPATHOLOGY 101, 114-116 (1999).

13. Nathalie Fontaine et al., *Girls' Hyperactivity and Physical Aggression during Childhood and Adjustment Problems in Early Adulthood: A 15-year Longitudinal Study*, 65 *ARCHIVES GEN. PSYCHIATRY* 320, 323-325 (2008).

14. Emily J. Salisbury & Patricia Van Voorhis, *Gendered Pathways: A Quantitative Investigation of Women Probationers' Paths to Incarceration*, 36 *CRIM. JUST. & BEHAV.* 541, 554-559 (2009).

15. Candice L. Odgers, N. Dickon Reppucci & Marlene M. Moretti, *Nipping Psychopathy in the Bud: An Examination of the Convergent, Predictive, and Theoretical Utility of the PCL-YV Among Adolescent Girls*, 23 *BEHAV. SCI. & L.* 743, 747-748 (2005).

16. AM.PSYCHIATRIC ASS'N, DIAGNOSTIC AND STATISTICAL MANUAL OF MENTAL DISORDERS (4th ed. 2000).

17. *Id.* at 701-717.

**[C]oncerns have been raised with respect to the validity and clinical utility of the psychopathy construct in females...**

a pervasive pattern of disregard for and violation of the rights of others occurring since age 15 (before which there must be a diagnosis of Conduct Disorder). APD has been studied primarily in the context of its association with aggressive, violent, and criminal behaviors among men. It is well known, for example, that individuals with APD are

grossly overrepresented within incarcerated populations.<sup>18</sup> Although the prevalence of the disorder in the general population is estimated at 3%, individuals with APD commit the vast majority of violent and property crimes.<sup>19</sup> Several researchers have further suggested that the combination of antisocial and borderline traits is a particularly salient marker of violence, as these individuals are characterized by high levels of emotional dysregulation (particularly poor anger control), irritability, and impulsiveness.<sup>20</sup>

A substantial share of the literature on PDs and violence has focused on psychopathy—a personality syndrome sharing many features of APD such as impulsivity and a lack of remorse, but further characterized by specific interpersonal and affective deficits such as egocentricity and callousness. This research has been conducted primarily with adult male offenders and has found that psychopathy is a robust indicator of risk for violence in this population.<sup>21</sup> In particular, individuals scoring highly on validated measures of psychopathy (e.g., Hare Psychopathy Checklist; PCL-R)<sup>22</sup> are more likely to commit acts of instrumental aggression, reoffend violently, and reoffend in a shorter period of time. In adult females, although the existing body of research is not large, recent reviews have offered preliminary evidence that the PCL-R can identify women at risk for antisocial behavior, poor treatment outcomes, and violent offending in a manner comparable to men.<sup>23</sup> For example,

Richards, Casey, and Lucente<sup>24</sup> found that in comparison to a combination of other variables, psychopathic traits (particularly the interpersonal and affective features) were the best predictors of reoffending for incarcerated female substance abusers released to the community. Importantly, however, despite showing modest associations with *prior* violence and criminality (i.e., “post” diction), others have failed to replicate this association when the task is to predict *future* violence and criminality in women.<sup>25</sup> As will be elaborated upon below, among younger females, research findings are mixed and suggest that psychopathy is *not* a useful predictor of violence and delinquency, particularly once other gender-relevant risk factors are accounted for (e.g., victimization).<sup>26</sup>

In light of these findings, concerns have been raised with respect to the validity and clinical utility of the psychopathy construct in females, and whether it has the potential to inform decision making with respect to risk for violence and reoffending as it does for males. At the heart of these concerns is the possibility that psychopathic traits manifest differently across gender, and that the cardinal features of the syndrome are qualitatively different for males and females.<sup>27</sup> If this is in fact the case, our current measurement tools for assessing psychopathy—tools such as the PCL-R, and its recently developed youth version, the Psychopathy Checklist, Youth Version (PCL:YV)<sup>28</sup>—will be significantly compromised in their ability to capture the construct in females given their development in all-male samples. Currently, the PCL-R and PCL:YV are assumed to function equivalently across gender;<sup>29</sup> specifically, the major dimensions underpinning psychopathy (i.e., the interpersonal, affective, and behavioral features) are assumed to manifest similarly and contribute equally to the overall syndrome in both males and females. This assumption seems suspect in light of documented gender differences in the prevalence of other PDs, and the assertion that gender plays a significant role in the expression and identification of personality pathology.<sup>30</sup>

