Published in final edited form as:

J Pers Disord. 2010 August ; 24(4): 460–472. doi:10.1521/pedi.2010.24.4.460.

Stability of Borderline Personality Disorder Features in Girls

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Abstract

Little empirical evidence exists regarding developmental antecedents of borderline personality disorder (BPD) features in children and adolescents. As a first step in addressing this gap in our knowledge, this study examined the factor structure and stability of putative underlying BPD features, specifically impulsivity, negative affectivity and interpersonal aggression, in 6–12 year-old girls. We report on results from exploratory and confirmatory factor analyses of underlying BPD dimensions as rated by parents and teachers over six successive data waves in a large, community sample of girls ($N=2,451$). Six factors were derived from parent ratings (i.e., Cognitive Dyscontrol, (Lack of) Self-Control, Hostility, Depression/Anxiety, Hyperactivity, and Relational Aggression) and five factors were derived from teacher reports (i.e., Cognitive Dyscontrol, Hyperactivity, (Lack of) Self-Control, Relational Aggression, and Depression). The item composition of similar parent and teacher factors was highly consistent. The year-to-year stability from ages 6 to 12 was high for parent factor scores (r ranging from .71–.85) and moderately high for teacher factor scores (r ranging from .49–.77). These findings suggest that underlying dimensions of BPD features can be reliably measured and are stable in 6–12 year-old girls.

Borderline Personality Disorder (BPD) is a heterogeneous disorder characterized by affective instability, cognitive disturbances, impulsive and self-damaging acts, and dysfunctional interpersonal relationships (APA, 2000). Individuals with BPD features are likely to experience poor outcomes in occupational, academic, and interpersonal functioning (Bagge, et al., 2004; Zweig-Frank & Paris, 2002) and utilize more treatment services than those without such features (Bagge, Stepp, & Trull, 2005). Furthermore, those with BPD are well-represented in psychiatric settings, accounting for 10–20% of outpatients and 15% of inpatients (Gunderson, 2001).

Given the extraordinary suffering endured by those afflicted and the strain this disorder imposes upon individuals who come into contact with BPD, Lenzenweger and Cicchetti (2005) discuss the importance of elucidating etiological pathways and the developmental course of BPD to aid in early identification and prevention efforts. Most research to date on BPD has been limited to studying adult samples. Thus, what is known about the developmental history of individuals with BPD relies heavily on retrospective reporting. Although formal diagnosis using the DSM criteria for BPD is usually postponed until age 18, the constructs that underlie this disorder have a developmental course and, thus, can be measured in childhood and adolescence.

Three factors have reliably emerged from factor analytic work and are conceptualized as core features of the disorder: impulsivity, negative affectivity, and interpersonal aggression

(e.g., Gunderson, 2007; Skodol, Gunderson, Pfohl, Widiger, & Siever, 2002). These three core features have also been implicated in the development of BPD. For example, Trull (2001) found that personality traits assessing impulse control and negative affectivity predicted BPD features in young adults over a 2-year time period. Additionally, Crick, Murray-Close, and Woods (2005) found that interpersonal turmoil, characterized by friendship exclusivity and relational aggression, predicted BPD over the course of one year in 4th to 6th grade children. We hypothesize that similar associations exist between the underlying constructs of impulsivity, negative affectivity, and interpersonal aggression and later BPD features in children and adolescents. Explicating the nature of these relations has implications for developmental pathways of risk for BPD.

Epidemiological studies estimate that BPD affects males and females equally (Torgersen, Kringlen, & Cramer, 2001). Examining the stability of these constructs in girls is important because this disorder appears to be particularly pernicious for females. In clinical settings, 75% of those with a BPD diagnosis are women (Skodol & Bender, 2003). Understanding the precursors of BPD in girls will yield important information about the etiology and developmental course for those who appear to be at particularly high risk for utilizing treatment in adulthood.

Questions

1. Using exploratory factor analysis (EFA), what factor structure emerges when sampling content from the domains of impulsivity, negative affectivity, and interpersonal aggression in girls between ages 6 and 12? Does this factor structure vary by informant (parent vs. teacher)?
2. Can the factor structure derived from EFA be validated in each of the age groups using more stringent confirmatory factor analytic techniques?
3. How stable are the factors during this age period? Does stability increase with age?

