

# The borderline personality diagnosis in adolescents: gender differences and subtypes

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**Background:** This study aimed to identify personality features characterizing adolescent girls and boys with borderline personality disorder (BPD) and to see whether meaningful patterns of heterogeneity exist among adolescents diagnosed with the disorder. **Methods:** Two hundred and ninety-four randomly selected doctoral-level clinicians described adolescent patients using Axis II rating scales and the Shedler–Westen Assessment Procedure-200 for Adolescents (SWAP-200-A). We used the SWAP-200-A to provide empirically derived descriptions of female and male adolescents meeting DSM-IV criteria for BPD (who differed substantially in their profiles), and used Q-factor analysis to identify naturally occurring groupings of female patients based on shared personality features. **Results:** The symptoms and phenomenology of adolescent girls with BPD are similar to those of adults. Adolescent boys meeting BPD criteria have a more aggressive, disruptive, antisocial presentation. Although *Ns* did not permit further analysis of the data on adolescent boys, Q-analysis isolated four clinically coherent subgroups of girls with BPD: high-functioning internalizing, histrionic, depressive internalizing, and angry externalizing. **Conclusions:** BPD in female adolescents resembles DSM-IV BPD as defined for adults. The operating characteristics of the DSM-IV criteria for adolescent boys require further investigation. Empirically derived subgroups are similar to those identified in recent research with adult females. Differences across subgroups on internalizing and externalizing Child Behavior Checklist (CBCL) scales provide preliminary data on the validity of subgroups and raise questions about the place of BPD among internalizing and externalizing spectrum disorders. **Keywords:** Adolescent psychopathology, personality disorder, gender, subtype, SWAP, Q-sort. **Abbreviation:** SWAP: Shedler–Westen Assessment Procedure.

Personality disorders (PDs) are enduring maladaptive patterns of thought, emotion, self-regulation, goal pursuit, behavior, and relatedness to others. In 1980, the *Diagnostic and Statistical Manual of Mental Disorders (DSM-III)*; American Psychiatric Association) created a multiaxial system of diagnosis distinguishing between clinical syndromes such as major depression and schizophrenia, diagnosed on Axis I, and enduring, trait-like personality phenomena (as well as mental retardation), diagnosed on Axis II. A similar set of disorders is coded in the *Specific Personality Disorders* sub-grouping of the ICD-10 category, 'Disorders of Adult Personality and Behavior.'

Personality disorders are highly prevalent disorders with important clinical ramifications. Best estimates suggest that between 10 and 15% of the general population (see, e.g., Torgersen, Kringlen, & Cramer, 2001) and at least 30% of patients presenting for treatment have diagnosable PDs (e.g., Kessler et al., 1998; Lenzenweger & Clarkin, 1996). Although clinicians and researchers rarely use Axis II diagnoses in adolescents (in accord with DSM-IV, which cautions against the diagnosis of PDs in adolescents), an emerging body of data suggests that despite substantial developmental changes in adolescence, enduring maladaptive personality characteristics can be identified among adolescents. A recent series of studies suggest that

the prevalence of PDs among adolescents in the community using adult criteria is roughly equivalent to that among adults (approximately 15%), and that PD symptoms in adolescents show diagnostic continuity over time (Bernstein, Cohen, Skodol, Bezirgianian, & Brook, 1996; Johnson et al., 1999) and predict occurrence of Axis I and Axis II disorders in young adulthood (Grilo, Walker, Becker, Edell, & McGlashan, 1997; Johnson et al., 1999, 2000).

The PD that has received the most empirical attention in adolescents, as in adults, is borderline PD (BPD). Studies suggest that the symptoms (e.g., emotional dysregulation, interpersonal instability) and developmental precursors (e.g., disrupted attachment, history of childhood sexual abuse) of BPD are similar among adolescents and adults (Johnson et al., 1995; Ludolph et al., 1990; Pinto, Grapentine, Francis, & Picariello, 1996; Westen, Ludolph, Lerner, Ruffins, & Wiss, 1990). As with adults, BPD in adolescence is comorbid with multiple Axis I disorders, particularly depression (Lewinsohn, Rohde, Seeley, & Klein, 1997), and shows stability over time (Brent, Zelenak, Bukstein, & Brown, 1990; Garnet, Levy, Mattanah, Edell, & McGlashan, 1994; McManus, Lerner, Robbins, & Barbour, 1984; Meijer, Goedhart, & Treffers, 1998).