18. Stephen D. Hart & Robert D. Hare, *Psychopathy: Assessment and Association with Criminal Conduct*, in HANDBOOK OF ANTISOCIAL BEHAVIOR 22, 24 (David M. Stoff, James Breiling & Jack D. Maser eds., 1997).  
19. Lee N. Robins, Jayson Tipp & Thomas Przybeck, *Antisocial Personality*, in PSYCHIATRIC DISORDERS IN AMERICA: THE EPIDEMIOLOGICAL CATCHMENT AREA STUDY 258 (Lee N. Robins & Darrel A. Regier eds, 1991).  
20. Richard C. Howard, Nick Huband, Connor Duggan & Aisling Mannion, *Exploring the Link Between Personality Disorders and Criminality in a Community Sample*, 22 J. PERSONALITY DISORDERS 589, 590, 595 (2008).  
21. Kevin S. Douglas, Gina M. Vincent & John F. Edens, *Risk for Criminal Recidivism: The Role of Psychopathy*, in HANDBOOK OF PSYCHOPATHY 533, 534 (Christopher J. Patrick ed., 2006).  
22. ROBERT D. HARE, HARE PSYCHOPATHY CHECKLIST, REVISED (PCL-R) (2003).  
23. Rebecca L. Jackson & Henry J. Richards, *Psychopathy in Women: A Valid Construct with Clear Implications*, in THE PSYCHOPATH: THEORY, RESEARCH, AND PRACTICE 389, 391 (Hugues Herve & John C. Yuille eds., 2007); Edelyn Verona & Jennifer Vitale, *Psychopathy in Women: Assessment, Manifestations, and Etiology*, in

HANDBOOK OF PSYCHOPATHY 415, 420-422 (Christopher J. Patrick ed., 2006).  
24. Henry J. Richards, Jay O. Casey & Stephen W. Lucente, *Psychopathy and Treatment Response in Incarcerated Female Substance Abusers*, 30 CRIM. JUST. & BEHAV. 251 (2003).  
25. Randall T. Salekin, Richard Rogers, Karen L. Ustad & Kenneth W. Sewell, *Psychopathy and Recidivism among Female Inmates*, 22 LAW & HUM. BEHAV. 109, 118-123 (1998).  
26. Odgers, Reppucci & Moretti, *supra* note 15, at 754.  
27. Elham Forouzan & David J. Cooke, *Figuring out la Femme Fatale: Conceptual and Assessment Issues Concerning Psychopathy in Females*, 23 BEHAV. SCI. & L. 765, 767-773 (2005).  
28. ADELLE E. FORTH, DAVID S. COOKE & ROBERT D. HARE, HARE PSYCHOPATHY CHECKLIST: YOUTH VERSION (PCL:YV) (2003).  
29. *Id.*; HARE, *supra* note 22.  
30. Eric B. Elbogen, Angela L. Williams, Doyoung Kim, Alan J. Tomkins & Mario J. Scalora, *Gender and Perceptions of Dangerousness in Civil Psychiatric Patients*, 6 LEGAL & CRIM. PSYCHOL. 215, 222-224 (2001); Jennifer Skeem et al., *Gender and Risk Assessment Accuracy: Underestimating Women's Violence Potential*, 29 LAW & HUM. BEHAV. 173, 175, 183 (2005).