Method

Sample Description

The participants of the Pittsburgh Girls Study (PGS) are 2,451 five to eight-year old girls recruited from a sample of 103,238 households in the city of Pittsburgh. Participants were identified by a stratified sampling of households in Pittsburgh neighborhoods where households in low-income neighborhoods were over-sampled. For the purposes of this study, neighborhoods were deemed low-income if at least 25% of the families were living at or below the poverty level, using 1990 Census data. Enumeration was completed in 89 of the 90 City of Pittsburgh neighborhoods during 1999, when households in low-income neighborhoods were fully enumerated. Half of the households in other neighborhoods were randomly sampled. In total, 3,241 girls in the 5- to 8-year old age range – 83.7% of the girls noted in the 2000 Census – were identified. Of those girls initially identified as meeting the age criterion, 2,876 were asked to take part in the longitudinal study. From this pool, a total of 2,451 (85.2%) girls agreed to participate (for further details, see Hipwell et al., 2002).

At the time of the first interview, the sample comprised 588 five-year olds, 630 six-year olds, 611 seven-year olds, and 622 eight-year olds. African American girls made up slightly more than half of the sample (52.8%), while 40.9% were Caucasian. Most of the remaining 6.3% of girls were described as multi-racial. In 92.7% of the interviews, the primary caregiver was a biological parent and in 92.9% of the cases the caregiver interviewed was female. The large majority of the parents (83.2%) had at least a high school education. In a majority of households (58.8%), the parent was cohabiting with a spouse or domestic

partner. Of the families surveyed, 38.9% reported receiving public assistance in the form of Women, Infants and Children Program (WIC), food stamps, or welfare.

Data Collection

Separate in-home interviews for both the child and the parent were conducted annually by trained interviewers using a laptop computer. Parents gave further feedback by completing additional questionnaires. Teacher participation was obtained using questionnaire booklets, distributed via a mix of mail and hand-delivery. All participants were reimbursed for their involvement. Study procedures were approved by the University of Pittsburgh Institutional Review Board and parental consent and child assent were obtained.

This paper covers the first six waves of parent and teacher data collected by the PGS. During this time period, cohort 5 girls ranged in age from 5 to 10, cohort 6 were ages 6 to 11, cohort 7 girls were 7 to 12 years of age, and cohort 8 ranged from 8 to 13 years old. Because the girls were not interviewed at age 5 and a full interview was not administered until age 7, self-reported data from the girls were not used. Additionally, due to the relatively smaller number of girls aged 5 ($n=588$) and 13 ($n=565$), this study is limited to girls aged 6–12.

All parents completed the interview during the first year. Valid teacher booklets were obtained from 1,832 (74.8%) of the participants' teachers during this wave. In year 2, interviews were completed by 2,383 (97.2%) parents, while 2,145 (87.5%) teachers completed and returned booklets. Parent participation was 95.4% ($N=2,339$) and teacher participation was 84.8% ($N=2,079$) for the third interview year. At year 4, parent and teacher participation rates were 94.3% ($N=2,310$) and 83.8% ($N=2,054$), respectively. For year 5, parent and teacher participation rates were 92.9% ($N=2,277$) and 80.9% ($N=1,982$), respectively. In year 6, parent and teacher participation rates were 92.2% ($N=2,260$) and 82.5% ($N=2,021$), respectively.

To assess the uniformity of the data across informants at each time point, an attrition analysis was run. For each year, participants who had missing teacher data were compared to those participants who received valid responses from both the parent and teacher on race (African American, Caucasian, Other), single parent, public assistance (any participant whose family received WIC, food stamps, or welfare), and low parental education (parent with less than 12 years of formal education). During year 1, the only difference in rates of those missing data concerned race: African Americans and Caucasians were very similar (21.7% and 18.3% missing teacher data, respectively) while other minorities showed a much lower attrition rate at 13.2%. In year 2, girls with missing teacher data differed on receipt of public assistance (12.2% of girls whose family received public assistance were missing teacher data, while only 7.7% of girls whose family did not receive public assistance were missing) and race (12.7% of African Americans were missing, while 6.5% of both Caucasians and other minorities were missing). There were no significant differences in year 3. The analysis of year 4 data showed a significant difference in race, as 13.3% of African Americans, 11.7% of other minorities, and 8.0% of Caucasians had missing teacher data. In year 5, girls with missing teacher data differed on receipt of public assistance (15.2% receiving public assistance compared with 11.9% not receiving public assistance were missing teacher data). There were no significant differences in year 6. Results from these analyses do not suggest any systematic bias due to sample loss.