Despite significant progress in understanding BPD among adolescents, important questions remain.

First, although considerable research suggests that adult BPD criteria can be profitably applied to adolescents, the extent to which these criteria are optimal for adolescents is unknown. Indeed, the studies of adolescent PDs described above all use adult diagnostic criteria, which has the advantage of facilitating comparisons of research on adolescents and adults with similar pathology but has the correlative disadvantage of potentially impeding identification of symptoms or syndromes specific to or differently expressed in adolescents (see Westen & Chang, 2000; Westen, Shedler, Durrett, Glass, & Martens, 2003).

Second, because BPD is much more prevalent among females than males, we know little about the characteristics of adolescent boys who meet diagnostic criteria. The same is true of adult BPD.

Third, a heterogeneous spectrum of clinical presentations can yield a BPD diagnosis in adolescents as in adults (e.g., two adolescents can share the BPD diagnosis while having only one of the nine symptoms of the disorder in common (Skodol et al., 2002)). Recent research has identified replicable and clinically meaningful subtypes of BPD in adults. In two independent samples, Westen and Shedler (Shedler & Westen, 1998; Westen & Shedler, 1999b) identified two types of patients who receive a BPD diagnosis. The first of these groups, labeled 'emotionally dysregulated,' is characterized by emotions that spiral out of control, a tendency to become irrational in the face of strong emotions, suicidal and self-harming behaviors, and an inability to self-soothe. The second, a 'histrionic' subtype, describes patients who tend to express emotions in an exaggerated and theatrical manner, to become attached quickly to others, to become involved in intense (and transient) sexual relationships, and to act impulsively without regard for consequences. A third study with a larger *N* reproduced the histrionic subtype and distinguished 2 subgroups of emotionally dysregulated patients, one whose pathology was more internalizing, characterized by intense dysphoric affect and desperate efforts to manage it; and the other more externalizing, characterized by similar psychological pain but, in addition, intense anger and a tendency to blame difficulties on others (Zittel & Westen, 2004).

This article has three goals. The first is to provide a comprehensive personality description of BPD in adolescents that might shed light on similarities and differences between the disorder as seen in adolescent and adult patients. The second is to examine similarities and differences in the personalities of adolescent girls and boys who meet criteria for the disorder. The third is to see if we can identify meaningful subgroups of patients receiving the borderline diagnosis, focusing, as in adult subtyping studies, on females, given limitations of sample size to address subgroups in males.

## Method

### Overview of approach

As part of a broader study of personality pathology in adolescents, we collected data from a large random sample of experienced North American clinicians whom we asked to select a random patient currently in their care who had any kind of enduring, maladaptive personality patterns, from mild to severe, irrespective of any adult categories or criteria. Clinicians completed an Axis II checklist that allowed us to diagnose patients categorically and dimensionally using adult Axis II criteria, as well as a number of psychometric instruments designed for clinicians, including the Shedler–Westen Assessment Procedure 200-item Q-sort for Adolescents (SWAP-200-A), a personality pathology instrument designed for assessing adolescents (Westen et al., 2003).

The logic of the present study is as follows. We first identified adolescent patients meeting adult BPD criteria. We then used the SWAP-200-A, which includes a much broader set of personality descriptors than the 79 diagnostic criteria in DSM-IV, to describe the personality functioning of adolescents with BPD and to see whether candidate criteria (items from the instrument) not currently represented among the DSM-IV criteria might prove more descriptive of BPD adolescents. This is a conservative strategy, in that it assumes the adult classification system and selects patients based on DSM-IV (adult) criteria. This means that if the SWAP-200-A items that emerge in this study as most descriptive of borderline adolescents strongly resemble DSM-IV criteria, the incremental knowledge will be relatively small, given that we selected patients based on these criteria. If, on the other hand, we identify other criteria (personality descriptors) that appear more characteristic of the average adolescent patient with BPD than the DSM-IV criteria, or identify substantial gender differences, this would provide strong evidence about ways Axis II may need to be refined for application to adolescents.<sup>1</sup> We next applied this same strategy separately to female and male adolescents with DSM-defined BPD, providing composite descriptions of the 'average' female and male patient with the disorder. This allowed us to see whether the disorder looks similar in girls and boys and whether female and male borderline adolescents both resemble the DSM-IV (adult) description of the disorder. Finally, to see if we could identify subgroups of adolescents who meet adult BPD criteria but are distinct from each other in clinically and empirically meaningful ways, we applied a statistical aggregation technique useful for identifying personality constellations, Q-factor analysis (see Block, 1978), to the SWAP-200-A data (applied only to females because of limitations in sample size, as in adult subtyping studies to date).