## GENDER-SPECIFIC DOMAINS OF RISK AND THE IMPORTANCE OF THE RELATIONAL CONTEXT IN FEMALE AGGRESSION

In assessing the potential of psychopathy research to inform the study of female aggression, it is important to consider other domains of risk that have been highlighted as relevant for women and girls. This is especially true given the above-noted limitations surrounding the psychopathy construct in females. There is evidence that incorporating relationships into models of girls' aggression is important. For example, social bonds to others are believed to be of greater importance for females, causing disruptions in key relationships to have a more negative impact on females than males.<sup>31</sup> This idea is further exemplified in research on attachment styles in high-risk youth, suggesting that aggression among young females is tied to these girls' attempts to maintain relationships.<sup>32</sup> The emphasis that females place on sustaining relationships also introduces a greater risk for criminality when their partners engage in illegal and delinquent behaviors.<sup>33</sup>

Within the larger developmental and clinical literature there is also a large body of empirical evidence that links child maltreatment to violence,<sup>34</sup> and a growing body of work linking maltreatment experiences and violence within the context of close relationships.<sup>35</sup> The model of female aggression described above emphasizes the need to understand the role of prior relationships—particularly those in which girls experienced trauma or abuse—to understand their aggression. Indeed, research on gender differences in socialization suggests that experiences of maltreatment and rejection within close relationships has a greater impact on the psychological development and emotional functioning of girls than that of boys.<sup>36</sup>

The link between victimization and aggression among adolescent females has been a central focus of our research team. Odgers, Reppucci, and Moretti demonstrated that experiences of victimization (i.e., psychological abuse, child physical abuse, and exposure to domestic violence) were strongly associated with both overt and relational forms of aggression, as

well as future offending, among a sample of incarcerated girls.<sup>37</sup> Of central importance, these investigators compared the relative value of psychopathy and victimization in predicting these outcomes. Results indicated that while a specific component of psychopathy (deficient emotionality) was modestly related to aggression, this effect was negated once victimization experiences were entered into the models. Further, psychopathy scores were *not* predictive of future offending, whereas victimization experiences significantly increased the odds of reoffending. This research confirms the salience of victimization experiences in explaining female aggression and underscores the need to directly compare the utility of traditionally “male” (e.g., psychopathy) versus “female” (e.g., dysfunctional relationships, maltreatment) risk factors—a task that most prior studies in the field have failed to carry out.

**The link between victimization and aggression among adolescent females has been a central focus of our research team.**

## MALTREATMENT, PERSONALITY PATHOLOGY, AND VIOLENCE

Maltreatment experiences therefore appear to be associated with future aggression and violence; however, they have also been linked to the development of personality pathology. Among females, a large body of literature links Borderline Personality Disorder (BPD) to prior abuse exposure,<sup>38</sup> and some experts in the field view childhood maltreatment as playing a causal role in the development of BPD.<sup>39</sup> Given that specific forms of personality pathology are linked to aggression and violence, and that symptoms of BPD are more prevalent in women as compared to men, an important question is whether emerging symptoms of BPD can explain the association between abuse and aggression in girls. Our research group has investigated this question, finding that prior experiences of

31. Carol Gilligan & Grant Wiggins, *The Origins of Morality in Early Childhood Relationships*, in *MAPPING THE MORAL DOMAIN: A CONTRIBUTION OF WOMEN'S THINKING TO PSYCHOLOGICAL THEORY AND EDUCATION* 111 (Carol Gilligan, Janie V. Ward, Jill M. Taylor & Betty Bardige eds., 1988); Marlene M. Moretti & Ingrid Obsuth, *Attachment and Aggression: From Paradox to Principles of Intervention to Reduce Risk of Violence in Teens*, in *UNDERSTANDING GIRLS' PROBLEM BEHAVIOUR: HOW GIRLS' DELINQUENCY DEVELOPS IN THE CONTEXT OF MATURITY AND HEALTH, CO-OCCURRING PROBLEMS, AND RELATIONSHIPS* 187 (Margaret Kerr et al., eds., 2011).
32. Marlene M. Moretti, Kimberley S. DaSilva & Roy Holland, *Aggression from an Attachment Perspective: Gender Issues and Therapeutic Implications*, in *GIRLS AND AGGRESSION: CONTRIBUTING FACTORS AND INTERVENTION PRINCIPLES* 41 (Marlene M. Moretti, Candice L. Odgers & Margaret A. Jackson eds., 2004).
33. Sibylle Artz, *Where Have all the School Girls Gone? Violent Girls in the School Yard*, 27 *CHILD & YOUTH CARE F* 77 (1998).
34. David M. Fergusson & Michael T. Lynskey, *Physical Punishment/Maltreatment During Childhood and Adjustment in Young Adulthood*, 21 *CHILD ABUSE & NEGLECT* 617, 624, 626 (1997); Cathy S. Widom & Helene White, *Problem Behaviours in*

*Abused and Neglected Children Grown Up: Prevalence and Co-occurrence of Substance Abuse, Crime and Violence*, 7 *CRIM. BEHAV. & MENTAL HEALTH* 287, 298 (1997).