Selection of BPD-Related Items

We selected items that appeared to be valid indicators of impulsivity, negative affectivity, and interpersonal aggression. To assess impulsivity, we mapped items onto three facets of Whiteside and Lynam's (2001) model of impulsivity: Urgency, (Lack of) Premeditation, and

(Lack of) Perseverance. In their model, Urgency is defined as the tendency to engage in impulsive behaviors when experiencing negative affect. Lack of Premeditation refers to engaging in behavior with little planning or forethought about the consequences. Lack of Perseverance is defined as the inability to follow-through with completing tasks, especially when tasks require focused attention.

For the Urgency domain, we chose to examine items that measured (Lack of) Self-Control (e.g., 'Ends disagreements calmly' and 'Responds appropriately when hit'). For the domains of (Lack of) Premeditation and (Lack of) Perseverance, we chose to sample from items measuring Inattention (e.g., 'Makes careless mistakes' and 'Has difficulty paying attention') and Hyperactivity (e.g., 'Difficulty staying seated' and 'Acts as if driven by a motor') symptoms of Attention Deficit Hyperactivity Disorder, respectively.

Negative affectivity is often conceptualized as three emotional states: Depression, Anxiety, and Anger (e.g., Watson & Clark, 1992). Items assessing Depressive, Anxiety, and Oppositional Defiant Disorder symptoms in children were selected that measured the experience of these affective states (e.g., 'Feels worthless/guilty,' 'Is nervous,' and 'Is angry and resentful'). We also chose items that measured intense emotional responses, (e.g., 'When frightened, she feels unreal'), negative emotions that were easily elicited, (e.g., 'Is easily annoyed, touchy') and negative emotions with a long duration (e.g., 'Depressed most of the day').

Lastly, we chose to focus on interpersonal aggression and defiant behaviors as clear markers of interpersonal problems relevant to BPD features. These interpersonal problems are likely due to difficulties with self-control (Geiger & Crick, 2001), and thus, overlap with the Urgency domain of Impulsivity. These behaviors have been associated with BPD features in adolescent female offenders (Burnette, South, & Reppucci, 2007). Overt forms of physical aggression toward others clearly results in difficulties forming friendships and having positive relationships with adults. We chose items that measured physical aggression (e.g., 'Starts physical fights' and 'Bullies'). We also chose to measure relational aggression, which is defined as engaging in behaviors that cause harm to interpersonal relationships (e.g., 'When mad gets even by excluding others from the group'). Items assessing defiant interpersonal behaviors were also selected, such as 'Defies what you tell her to do.'

Measures

Children's Peer Relationship Scale (CPRS; Crick & Grotpeter, 1995; Crick, 1996)

—The CPRS measures child-peer relations through frequencies of behaviors. The PGS administered adapted versions of the relational aggression subscale to the parent (5 items) and teacher (7 items). This subscale was comprised of items such as: 'When some kids are mad at someone, they get back at the person by not letting the person in their group anymore'. Both the parent and teacher versions comprise a 5-point answer format, which ranges from *never* to *almost always*.

Child Symptom Inventory-4 (CSI-4; Gadow & Sprafkin, 1994)

—The CSI-4 assesses the nature and severity of childhood emotional and behavioral disorder symptoms using criteria found in the DSM-IV, including Conduct Disorder, Oppositional Defiant Disorder, Attention Deficit Hyperactivity Disorder, and Major Depressive Disorder. Each symptom was scored on 4-point scales of *never*, *sometimes*, *a lot*, and *all the time*. Items of interest for the current study included 9 inattention items, 10 hyperactivity-impulsivity items, 8 Oppositional Defiant Disorder items, 2 conduct disorder items assessing physical aggression items, and 6 depression items for parent and teacher informants. In the first year of data collection, symptoms were assessed for lifetime occurrence. In all ensuing years, only past year occurrence was assessed.

To measure girls' social competencies, items were adapted from the *Social Skills Rating System (SSRS)* (Gresham & Elliott, 1990). Items of interest in the current analyses included those adapted to assess self-control in girls for the parent (9 items) and teacher (8 items; e.g., 'Responds appropriately when hit' and 'Controls temper when in conflict with parents/adults'). Both the parent and teacher versions comprise a 3-point scale of *often*, *sometimes*, and *never*. Thus, higher ratings reflected poorer self-control.

Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1997)—The SCARED is a screening instrument for childhood anxiety disorders. This instrument was administered to the parent and child but not to teachers. For the purposes of this study, 5 parent items were chosen that reflected trait anxiety (e.g., 'Is nervous.') and reactive/intense anxiety (e.g., 'Gets really frightened for no reason.'). Items were rated on 3-point scale of *not true or hardly ever*, *sometimes true*, and *very true*.

Data Analysis

We examined parent and teacher reports separately using the same analytic strategy. Since we are interested in the nature and stability of these constructs as girls mature, analyses were also run separately by age (6–12; 7 years). Due to the sampling technique used at recruitment, which oversampled girls in low income neighborhoods, a weighting variable was applied to all analyses in order to obtain rates for the general population of girls in Pittsburgh.

Prior to examining the factor structure, the sample was randomly divided into two groups of about equal size: calibration ($n=1210$) and validation ($n=1241$) samples. An exploratory factor analysis (EFA) was first performed on the calibration sample. The EFA utilized all of the items reflecting content related to negative affectivity, impulsivity, and interpersonal aggression as described previously. The EFA analyses were run using a mean and variance-adjusted weighted least squares estimator (WLSMV) with an oblique rotation (promax) that allowed for correlated factors in Mplus 5.0 (Muthén & Muthén, 2007). To determine the most suitable number of factors, the number of eigenvalues greater than 1.0, visual inspection of scree plots, and interpretability of the solution were considered.

Next, the factor loading pattern matrix was examined to determine whether or not individual items consistently loaded on a single factor across multiple years. The strength of item loadings were considered poor if they did not reach a value of .35 in at least five of the seven years examined. Items were considered to poorly discriminate between factors if they exhibited loadings greater than or equal to .35 on more than one factor across three or more years.

Items from the EFA that were found to consistently load on a single factor across time were then submitted to a CFA using the validation sample. The CFA analyses were also conducted using WLSMV in Mplus 5.0. We assessed absolute fit of the confirmatory models using global fit indices, including the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA). For the CFI and TLI, we used the conventional cutoff values .90 or greater for acceptable fit, and .95 or greater for good fit. RMSEA values between .05 and .08 represent an acceptable fit, while values less than .05 indicate a good fit (McDonald & Ho, 2002).

Results

Exploratory Factor Analysis Using Parent and Teacher Report

Separate EFA analyses were conducted with 53 parent and 50 teacher items using the calibration sample. The EFA analyses for the parent data yielded between 9 and 12 eigenvalues greater than 1.0 (mode=10 across 7 years). The teacher EFA analyses yielded 5 and 6 eigenvalues greater than 1.0 (mode=6 across 7 years). Inspection of scree plots suggested that a seven-factor solution for parent reports and a six-factor solution for teacher reports was most appropriate. Since interpretability was of high importance, six, seven, and eight rotated solutions were evaluated for the parent data while four, five, and six rotated solutions were examined for the teacher data. We determined that the six factor solution consistently yielded conceptually valid structure for the parent report. The resulting parent factors were labeled: (1) Cognitive Dyscontrol, (2) (Lack of) Self-Control, (3) Hostility, (4) Depression/Anxiety, (5) Hyperactivity, and (6) Relational Aggression. Next, we examined the range of parent factor loadings for each item across the seven years of data and the number of times each item had a significant loading (i.e., ≥ 0.35). Four items did not reach significance in five of the seven years examined (i.e., 'Does dangerous things,' 'Avoids trouble situations,' 'Helps with tasks without prompts,' and 'Fidgets'). Two items significantly cross-loaded on multiple factors (i.e., 'Bullies,' and 'Starts physical fights') and were not retained for further confirmatory analyses.

Similarly, for the teacher data, the five factor solution was deemed most conceptually compelling while a six factor solution failed to yield a meaningful extra factor. The five parent factors were labeled: (1) Cognitive Dyscontrol, (2) Hyperactivity, (3) (Lack of) Self-Control, (4) Relational Aggression, and (5) Depression. Teachers did not rate anxiety items; thus, anxiety is not represented in the teacher solution. We then examined the range of teacher factor loadings for each item and the number of times each item had a significant loading across the seven years. All items reached significance in at least 5 years. Five items significantly cross-loaded (i.e., 'Fidgets,' 'Difficulty staying seated,' 'Appropriately questions rules,' 'Angry and resentful,' and 'Bullies') and were not retained for confirmatory analyses.