### Sample

We obtained data on 294 patients using a practice network approach to taxonomy (Morey, 1988; Westen &

<sup>1</sup> Elsewhere we have reported preliminary data using a less conservative procedure to generate a classification of adolescent personality pathology that does not presume the current Axis II categories (Westen et al., 2003).

Chang, 2000; Westen & Harnden-Fischer, 2001; Westen & Shedler, 1999a, 1999b, 2000; Wilkinson-Ryan & Westen, 2000), recruiting psychiatrists and psychologists who reported treating adolescents from the membership rosters of the American Academy of Child and Adolescent Psychiatry and the American Psychological Association. (For additional details on the sampling procedure, see Westen et al., 2003.)

Elsewhere we have addressed in detail the rationale for using clinicians as informants in basic science research (see Dutra, Campbell, & Westen, 2004; Westen & Shedler, 1999a, 1999b; Westen et al., 2003; Westen & Weinberger, in press). The main advantage is that clinicians are experienced observers, with skills and a normative basis with which to make inferences and recognize nuances in psychopathology. Clinician-report instruments are less vulnerable to defensive and self-presentational biases than self-reports and observations by significant others can be, particularly with adolescents (see Shedler, Mayman, & Manis, 1993; Westen, 1997). Further, clinical observation is generally longitudinal, rather than based on a single interview or questionnaire completed on a single day. This can be particularly useful in studying symptoms and personality processes that wax and wane or are subject to mood-dependent biases. We address potential concerns about clinicians as informants in the Discussion. Our general point is that clinician-report methods, like more traditional self-report and structured interview methods, have distinct strengths and weaknesses and are likely to provide a useful complement to other research approaches.

### Procedure

Participating clinicians provided data on a randomly selected adolescent patient (operationalized as 'the last patient you saw last week before completing this form who meets study criteria' and is currently in treatment for 'enduring maladaptive patterns of thought, feeling, motivation, or behavior – that is personality'). We obtained an age- and gender-stratified sample. To impose as few constraints as possible on random patient selection, we did not ask clinicians to select a patient with any particular diagnosis. Only 28.4% of clinicians described patients whom they diagnosed with an Axis II disorder, with the remaining describing what they considered subclinical personality patterns. Clinicians who contributed data received a token honorarium of \$25.

### Measures

*The SWAP-200-A.* This is a Q-sort instrument for assessing adolescent personality pathology. It presumes a clinically experienced observer, who has either observed the patient clinically over an extended period or has administered a systematic, narrative-based interview to both the adolescent and his or her parents (see, e.g., Westen & Muderrisoglu, 2003). A Q-sort is a ranking procedure, in which the observer describes a patient by rank-ordering statements (in this case 200 statements describing personality characteristics applicable to adolescents) into eight categories based on their applicability to the patient, from those that are not descriptive (assigned a value of 0) to those that are most

descriptive (assigned a value of 7). Statements that apply to a greater or lesser degree are placed into intermediate categories. Following Block (1978), our goal was to provide clinicians with a standard 'language' with which to make their observations, so that we could use data from experienced clinical observers to generate reliable formulations of a case or disorder. In this study, because we were interested in identifying the distribution to be used for future studies, we asked clinicians to use a semi-constrained distribution, in which we limited the number of items ranked 5, 6, and 7 (the items most descriptive of patients) but did not place constraints on the distribution of the rest of the items.

In designing the SWAP-200-A, we drew substantially on the work of Block (1971, 1978), who pioneered both the use of Q-sort techniques for personality assessment and the development of personality prototypes in normal populations. The item set was developed and revised over a period of approximately seven years (see Shedler & Westen, 1998) and was subsequently adapted for adolescents (see Westen et al., 2003). The items reflect constructs from a variety of sources: axis II criteria for DSM-III-DSM-IV; symptoms currently included in axis I criteria that are associated with personality disturbance and tend to be enduring (e.g., anxiety and depressed mood); research on PDs, personality traits, and psychological health in adolescents as well as adults; and feedback from over 1,000 experienced clinicians. SWAP-200-A items were written in a manner close to the data (e.g., 'tends to run away from home' and 'has an exaggerated sense of self importance'). Items requiring inference about internal processes are stated in simple language without jargon (e.g., 'tends to blame others for own failures and shortcomings'). Thus, clinicians can use the SWAP-200-A regardless of their theoretical orientation. Empirically, clinicians' theories appear to have little impact on cluster or factor-analytic solutions that emerge using the instrument (Shedler & Westen, 1998, 2004a).