35. Christine Wekerle & David Wolfe, *Child Maltreatment*, in *CHILD PSYCHOPATHOLOGY* 632 (Eric J. Mash & Russell A. Barkley eds., 2d ed. 2003); David A. Wolfe, Christine Wekerle, Deborah Reitzel-Jaffe, & Lorrie Lefebvre, *Factors Associated with Abusive Relationships among Maltreated and Nonmaltreated Youth*, 10 *DEV. & PSYCHOPATHOLOGY* 61, 61-65 (1998).
36. Marlene M. Moretti, Roy Holland & Sue McKay, *Self-other Representations and Relational and Overt Aggression in Adolescent Girls and Boys*, 19 *BEHAV. SCI. & L.* 109, 117 (2001).
37. *Supra* note 15, at 754.
38. Fred A. Rogosch & Dante Cicchetti, *Child Maltreatment, Attention Networks, and Potential Precursors to Borderline Personality Disorder*, 17 *DEV. & PSYCHOPATHOLOGY* 1071, 1080 (2005); Stephen A. Wonderlich et al., *Sexual Trauma and Personality: Developmental Vulnerability and Additive Effects*, 15 *J. PERSONALITY DISORDERS* 496, 501 (2001).
39. MARSHA M. LINEHAN, *COGNITIVE-BEHAVIORAL TREATMENT OF BORDERLINE PERSONALITY DISORDER* (1993).

**Some researchers have further posited that Borderline Personality Disorder represents the “female version” of Antisocial Personality Disorder.**

childhood physical abuse predicted future violent offending. Importantly, however, abuse was no longer a significant predictor once BPD was taken into consideration.<sup>40</sup> This important finding suggests that girls' aggression may be partially explained by early abuse exposure, which in turn interferes with identify formation, emotion regulation, and the formation of stable, healthy relationships (i.e., key symptoms of BPD). By adolescence, it appears

that these symptoms carry the lion's share of predictive weight in terms of forecasting violence. Taken together, our findings suggest that with respect to personality pathology, psychopathy is not a relevant risk factor for violence in girls<sup>41</sup> whereas BPD may be of particular relevance for girls.

Why may symptoms of BPD constitute significant indicators of female aggression? In light of the uniquely interpersonal nature of female aggression, the role of personality malfunction, defined by problematic patterns of relating to others, likely holds particular relevance in explaining these behaviors. Further, of all the PDs appearing in the current Diagnostic and Statistical Manual of Mental Disorders (DSM-IV),<sup>42</sup> arguably, BPD is the one that is most exclusively focused on interpersonal dysfunction and disruptions in relationships. Clinically, it has been observed that the behavioral and affective symptoms of BPD (i.e., suicidal gestures, substance abuse, unstable mood, and intense anger) occur chiefly in the context of relational stress.<sup>43</sup>

Some researchers have further posited that BPD represents the “female version” of APD, and that these two disorders reflect gender-specific variants of a common underlying etiology.<sup>44</sup> Symptoms of BPD and Histrionic PD (HPD) have also been conceptualized as female-specific expressions of psychopathy.<sup>45</sup> Implied in these views is that BPD relates to violence in females in much the same way that APD and psychopathy predict violence in males. Theoretically, however, psychopathy and BPD imply two very different etiological models of aggression. Specifically, the linkage between psychopathy and aggression has been attributed, in large part, to fundamental deficits that psychopathic individuals are believed to have

with respect to relating and caring for others (shallow affect, lack of empathy, and a callous and unemotional style), which, in turn, removes psychological barriers to engaging in violence.<sup>46</sup> In contrast, a causal model for violence involving BPD focuses on the role of emotional overreactivity, extreme interpersonal sensitivity, and dysfunctional relationships, variables that are largely antithetical to models of psychopathy which focus on the role of emotional underarousal and social detachment in sustaining aggressive behaviors. As noted earlier, given the salience of relationships in girls' aggression and violence, causal models that incorporate features of extreme interpersonal sensitivity and relational dysfunction are likely to be of greater value for explaining these behaviors among females.