Confirmatory Factor Analysis Using Parent and Teacher Report

Table 1 presents ranges for the estimated CFA standardized factor loadings for both parent and teacher reports. All items consistently loaded above the .35 threshold for all ages examined for both the parent and teacher reports with the exception of one item. For parent data, 'Receives criticism well' fell just below the threshold (loading = .34) for one of the years. Model fit statistics for the CFA models were examined. For parent models, TLI values suggested good fit from ages 6–12 ($>.95$). RMSEA values suggested acceptable fit for all years ($<.08$). CFI values suggested acceptable fit in one of the seven years. For teacher models, CFI values suggested acceptable fit in three years and good fit for the remaining four years. TLI values suggested good fit in all years ($>.95$). RMSEA values suggested adequate fit in all but one year.

Generally, there was high consistency of items loading on equivalent factors derived from the two informants. However, the teacher (Lack of) Self-Control factor includes items relating to physical aggression and does not include items relating to the experience of anger. The parent factors do not include physical aggression and the parent Hostility factor contains items reflecting the propensity to experience anger. These differences may be due to teacher's ability to observe physical aggression in a school setting and parent's superior ability to notice girls experiencing anger.

Among the parent factors, Hyperactivity was consistently highly correlated with Cognitive Dyscontrol and Hostility, with coefficients ranging from .64 to .72 ($p < .001$) and .61 to .71 ($p < .001$), respectively. Additionally, Hostility strongly correlated with Cognitive Dyscontrol, (Lack of) Self-Control, and Depression/Anxiety, with coefficients ranging from .54 to .72 ($p < .001$), .60 to .67 ($p < .001$), and .51 to .67 ($p < .001$), respectively. All other factors exhibited more varied magnitudes of associations, most at an intermediate level. Among the teacher factors, Cognitive Dyscontrol, Hyperactivity, and (Lack of) Self-Control were highly related, (r ranging from .63 to .82, $p < .001$). All other teacher factors were related at an intermediate level.

Intercorrelation between parent and teacher factor scores—The Cognitive Dyscontrol parent and teacher factors were the most inter-related, with coefficients ranging from .35–.40 ($p < .001$) across the seven years. The Hyperactivity parent and teacher factors were also related (r ranging from .28–.34, $p < .001$). The teacher (Lack of) Self-Control factor was inter-related with both the parent (Lack of) Self-Control and Hostility factors (r ranging from .23–.30 and .20–.29, respectively). The Relational Aggression parent and teacher factors were more weakly associated at age 6 ($r = .14$, $p < .001$) than at ages 7–12 (r ranging from .24–.31, $p < .001$). The parent and teacher Depression factors had the weakest association, (r ranging from .13–.20, $p < .001$).

Examining stability—We calculated intra-class correlations (ICCs) for each parent- and teacher-derived factor between the ages of 7 and 12. All correlations were statistically significant ($p < .001$), and were moderate to very strong in magnitude. For parent-derived factor scores, ICCs ranged from .77 to .84 for Cognitive Dyscontrol, from .76 to .82 for (Lack of) Self-Control, from .80 to .85 for Hostility, from .75 to .83 for Depression/Anxiety, from .80 to .85 for Hyperactivity, and from .71 to .81 for Interpersonal Aggression. For each factor, the ICC was lowest between age 5 and age 6 ($r = .77$ for Cognitive Dyscontrol, .76 for (Lack of) Self-Control, .80 for Hostility, .75 for Depression/Anxiety, .85 for Hyperactivity, and .71 for Relational Aggression) and appeared to gradually increase in magnitude with age, with ICCs predicting age 11 to age 12 generally of the strongest magnitude.

For teacher-derived factor scores, ICCs ranged from .69 to .77 for Cognitive Dyscontrol, from .65 to .73 for Hyperactivity, from .68 to .77 for (Lack of) Self-Control, from .48 to .63 for Relational Aggression, and from .49 to .61 for Depression. Generally, the magnitude of the ICCs was strongest at age 8, leveled off, and then decreased at age 11.

