



## Introduction

Rates of aggressive and violent behavior among female adolescents have increased substantially over the past decade. Specifically, rates of official violent offending (Puzzanchera et al., 2003; Statistics Canada, 2001) and entry into juvenile detention facilities (Porter, 2000) have increased for females, as have arrests of female adolescents for violent offenses (Hoyt & Scherer, 1998). Researchers and clinicians are increasingly searching for appropriate risk factors and instruments to measure and guide the assessment of violence risk in young females (Odgers, Moretti, & Reppucci, 2005). Therefore it is not surprising that there has been recent interest in the validity and utility of measures of psychopathic features in young females. Although there is some evidence of concurrent relations between psychopathy and outcomes among females (e.g., Casey & Lucente, 2003; Richards et al., 2003), further research is necessary to investigate whether these relations hold across time and support the predictive utility of psychopathy assessment in young females.

To date, only one study has examined the predictive utility and factorial validity of psychopathy in girls (Odgers, Reppucci, & Moretti, 2005), and found that the presence of psychopathic features was unrelated to future offending (mean follow-up = 8 months). Such findings draw attention to the danger of assuming gender invariance in the validity and utility of risk factors for violence, and highlight the critical need for more research that investigates sex differences explicitly. The evidence that psychopathy functions similarly in adult women is mixed (Vitale & Newman, 2001), while it is virtually non-existent for girls (Odgers et al., 2005). The current study examined the concurrent and predictive relations between psychopathic features and aggression and violence in a sample of high-risk girls. Of note, this is the first study to investigate the validity of psychopathic features in girls prospectively over a substantial follow-up period (average length of follow-up = 23.3 months). Finally, this study is unique in ensuring that specific relations of each psychopathy factor with concurrent and future offending was tested while controlling for the shared variance among the factors.

## Method

**Participants:** Participants at Time 1 included 60 females between the ages of 12 and 18 ( $M = 15.6$ ;  $SD = 1.6$ ) gathered from custody centres (61%), provincial assessment centers (37%), and probation offices (2%). Participants at Time 2 were 43 females (mean age = 16.9;  $SD = 1.5$ ). Average length of follow-up was 23.3 months.

### Materials

**The Hare Psychopathy Checklist, Youth Version (PCL:YV: Forth, Kosson, & Hare, 2003).** The PCL:YV is a 20-item symptom construct rating scale designed to measure the same interpersonal, affective, and behavioral dispositions as does its parent measure, the PCL-R, in youth. For interview cases ( $n = 28$ ), the ICC<sub>2</sub> for PCL:YV total score was .96. For the factor scores, the coefficients ranged as follows: Factor 1 = .93, Factor 2 = .90, and Factor 3 = .84.

**Little's Aggression Items (LAI-25: Little, Jones, Henrich, & Hawley, 2003).** The LAI contains six subscales designed to differentiate manifest forms of aggression (overt and relational) among specific quadrants of aggression (pure overt, overt reactive, overt instrumental, pure relational, relational reactive, relational instrumental). All items are scored on a 4-point scale ranging from "not true at all" to "completely true". The alpha coefficient for the entire scale was .95 (.93 and .90 for overt and relational aggression, respectively). Little and colleagues (2003) reported acceptable levels of internal validity, as well as satisfactory external and criterion validity for the scale, which was shown to generalize across age-cohort (ages 11 to 16), gender, and ethnicity.

**Self-Report of Offending, revised (SRO-R).** The Self-Report of Offending (Huizinga et al., 1991) was adapted for use in this study based on the more widely studied Self-Report of Delinquency (see Huizinga & Elliott, 1986; Piquero et al., 2002). The scale has been shown to produce results concordant with official measures of delinquency (Elliott et al., 1987), and demonstrates functional invariance across sex and ethnicity (Knight et al., 2004). The current measure included 15 items assessing lifetime and current involvement in violent (e.g., assault and weapons charges) and non-violent (e.g., narcotics and property crimes) behaviors.

**Official Arrest Data** was accessed through the Ministry of Children and Family Development official records system in British Columbia. CORNET record checks after at least 18 months following release were used and coded for violent and non-violent recidivism.