**WHAT IS THE VALUE OF ASSESSING PDS IN ADOLESCENT POPULATIONS?**

Researchers are increasingly questioning whether features of personality pathology can offer the same lens into understanding and predicting violence among adolescents as they do in adults. Indeed, emerging evidence that psychopathic and Cluster B PD traits are linked to violence in adolescents highlight the utility of assessing personality pathology early in development. For example, the early identification of psychopathic traits in children is viewed as a worthwhile research endeavor with important implications for public safety and protection.<sup>47</sup> At the same time, it is important to acknowledge the potential stigma and negative consequences associated with applying PDs to youth. Experts in the field of personality and developmental psychopathology argue that it is not appropriate to assess PDs in adolescents as they are still in the process of development, whereas a PD diagnosis implies a persistent pathology that is resistant to change. It is possible that seemingly maladaptive features of personality represent developmentally normative—and transient—fluctuations in an adolescent's still malleable personality. On the other hand, it is unlikely that features of PDs emerge *de novo* in adulthood. Thus, we must be mindful of the consequences of diagnosing PDs in adolescents, but at the same time, recognize the value in doing so, namely, the ability to identify the etiological mechanisms that contribute to the development of the disorder and develop effective interventions.

Within the juvenile justice setting, the practice of assessing psychopathic traits in adolescents has garnered particular concern due to the potential negative consequences that accompany such a diagnosis. The presence of psychopathic characteristics in adolescents may influence decisions regarding transfer

40. Mandi L. Burnette & N. Dickon Reppucci, *Childhood Abuse and Aggression in Girls: The Contribution of Borderline Personality Disorder*, 21 DEV. & PSYCHOPATHOLOGY 309, 313 (2009).

41. Odgers, Reppucci & Moretti, *supra* note 15, at 754.

42. AM. PSYCHIATRIC ASS'N., *supra* note 16.

43. LINEHAN, *supra* note 39.

44. Theodore P. Beauchaine, Daniel N. Klein, Sheila E. Crowell, Christina Derbidge & Lisa Gatzke-Kopp, *Multifinality in the Development of Personality Disorders: A Biology x Sex x Environment Interaction Model of Antisocial and Borderline Traits*, 21 DEV. & PSYCHOPATHOLOGY 735, 736 (2009); Joel Paris, *Antisocial and Borderline Personality Disorders: Two Separate Diagnoses or*

*Two Aspects of the Same Psychopathology?* 38 COMPREHENSIVE PSYCHIATRY 237, 239 (1997).

45. Ellison M. Cale & Scott O. Lilienfeld, *Histrionic Personality Disorder and Antisocial Personality Disorder: Sex-Differentiated Manifestations of Psychopathy?* 16 J. PERSONALITY DISORDERS 52, 53 (2002).

46. Robert D. Hare & Stephen D. Hart, *Psychopathy, Mental Disorder, and Crime*, in MENTAL DISORDER AND CRIME 104 (Sheilagh Hodgins ed., 1993); Paul A. Miller & Nancy Eisenberg, *The Relation of Empathy to Aggression and Externalizing/Antisocial Behavior*, 3 PSYCHOL. BULL. 324, 339-341 (1988).