Discussion

These findings suggest that the putative underlying features of BPD, conceptualized as impulsivity, negative affectivity, and interpersonal aggression, can be reliably measured in 6–12 year-old girls. Based on the exploratory and confirmatory factor analyses, these three underlying features best fit a six factor solution for parent ratings and a five factor solution for teacher ratings. Three factors were largely similar for both informants: Cognitive Dyscontrol, Hyperactivity, and Relational Aggression. The parent Depression/Anxiety factor and teacher Depression factor contained identical items regarding Depression. Anxiety items did not appear on the teacher factor solution because teachers did not rate these items. The (Lack of) Self-Control and Hostility factors were distinct factors in the parent solution, but were combined into one factor in the teacher solution. Items from the teacher (Lack of) Self-Control factor and the parent (Lack of) Self-Control and Hostility factors had a high degree of overlap. The convergence between parent and teacher factor scores appeared to be strongest for the cognitive dyscontrol, hyperactivity, and (lack of) self-control factors. The convergence between these informants was weakest for the relational aggression and

depression/anxiety factor scores. These results suggest that parents and teachers are more similar in rating externalizing behaviors when compared to those behaviors that are more covert. This lack of agreement might also reflect the slightly different items that parents and teachers rated.

The year-to-year stability of each of the parent factor scores was high and appeared to increase as girls matured. Although the stability of teacher factor scores was moderately high across the age period under examination, it generally appeared to peak at age 8, level off, and then decrease at age 11. The year-to-year stability of Relational Aggression and Depression teacher factor scores was considerably lower than the stability of the Cognitive Dyscontrol, Hyperactivity, and (Lack of) Self-Control teacher factor scores. This finding is consistent with previous work suggesting that teachers are better informants regarding more overt behavioral problems than internalizing problems when compared to parents and child reports (e.g., Epkens, 1995). Overall, these findings support the notion that these features are stable in 6–12 year-old girls. The stability of the teacher scores is particularly impressive given that different teachers judged these behaviors each year.

To our knowledge, this is the first large-scale, prospective study regarding the factor structure and stability of underlying features of BPD in girls. In a short-term longitudinal study, Crick et al. (2005) found intermediate levels of stability for a measure of BPD in 4th to 6th grade children across three assessment points over the course of one year. However, only the stability for the overall measure, and not for each underlying feature, was reported. Although not a study of BPD features, Vaillancourt and colleagues (2003) found that relational aggression was distinct from physical aggression in 4–11 year-old children across three time points.

This study is not without limitations. We did not set out to measure an exhaustive list of all BPD criteria, such as paranoid ideation when under stress. Thus, we do not posit that other items are unimportant when measuring BPD features in girls. For example, other interpersonal processes related to themes of abandonment and sensitivity to interpersonal rejection are also likely to be important constructs. We do believe that we thoughtfully and adequately sampled the content domain for the constructs we set out to measure, namely impulsivity, negative affectivity, and interpersonal aggression and that these are central constructs to BPD.

As the girls in the PGS continue to be followed, we will re-examine the nature and stability of these dimensions during adolescence. We will be able to examine the relation between impulsivity, negative affectivity, and interpersonal aggression and a measure of BPD in early adolescence. We are interested in examining the nature and specificity of these pathways. Understanding the precursors of this disorder in childhood will yield important information about the etiology of BPD and will allow for examining risk and protective factors. Establishing the nature of these putative features of the disorder and their relation to BPD will also allow for the development of screening tools and effective interventions for girls who are at risk.

Acknowledgments

We would like to extend our deepest appreciation to the staff of the Pittsburgh Girls Study. This study would not be possible without their commitment and hard work. This research was supported by grants from the Office of Juvenile Justice and Delinquency Prevention (95-JD-FX-0018) and from the National Institute on Mental Health (MH56630). The first author also received support from T32 MH18269 (Clinical Research Training for Psychologists, PI: Paul A. Pilkonis).