## Hierarchical Regression with PCL:YV Factor Scores Predicting Concurrent Aggression & Offending ( $N = 60$ )

| Variable               | B     | SE B | $\beta$ |
|------------------------|-------|------|---------|
| Factor 1               |       |      |         |
| Total aggression       | -1.11 | 1.35 | -.10    |
| # Violent offenses     | -.09  | .18  | -.07    |
| # Non-violent offenses | -.13  | .17  | -.11    |
| Factor 2               |       |      |         |
| Total aggression       | 4.41  | 1.25 | .55**   |
| # Violent offenses     | .20   | .16  | .21     |
| # Non-violent offenses | .11   | .16  | .12     |
| Factor 3               |       |      |         |
| Total aggression       | -.16  | 1.43 | -.02    |
| # Violent offenses     | .31   | .19  | .28     |
| # Non-violent offenses | .43   | .18  | .40*    |

Note: Factor 1 = Arrogant and Deceitful Interpersonal Style; Factor 2 = Deficient Affective Experience; Factor 3 = Impulsive and Irresponsible Behavior .

\*  $p < .05$ . \*\*  $p < .01$ .

## Hierarchical Regression with PCL:YV Factor Scores Predicting Violent & Non-violent Recidivism ( $N = 43$ ; Mean Follow-Up = 23.3 months)

| Variable                   | B    | SE B | $\beta$ |
|----------------------------|------|------|---------|
| Factor 1                   |      |      |         |
| # New violent offenses     | -.02 | .20  | -.01    |
| # New non-violent offenses | -.46 | .47  | -.16    |
| Factor 2                   |      |      |         |
| # New violent offenses     | .31  | .18  | .36†    |
| # New non-violent offenses | .22  | .41  | .11     |
| Factor 3                   |      |      |         |
| # New violent offenses     | -.32 | .21  | -.31    |
| # New non-violent offenses | .89  | .48  | .36†    |

Note: Factor 1 = Arrogant and Deceitful Interpersonal Style; Factor 2 = Deficient Affective Experience; Factor 3 = Impulsive and Irresponsible Behavior .

†  $p < .10$ .

## Results & Discussion

The current study was designed to investigate the concurrent and predictive validity of psychopathic features in a sample of high-risk girls. A regression framework was employed to test the unique concurrent and predictive relations between each factor appearing on the PCL:YV (i.e., interpersonal, affective, and behavioral) and outcomes, controlling for the shared variance among the factors.

Results from the present study show that the PCL:YV has limited value in predicting both violent and non-violent recidivism in high-risk female youth. The PCL:YV factors were also not seen to be robust predictors of concurrent aggression, violence, or non-violent offending. Some exceptions did arise, however: Factor 2 (Affective) was significantly related to concurrent aggression and approached significance when predicting new violent offenses. These results are largely consistent with findings in the developmental psychopathology literature, namely, that deficits in affect and empathy are key factors in youth aggression (Broidy et al., 2003; Cohen & Strayer, 1996; Miller & Eisenberg, 1988). Factor 3 (Behavioral) also produced significant effects when predicting concurrent non-violent delinquency and approached significance in the prediction of non-violent recidivism. These findings should be viewed with some caution, however, as they raise concerns already voiced by others (e.g., Edens et al., 2001) regarding the potential overlap in variance between items found on Factor 3 (e.g., impulsivity, irresponsibility) and behavioral outcomes.

In general, results from the current study do not lend much support to the viability of the PCL:YV as a risk assessment or prediction instrument in girls. Despite recent pressures to find valid and clinically useful instruments for use with aggressive girls, we need to be appropriately cautious about the tools we currently have at our disposal and the implications for extending these tools to females.

Limitations of the current study included the use of a small sample size, as well as reliance on official arrest data which has been shown to underestimate true crime rates among juveniles (Sprott, 2001). However, follow-up data collection is currently on-going, and we are in the process of gathering data on a larger sample of girls and boys, as well as self-report data on these youths' patterns of offending.

## Acknowledgments & Contact Information

Funding for this study was provided by the CIHR Institute of Gender and Health (IGH) in partnership with the CIHR Institute of Human Development, Child and Youth Health (IHDCYH) through a New Emerging Team Grant awarded to Dr. Marlene M. Moretti (CIHR #54020) and the Human Early Learning Partnership (HELP) of British Columbia.  
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