47. Randall T. Salekin, *Psychopathy and Therapeutic Pessimism: Clinical Lore or Clinical Reality?*, 22 CLINICAL PSYCHOL. REV. 79, 80 (2002).

to adult court, the severity of sentences, and perceptions of “treatability.”<sup>48</sup> Our review of the existing literature and findings from our research team suggest that the PCL:YV should not be used to make clinical (e.g., suitability for treatment) or legal (e.g., transfer to adult court) decisions with youth. To date, there is insufficient evidence that measures of juvenile psychopathy are tapping the same construct as are their corresponding adult instruments, namely, a stable personality disorder that does not dissipate over time.<sup>49</sup> Rather, existing measures of psychopathic traits in children and adolescents may contain items that reflect normative fluctuations in emotional, psychosocial, and behavioral development, and consequently are *age-inappropriate* markers for psychopathy in youth.<sup>50</sup>

Furthermore, although the field may be moving toward demonstrating the value of psychopathy in adolescent males, there are too few studies examining psychopathy’s ability to predict violence and criminality in adolescent females. Of particular concern are recent findings that psychopathy does not predict recidivism in girls.<sup>51</sup> Specifically, research from our team has demonstrated that the PCL:YV can predict concurrent (i.e., *present*) overt and relational aggression among high-risk male and female youth.<sup>52</sup> However, when the task is to predict *future* violence—and when other gender-relevant risk factors are entered into the equation (e.g., victimization)—the PCL:YV shows no predictive value.<sup>53</sup> Results from a recent study<sup>54</sup> also failed to find any predictive relationship between the PCL:YV and recidivism (violent or nonviolent) in a sample of female juvenile offenders over a lengthy follow-up period (an average of three years). Similarly, results from a recent large-scale review found very limited value of the PCL:YV for predicting recidivism in girls.<sup>55</sup> Taken together, these studies do not support the use of the PCL:YV as an indicator of risk among adolescent females.

In contrast to psychopathy, the extension of BPD downwards

to adolescent females may hold greater promise in terms of prediction, clinical utility, and informing treatment efforts for aggression and other high-risk behaviors. Of course, caution is still warranted in applying the diagnosis of BPD to girls, as it can carry negative implications with regards to the symptoms of the disorder and its treatability. However, a growing body of research demonstrates the utility of BPD in younger samples, and girls in particular, for understanding aggression and other problematic behaviors such as substance use and high-risk sexual activities. As noted above, research carried out by our team<sup>56</sup> and others<sup>57</sup> shows that features of BPD are related to prior experiences of victimization, and together, these variables appear particularly salient in causal models of female aggression. Perhaps of greatest value, however, is the potential for etiological models of BPD to inform treatment efforts with aggressive girls. In contrast to models of psychopathy, which tend to imply biologically based causes of the disorder and relative resistance to intervention, there are empirically validated treatment models for BPD that have succeeded in reducing symptoms of BPD (e.g., self-injury and suicidal behaviors, substance abuse),<sup>58</sup> as well as aggression specifically.<sup>59</sup>

Thus, the finding that features of BPD are associated with aggression in girls has clear implications for gender-specific treatment planning. The extension of empirically validated treatments for BPD such as Dialectical Behavior Therapy (DBT)<sup>60</sup> may hold great promise for incarcerated girls. DBT is

**[Psychological tests] of juvenile psychopathy are [not necessarily] tapping the same construct as are their corresponding adult [tests].**

48. Stephanie R. Penney & Marlene M. Moretti, *The Transfer of Juveniles to Adult Court in Canada and the United States: Confused Agendas and Compromised Assessment Procedures*, 4 INT’L J. FORENSIC MENTAL HEALTH 19, 31-32 (2005); Ivan Zinger & Adelle E. Forth, *Psychopathy and Canadian Criminal Proceedings: The Potential for Human Rights Abuses*, 40 CAN. J. CRIMINOLOGY 237, 242 (1998).

49. Gina M. Vincent & Stephen D. Hart, *Psychopathy in Childhood and Adolescence: Implications for the Assessment and Management of Multi-Problem Youths*, in MULTI-PROBLEM VIOLENT YOUTH: A FOUNDATION FOR COMPARATIVE RESEARCH ON NEEDS, INTERVENTIONS, AND OUTCOMES 150 (Raymond R. Corrado, Ronald Roesch, Stephen D. Hart & Jozef K. Gierowski eds., 2002).

50. John F. Edens, Jennifer L. Skeem, Keith R. Cruise & Elizabeth Cauffman, *Assessment of “Juvenile Psychopathy” and its Association with Violence: A Critical Review*, 19 BEHAV. SCI. & L. 53, 57-59 (2001).