References

- American Psychiatric Association. Diagnostic and statistical manual of mental disorders. 4. Washington, DC: Author; 2000.
- Bagge C, Nickell A, Stepp S, Durrett C, Jackson K, Trull TJ. Borderline personality disorder features predict negative outcomes two years later. *Journal of Abnormal Psychology* 2004;113:279–288. [PubMed: 15122948]
- Bagge CL, Stepp SD, Trull TJ. Borderline personality disorder features and utilization of treatment over two years. *Journal of Personality Disorders* 2005;19:420–439. [PubMed: 16178683]
- Birmaher B, Khetarpal S, Brent D, Cully M, Balach L, Kaufman J, Neer SM. The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale construction and psychometric characteristics. *Journal of the American Academy of Child and Adolescent Psychiatry* 1997;36:545–553. [PubMed: 9100430]
- Burnette ML, South SC, Reppucci ND. Cluster B personality pathology in incarcerated girls: Structure, comorbidity, and aggression. *Journal of Personality Disorders* 2007;21:262–272. [PubMed: 17536939]
- Crick NR, Murray-Close D, Woods K. Borderline personality features in childhood: A short-term longitudinal study. *Development and Psychopathology* 2005;17:1051–1070. [PubMed: 16613430]
- Crick NR, Grotpeter JK. Relational aggression, gender, and social-psychological adjustment. *Child Development* 1995;66:710–722. [PubMed: 7789197]
- Crick NR, Ostrov JM, Werner ME. A longitudinal study of relational aggression, physical aggression, and children's social psychological adjustment. *Journal of Abnormal Child Psychology* 2006;34:127–138.
- Epkins CC. Teachers' ratings of inpatient children's depression, anxiety, and aggression: A preliminary comparison between inpatient-facility and community-based teachers' ratings and their correspondence with children's self-reports. *Journal of Clinical Child Psychology* 1995;24:63–70.
- Gadow, KD.; Sprafkin, J. *Child Symptom Inventories Manual*. Stony Brook, NY: Checkmate Plus; 1994.
- Geiger, T.; Crick, NR. A developmental psychopathology perspective on vulnerability to personality disorders. In: Ingram, R.; Price, JM., editors. *Vulnerability to psychopathology: Risk across the life span*. New York: Guilford Press; 2001.
- Gresham, FM.; Elliott, SN. *Social Skills Rating System*. Bloomington, MN: Pearson Assessments; 1990.
- Gunderson, JG. *Borderline personality disorder: A clinical guide*. Washington, DC: American Psychiatric Press; 2001.
- Gunderson JG. Disturbed relationships as a phenotype for borderline personality disorder. *American Journal of Psychiatry* 2007;164:1637–1640. [PubMed: 17974925]
- Hipwell AE, Loeber R, Stouthamer-Loeber M, Keenan K, White HR, Kroneman L. Characteristics of girls with early onset disruptive and antisocial behaviour. *Criminal Behaviour and Mental Health* 2002;12:99–118. [PubMed: 12357260]
- Lenzenweger MF, Cicchetti D. Toward a developmental psychopathology approach to borderline personality disorder. *Development and Psychopathology* 2005;17:893–898. [PubMed: 16613423]
- McDonald RP, Ho MH. Principles and practice in reporting structural equation analyses. *Psychological Methods* 2002;7:64–82. [PubMed: 11928891]
- Muthén, LK.; Muthén, R. *Mplus: The Comprehensive Modeling Program for Applied Researchers*. Los Angeles, CA: 2007. (version 5.0)
- Skodol AE, Gunderson JG, Pfohl B, Widiger TA, Livesley WJ, Siever L. The borderline diagnosis I: psychopathology, comorbidity, and personality structure. *Biological Psychiatry* 2002;51:936–950. [PubMed: 12062877]
- Skodol AE, Bender DS. Why are women diagnosed borderline more than men? *Psychiatric Quarterly* 2003;74:349–360. [PubMed: 14686459]
- Torgersen S, Kringlen E, Cramer V. The prevalence of personality disorders in a community sample. *Arch Gen Psychiatry* 2001;58:590–596. [PubMed: 11386989]

- Trull TJ. Structural relations between Borderline Personality Disorder features and putative etiological correlates. *Journal of Abnormal Psychology* 2001;110:471–478. [PubMed: 11502090]
- Vaillancourt T, Brendgen M, Boivin M, Tremblay RE. A longitudinal confirmatory factor analysis of indirect and physical aggression: Evidence of two factors over time? *Child Development* 2003;74:1628–1638. [PubMed: 14669886]
- Watson D, Clark LA. Affects separable and inseparable: On the hierarchical arrangement of negative affects. *Journal of Personality and Social Psychology* 1992;62:489–505.
- Whiteside SP, Lynam DR, Miller JD, Reynolds SK. Validation of the UPPS Impulsive Behavior Scale: A four-factor model of impulsivity. *European Journal of Personality* 2005;19:559–574.
- Zweig-Frank H, Paris J. Predictors of outcome in a 27-year follow-up of patients with borderline personality disorder. *Comprehensive Psychiatry* 2002;43:103–107. [PubMed: 11893987]