An emerging body of research supports the validity and reliability of the adult progenitor of the SWAP-200-A, the SWAP-200. SWAP descriptions made by treating clinicians and independent interviewers show high correlations (Westen & Muderrisoglu, 2003), and both predict a range of measures of adaptive functioning, such as history of hospitalizations and GAF scores, as well as etiological variables (Shedler & Westen, 1998; Westen & Chang, 2000; Westen & Harnden-Fischer, 2001; Westen & Shedler, 1999a, 1999b). Similar data are emerging on the adolescent version of the instrument (e.g., Nakash-Eisikovits, Dutra, & Westen, 2003; Westen et al., 2003).

*Axis II pathology.* We presented clinicians with a checklist of all criteria currently included on Axis II for all disorders, randomly ordered, and asked them to rate each criterion as present or absent. We then applied DSM-IV decision rules to make diagnoses (in this case, 5 of 9 criteria to attain a diagnosis of BPD). Similar methods have produced robust findings in previous research (Blais & Norman, 1997; Morey, 1988).

*Clinical Data Form-Adolescent Version.* The Clinical Data Form-Adolescent Version (CDF-A) assesses a range of variables relevant to demographics, diagnosis,

and etiology. Following basic demographic and diagnostic questions, clinicians rate the patient's adaptive functioning, including variables such as school functioning (1 = severe conduct problems/suspensions, 7 = working to potential) and history of suicide attempts; and variables relevant to etiology, such as family stability and history of physical and sexual abuse. Research has demonstrated that clinician ratings of adaptive functioning variables show high correlations with the same variables obtained by interview (Hilsenroth et al., 2000; Westen & Muderrisoglu, 2003; Westen, Muderrisoglu, Shedler, Fowler, & Koren, 1997) and with other ratings of adjustment and psychopathology (Dutra et al., 2004; Nakash-Eisikovits et al., 2003; Westen et al., 1997). In prior studies, clinicians' judgments on developmental history variables as assessed by the CDF have predicted theoretically relevant criterion variables in ways similar to structured interview data (Wilkinson-Ryan & Westen, 2000). Aggregated ratings of patients' relationships with their parents, as assessed by the CDF, also correlate strongly with factor scores from a clinician-report version of the Parental Bonding Inventory (PBI; Parker, Tupling, & Brown, 1979), which in turn shows the same factor structure and similar correlates as the widely used self-report version of the instrument (Russ, Heim, & Westen, 2003).

#### *Clinician-Report Child Behavior Checklist.*

Clinicians completed a clinician-report version of the parent form of the Child Behavior Checklist (CBCL; Achenbach, 1991) which assesses behavioral symptoms in children and adolescents. It has three versions, based on alternative reporters (parents, teachers, and the child/adolescent). All three forms are widely used in research and clinical settings because of strong psychometric properties and ease of administration. Items are rated on a 3-point scale (0 = not true, 1 = somewhat or sometimes true, 2 = very true or often true) and yield a total score, broadband internalizing and externalizing scores, and 8 more specific problem scales. The clinician-report version of the CBCL uses the same wording as the parent version. Recent research demonstrates that the clinician-report CBCL has similar psychometric properties to the parent-report form, including high internal consistency for the problem scale scores (median coefficient alpha >.80), virtually identical factor structure, and predictable correlates suggesting convergent and discriminant validity (Dutra et al., 2004).

#### *Statistical analyses*

We analyzed the data as follows. First, we created a composite description of all adolescents in the sample meeting DSM-IV criteria for BPD from the Axis II checklist, arranging the SWAP-200-A items in descending order of magnitude to focus on those with the highest mean rankings (see Westen & Shedler, 1999a). We then repeated this procedure separately for boys and girls with the disorder. In secondary analyses, we aggregated composite descriptions using a method that emphasizes items that *distinguish* BPD patients from other patients in the sample, by standardizing items

before aggregating (and hence, by setting means to 0, emphasizing distinctive but low base rate items). Using this second method, items highly descriptive of borderline patients (e.g., depression) but not specific to BPD will tend to be eclipsed by items more specific to BPD.