51. Odgers, Reppucci & Moretti, *supra* note 15, at 754.

52. Stephanie R. Penney & Marlene M. Moretti, *The Relation of Psychopathy to Concurrent Aggression and Antisocial Behavior in High-Risk Adolescent Girls and Boys*, 25 BEHAV. SCI. & L. 21, 32, 35 (2007).

53. Odgers, Reppucci & Moretti, *supra* note 15, at 754.

54. Gina M. Vincent, Candice L. Odgers, Amanda V. McCormick & Raymond R. Corrado, *The PCL:YV and Recidivism in Male and Female Juveniles: A Follow-up into Young Adulthood*, 31 INT’L J.L.

& PSYCHIATRY 287, 292-294 (2008).

55. John F. Edens, Justin S. Campbell & John M. Weir, *Youth Psychopathy and Criminal Recidivism: A Meta-Analysis of the Psychopathy Checklist Measures*, 31 LAW & HUM. BEHAV. 53, 66 (2007).

56. Burnette & Reppucci, *supra* note 40, at 313; Mandi L. Burnette, Susan C. South & N. Dickon Reppucci, *Cluster B Personality Pathology in Incarcerated Girls: Structure, Comorbidity, and Aggression*, 21 J. PERSONALITY DISORDERS 262, 269 (2007).

57. Beauchaine, Klein, Crowell, Derbidge & Gatzke-Kopp, *supra* note 44, at 736.

58. Melanie S. Harned, Alexander L. Chapman, Elizabeth T. Dexter-Mazza, Angela Murray, Katherine A. Comtois & Marsha M. Linehan, *Treating Co-Occurring Axis I Disorders in Recurrently Suicidal Women with Borderline Personality Disorder: A 2-year Randomized Trial of Dialectical Behavior Therapy Versus Community Treatment by Experts*, 76 J. CONSULTING & CLINICAL PSYCHOL. 1068, 1071-74 (2008).

59. Marsha M. Linehan, Joshua D. McDavid, Milton Z. Brown, Jennifer H. R. Sayers & Robert J. Gallop, *Olanzapine plus Dialectical Behavior Therapy for Women with High Irritability Who Meet Criteria for Borderline Personality Disorder: A Double-Blind, Placebo-Controlled Pilot Study*, 69 J. CLINICAL PSYCHIATRY 999, 1003 (2008).

60. LINEHAN, *supra* note 39.

**[T]he malleability of adolescent personality presents an ideal argument for targeting empirically based interventions such as [Dialectical Behavioral Therapy]....**

a comprehensive cognitive-behavioral treatment with considerable evidence for its efficacy in treating BPD in adults.<sup>61</sup> Recently, there has been a surge of research extending the application of DBT to adolescents, with studies demonstrating the efficacy of DBT in reducing behaviors such as substance abuse, bingeing and purging, and self-injurious behaviors among youth manifesting BPD traits.<sup>62</sup> Several recommendations have been offered

for successful treatment of BPD in youth, including pharmacological therapy aimed at reducing impulsivity and mood swings and psychotherapeutic techniques to lower anxiety about relationships with others and encourage appropriate expression of feelings.<sup>63</sup> The latter goals are central within the DBT therapeutic framework.

Overall, interventions aimed at reducing BPD symptoms will likely be a useful addition to current treatment programs for aggressive and violent girls. Further, the malleability of adolescent personality presents an ideal argument for targeting empirically based interventions such as DBT at girls who are beginning to demonstrate BPD symptoms, in the hopes of avoiding further solidification into adult personality pathology. Because the treatment of girls' aggression requires interventions aimed at emotion regulation and addressing barriers to healthy relationships, DBT appears particularly well-suited to such a task.

#### **SUMMARY OF RESEARCH FINDINGS AND IMPLICATIONS FOR THE TREATMENT OF AGGRESSIVE GIRLS**

The points below highlight the findings from our research team regarding the role of personality pathology and victimization in girls' aggression.