Table 1

Results from the confirmatory factor analysis

Parent Report		Teacher Report			
Item Stem	Min	Max	Item Stem	Min	Max
Cognitive Dyscontrol			Cognitive Dyscontrol		
Careless mistakes	0.40	0.80	Careless mistakes	0.79	0.85
Diff. paying attention	0.58	0.85	Diff. paying attention	0.91	0.93
Not listening	0.74	0.85	Not listening	0.88	0.92
Diff. following directions	0.79	0.87	Diff. following directions	0.92	0.94
Diff. organizing	0.69	0.81	Diff. organizing	0.89	0.93
Avoids mental effort	0.50	0.82	Avoids mental effort	0.88	0.92
Loses things	0.40	0.72	Loses things	0.81	0.86
Easily distracted	0.77	0.84	Easily distracted	0.91	0.98
Forgetful	0.47	0.81	Forgetful	0.87	0.92
Hyperactivity			Hyperactivity		
Blurts out answers	0.42	0.76	Blurts out answers	0.79	0.89
Diff. waiting	0.74	0.84	Diff. waiting	0.91	0.95
Interrupts people	0.72	0.86	Interrupts people	0.95	0.96
Diff staying seated	0.67	0.85	Does dangerous things	0.82	0.94
Runs/Climbs	0.62	0.79	Runs/Climbs	0.80	0.89
Diff playing quietly	0.61	0.82	Diff playing quietly	0.84	0.90
Driven by motor	0.53	0.65	Driven by motor	0.69	0.83
Talks excessively	0.52	0.68	Talks excessively	0.81	0.90
(Lack of) Self-Control			(Lack of) Self-Control		
Appropriate response when hit	0.36	0.63	Appropriate response when hit	0.78	0.87
Receives criticism well	0.34	0.75	Receives criticism well	0.78	0.86
Ends disagreements calmly	0.60	0.84	Appropriate response when teased	0.78	0.86
Appropriate response when teased	0.53	0.71	Compromises in conflict situations	0.55	0.66
Appropriate tone when speaking	0.52	0.87	Appropriate peer pressure response	0.72	0.83
Controls temper with peers/friends	0.71	0.78	Loses temper	0.89	0.91
Controls temper with adults/parents	0.67	0.88	Easily annoyed, touchy	0.83	0.88

Parent Report		Teacher Report			
Item Stem	Min	Max	Item Stem	Min	Max
Hostility			Controls temper with peers/friends	0.85	0.90
Loses temper	0.67	0.75	Controls temper with adults/parents	0.81	0.87
Easily annoyed, touchy	0.66	0.81	Argues with adults	0.80	0.91
Angry and resentful	0.67	0.87	Physically cruel to people	0.89	0.94
Argues with adults	0.61	0.78	Defies what you tell her to do	0.90	0.94
Defies what you tell her to do	0.61	0.80	Deliberately annoys others	0.91	0.95
Deliberately annoys others	0.69	0.76	Blames others for mistakes	0.91	0.93
Blames others for mistakes	0.58	0.87	Takes anger out on others	0.93	0.97
Takes anger out on others	0.63	0.82	Relational Aggression		
Relational Aggression			Excludes others when mad	0.89	0.92
Excludes others when mad	0.75	0.86	Excludes others from play	0.93	0.96
Spreads rumors	0.67	0.85	Spreads rumors	0.91	0.95
Gets others to exclude child when mad	0.84	0.96	Tells lies so that others won't like	0.95	0.98
Threatens to stop being friends	0.75	0.93	Gets others to exclude child when mad	0.95	0.98
Ignores when mad	0.58	0.71	Threatens to stop being friends	0.90	0.94
Depression/Anxiety			Ignores when mad	0.79	0.84
She is nervous	0.42	0.64	Depression		
She is a worrier	0.40	0.66	Felt she hated herself	0.97	1.02
When frightened, feel unreal	0.42	0.66	Complains of loneliness	0.80	0.87
Get frightened for no reason	0.56	0.69	Depressed most of day	0.84	0.94
Felt she hated herself	0.73	1.01	Feels worthless/guilty	0.82	0.95
Complains of loneliness	0.56	0.78	Little confidence/self-conscious	0.71	0.81
Depressed most of the day	0.61	0.83	Feels things never work out	0.90	0.96
Feels worthless/guilty	0.75	0.91			
Little confidence/self-conscious	0.55	0.77			
Feels things never work out	0.69	0.91			

Note: Minimum and maximum factor loadings from confirmatory factor analyses across ages (6–12 years) are provided.