Next, we used an empirical clustering technique, Q-factor analysis (Block, 1978), to identify naturally occurring groupings of patients who met DSM-IV criteria for BPD. Q-factor analysis (or simply Q-analysis) has been used effectively in studies of normal personality (Block, 1978; Caspi, 1998; Robins, John, Caspi, Moffitt, & Stouthamer-Loeber, 1996) as well as PDs (Westen & Harnden-Fischer, 2001; Westen & Shedler, 1999b; Westen et al., 2003). Whereas conventional factor analysis identifies items that share a common underlying dimension (a common factor) across patients, Q-analysis as applied to personality data identifies patients who share a core personality style or organization (i.e., patients who have similar profiles across items). (Q-factor analysis does not have the same constraints as traditional factor analysis on number of cases required for analysis, and can be accomplished with even a small *N*; see Block, 1978; Thompson, 2000.) Finally, to see whether the subgroups (called Q-factors) had distinct correlates (i.e., to provide preliminary data on their validity), we compared them on the internalizing and externalizing scales of the CBCL.

## Results

### *Demographics and comorbidity*

Clinician-respondents (61.4% psychiatrists, 50.2% male) were on average highly experienced (mean years of experience, 13.4, SD 9.4). Clinicians' theoretical orientation varied: 42.7% described themselves as eclectic, 34.8% psychodynamic, 11.6% cognitive-behavioral, 6.5% biological, and 3.8% systemic. Most worked in multiple settings: 77.0% private practice, 31.3% outpatient clinic, 25.8% hospital, 13.4% school, and 6.5% forensic. Clinicians knew the patients well: Median length of treatment prior to completing the questionnaire was 20 sessions.

The overall group of patients described by the clinicians (*N* = 294) was evenly distributed by gender and age (14–18). The majority (84.9%) were Caucasian, with most of the remaining participants African-American or Hispanic. Clinicians rated the patients as 7.5% poor, 20.9% working class, 50.7% middle class, and 20.9% upper class. The most prevalent Axis I diagnoses in the sample included major depressive disorder (25.3%), dysthymic disorder (24.3%), ADHD (16.1%), oppositional defiant disorder (9.0%), and conduct disorder (6.1%).

To select patients to be included in the analyses for the present study, we calculated the number of BPD criteria met for each patient on the Axis II checklist and applied DSM-IV decision rules (5 of 9 criteria met) to make a categorical (present/absent) diagnosis. Eighty-one patients received a BPD diagnosis,

including 55 females and 26 males. Demographics resembled the overall sample, with 78.6% Caucasian, most middle (50%) or working (30.4%) class, and relatively even distribution by age (average age of 16.1 years,  $SD = 1.4$ ). The most prevalent Axis I diagnoses were major depressive disorder (31.8%), dysthymic disorder (18.9%), and PTSD (14.2%).

### *A composite portrait of borderline adolescents in treatment in the community*

Table 1 shows the empirically derived composite description of adolescents meeting DSM-IV BPD criteria. The table lists the 18 items most descriptive of these patients, obtained by averaging the value of each SWAP-200-A item across patients. We chose 18 items for parsimony and because, using the fixed distribution of the Q-sort (see Block, 1978; Westen & Shedler, 1999a), this is the number of items that clinicians place in the two 'most descriptive' categories (and constitute slightly less than 10% of the items in the instrument). We calculated the reliability of this diagnostic composite (obtained by considering each case an observation and calculating coefficient alpha; for this use of alpha, see Block, 1978; Shedler & Westen, in press). The resulting alpha (.84) was high, indicating that the composite captured substantial shared characteristics across patients, with minimal error retained.

As might be expected, given that we used DSM criteria to select patients who met BPD criteria, many of the most descriptive items are reflected among DSM-IV BPD criteria, including lack of a stable identity, fear of abandonment, affective instability, difficulty controlling anger and a tendency to act impulsively. Interestingly, however, several of these personality descriptors are often

used to describe normal adolescents, yet they rose to the top of the rankings of BPD items in comparison to other items, suggesting that, for example, disturbed identity and difficulty controlling anger are something striking about BPD adolescents above and beyond developmental issues. In addition, a number of other items emerged from the data as descriptive of BPD adolescents not listed among DSM-IV criteria, including inability to soothe or comfort self when distressed without the involvement of others; tendency to feel misunderstood, mistreated, or victimized; tendency to feel depressed or despondent; and tendency to draw strong reactions from others.