1. Cluster B personality disorder traits are linked to overt and physically aggressive behaviors. In particular, BPD traits are associated with violence.
2. Experiences of victimization by maternal figures (i.e., psychological abuse, child physical abuse, and exposure to

domestic violence) are associated with aggression and recidivism. Specifically, psychological abuse is associated with physical aggression whereas exposure to domestic violence is associated with physical and relational aggression.

3. Childhood physical abuse was associated with the emergence of BPD traits. Furthermore, the relationship between childhood physical abuse and violence disappeared once the influence of BPD was taken into consideration. These findings suggest BPD traits are important targets for intervention once these girls reach adolescence.
4. Although psychopathic traits are modestly related to aggression, this relationship no longer exists once victimization experiences are accounted for.
5. Psychopathic traits are not predictive of violent or nonviolent recidivism whereas victimization experiences do increase the risk of recidivism, suggesting that tools to assess psychopathy in adolescence will be of limited use in predicting future offending.

Findings from our research thus support the idea that there are gender-specific domains of risk and that unique variables may be playing a role in initiating and sustaining girls' aggression and violence, such as victimization and borderline personality pathology. In contrast, risk markers such as psychopathic traits appear to hold less relevance for girls. Considering the limited evidence for the predictive ability of psychopathy in women, as well as the conceptual uncertainties surrounding the measurement and expression of psychopathy in females, it may be the case that the utility of psychopathy is largely confined to males. Also of note is the fact that the proposed mechanisms linking victimization and BPD to aggression are largely antithetical to explanatory models of aggression involving psychopathy and other traditionally male markers of risk. This suggests males and females may traverse distinct developmental trajectories toward aggression, with each trajectory encompassing diverse etiological mechanisms (e.g., emotional under-versus over-reactivity).

With regards to treatment, the position taken by our research team is that personality pathology in youth should be considered as an emerging style of relating to others that is problematic, but at the same time amenable to change and applicable to intervention planning. Based on our findings, interventions that reduce exposure to victimization, build healthy relationships, and reduce oversensitivity and over-reactivity to interpersonal stress appear to hold the most value for girls exhibiting high levels of aggression and violence.

61. See Thomas R. Lynch, William T. Trost, Nicholas Salsman & Marsha M. Linehan, *Dialectical Behavior Therapy for Borderline Personality Disorder*, 3 ANN. REV. CLINICAL PSYCHOL. 181, 187-95 (2007) (review of the Dialectical Behavior Therapy literature).

62. ALEC L. MILLER, JILL H. RATHUS & MARSHA M. LINEHAN, *DIALECTICAL BEHAVIOR THERAPY WITH SUICIDAL ADOLESCENTS* (2008).

63. Jeffrey J. Haugaard, *Recognizing and Treating Uncommon Behavioral and Emotional Disorders in Children and Adolescents who have been Severely Maltreated: Borderline Personality Disorder*, 9 CHILD MALTREATMENT 139, 143-44 (2004).



*Stephanie R. Penney, Ph.D., is research psychologist at the Center for Addiction and Mental Health in Toronto. She received her doctorate in Law and Forensic Psychology from Simon Fraser University in British Columbia, and completed her pre-doctoral internship in clinical-forensic psychology at Bellevue Hospital Center in New York. Dr. Penney's current*

*research interests include juvenile violence risk assessment and the role of emotion regulation in the development of aggression and violence in adolescents. Other research interests include the predictive validity of dynamic risk factors in forensic populations, and the assessment of psycholegal constructs relevant to young offenders, such as competency to stand trial and future dangerousness. Correspondence concerning this article should be addressed to Dr. Penney, Law and Mental Health Program, Centre for Addiction and Mental Health, 1001 Queen Street West, Toronto, Ontario M6J 1H4. Phone: (416) 535-8501 x 2832, Fax: (416) 583-4319, email: Stephanie\_Penney@camh.net.*



*Zina Lee, Ph.D., is a faculty member in the School of Criminology and Criminal Justice at the University of the Fraser Valley. She received her doctorate in Law and Forensic Psychology from Simon Fraser University and completed a postdoctoral fellowship funded by the Social Sciences and Humanities Research Council of Canada. Her research interests include the*

*assessment and validity of adolescent psychopathic personality traits and youth violence and aggression. Other research interests include deception and program evaluation.*