### *Composite portraits of borderline adolescent females and males*

We next examined the composite SWAP-200-A descriptions of adolescent girls and boys meeting DSM-IV BPD criteria separately by gender. Table 2 shows the empirically derived composite of adolescent girls with BPD. Coefficient alpha (.90) was again high, indicating that the composite captured substantial shared characteristics across patients, with minimal error retained. Many of the most descriptive items are again related to DSM-IV BPD criteria, including identity disturbance, fear of abandonment, affective lability, difficulty controlling anger, feelings of emptiness, and a tendency for cognitive processes to become impaired in the face of stress. Many of the additional items not reflected among the DSM-IV criteria, as in the cross-gender composite, reflect processes likely to underlie many of the maladaptive behaviors constituting DSM criteria for BPD, notably high levels of negative affect and difficulty with emotional regulation. Other items unique to the

**Table 1** Composite SWAP-200-A description of adolescents meeting DSM IV borderline criteria ( $N = 80$ )

SWAP-200-A items	Mean (SD) <sup>a</sup>
Emotions tend to spiral out of control, leading to extremes of anxiety, sadness, rage, excitement, etc.	5.48 (1.67)
Tends to get into power struggles with adults.	5.04 (1.97)
Psychological issues interfere with appropriate functioning at school (or work, if s/he is no longer in school).	5.00 (1.94)
Lacks a stable image of who s/he is (e.g., attitudes, values, goals, and feelings about self are highly unstable).	4.98 (1.77)
Tends to feel misunderstood, mistreated, or victimized.	4.96 (1.53)
Tends to be angry or hostile (whether consciously or unconsciously).	4.94 (1.73)
Tends to feel unhappy, depressed, or despondent.	4.88 (1.84)
Tends to fear s/he will be rejected or abandoned by those who are emotionally significant.	4.81 (1.89)
Is unable to soothe or comfort self when distressed; requires involvement of another person to help regulate affect.	4.63 (1.90)
Tends to be rebellious or defiant toward authority.	4.46 (2.12)
Tends to react to criticism with feelings of rage or humiliation.	4.46 (2.11)
Tends to elicit extreme reactions or stir up strong feelings in others.	4.33 (1.97)
Tends to express intense and inappropriate anger, out of proportion to the situation at hand.	4.32 (2.12)
Tends to be oppositional, contrary, or quick to disagree.	4.24 (2.03)
Emotions tend to change rapidly and unpredictably.	4.21 (1.81)
Tends to be critical of others.	4.17 (2.00)
Tends to blame others for own failures or shortcomings; tends to believe his/her problems are caused by external factors.	4.15 (2.16)
Tends to act impulsively, without regard for consequences.	4.13 (2.28)

<sup>a</sup>Obtained by averaging the value of the item across all adolescent patients in the BPD sample.

**Table 2** Composite SWAP-200-A description of female adolescents meeting DSM IV borderline criteria ( $N = 54$ )

SWAP-200-A items	Mean (SD) <sup>a</sup>
Emotions tend to spiral out of control, leading to extremes of anxiety, sadness, rage, excitement, etc.	5.69 (1.44)
Lacks a stable image of who s/he is (e.g., attitudes, values, goals, and feelings about self are highly unstable).	5.17 (1.57)
Tends to fear s/he will be rejected or abandoned by those who are emotionally significant.	5.06 (1.95)
Tends to feel misunderstood, mistreated, or victimized.	4.92 (1.60)
Tends to feel unhappy, depressed, or despondent.	4.92 (2.06)
Psychological issues interfere with appropriate functioning at school (or work, if s/he is no longer in school).	4.77 (2.15)
Tends to be angry or hostile (whether consciously or unconsciously).	4.74 (1.77)
Tends to get into power struggles with adults.	4.74 (2.00)
Is unable to soothe or comfort self when distressed; requires involvement of another person to help regulate affect.	4.59 (1.87)
Expresses emotion in exaggerated and theatrical ways.	4.45 (2.19)
Tends to feel s/he is inadequate, inferior, or a failure.	4.37 (2.21)
Tends to react to criticism with feelings of rage or humiliation.	4.32 (2.02)
Tends to express intense and inappropriate anger, out of proportion to the situation at hand.	4.32 (2.18)
Manages to elicit in others feelings similar to those he or she is experiencing (e.g., when angry, acts in such a way as to provoke anger in others; when anxious, acts in such a way as to induce anxiety in others).	4.26 (2.11)
Tends to feel empty.	4.24 (2.28)
Tends to elicit extreme reactions or stir up strong feelings in others.	4.23 (2.28)
Emotions tend to change rapidly and unpredictably.	4.24 (2.11)
Tends to become irrational when strong emotions are stirred up; may show a noticeable decline from customary level of functioning.	4.23 (1.89)

<sup>a</sup>Obtained by averaging the value of the item across all female adolescent patients in the BPD sample.

female BPD composite include a tendency to express emotion in an exaggerated and theatrical manner and an interpersonal process that has been described in the clinical literature on borderline adolescents as a form of 'projective identification,' in which the patient elicits in others feelings she has but cannot acknowledge (Zinner & Shapiro, 1989).

In a secondary analysis, we used standardized rather than raw scores to develop a composite description, which is more likely to identify items specific to BPD. Although the profile was similar, it included several additional items. Some again replicated DSM criteria, notably impulsive and self-harming behaviors and a tendency to see others as all good or all bad. However, others provided incremental information, notably involvement in abusive relationships outside the family ( $M = .79$ ), a tendency to be overly sexually seductive ( $M = .73$ ), a tendency to become attached quickly or intensely ( $M = .72$ ), and a tendency ends to oscillate between undercontrol and overcontrol of needs and impulses ( $M = .66$ ). (These means are in standard deviation units.)

Table 3 shows the empirically derived male composite. Although this composite shares central features of emotional dysregulation and identity instability with that of adolescent females (and DSM-IV BPD criteria), the male portrait diverges substantially from DSM-IV (even though these criteria were used to select these patients). The male composite is considerably more externalizing than either DSM-IV or the adolescent female composite. When we used standardized rather than raw item scores to generate the composites, gender differences were

magnified. For example, characteristics now receiving a high ranking among males (but not females) included gaining pleasure from being aggressive, sadistic, or bullying ( $M = 1.08$ ); tendency to take advantage of others ( $M = 1.00$ ); sense of entitlement ( $M = .96$ ); and exaggerated sense of self-importance ( $M = .92$ ). Table 4 presents all items on which females and males differed at  $p \leq .01$  (two-tailed  $t$ -tests). Because the small sample of adolescent males is small, these data should be considered preliminary, although the differences are striking and raise questions about whether adolescent boys are readily misdiagnosed by strict application of DSM-IV criteria or whether the disorder expresses itself with a more psychopathic presentation in boys.

### Identifying subtypes

We next used Q-analysis to see whether the BPD diagnosis in females is heterogeneous or whether we could identify naturally occurring groupings of female adolescents meeting DSM-IV criteria for BPD. It is of note that Q-factor analysis, unlike many other clustering algorithms, does not invariably produce multiple subgroups. Like conventional factor analysis, it can just as readily identify a single factor as multiple factors if the data support a one-factor solution. As in conventional factor analysis, we first entered the data from all patients into a principal components analysis, specifying eigenvalues  $\geq 1$ . The scree plot suggested a break after 4 principal components (with eigenvalues of 13.7, 5.8, 3.5, and 2.3 for the first 4 factors; the next-highest factors had eigenvalues of 1.6 and 1.5). To increase the

**Table 3** Composite SWAP-200-A description of male adolescents meeting DSM IV borderline criteria ( $N = 26$ )

SWAP-200-A item	Mean (SD) <sup>a</sup>
Tends to get into power struggles with adults.	5.76 (1.58)
Psychological issues interfere with appropriate functioning at school (or work, if s/he is no longer in school).	5.40 (1.38)
Tends to be angry or hostile (whether consciously or unconsciously).	5.32 (1.60)
Tends to be rebellious or defiant toward authority.	5.28 (1.31)
Tends to feel misunderstood, mistreated, or victimized.	5.12 (1.39)
Tends to blame others for own failures or shortcomings; tends to believe his/her problems are caused by external factors.	5.04 (1.70)
Emotions tend to spiral out of control, leading to extremes of anxiety, sadness, rage, excitement, etc.	5.00 (2.10)
Tends to be critical of others.	4.96 (1.57)
Tends to feel unhappy, depressed, or despondent.	4.92 (1.26)
Tends to be oppositional, contrary, or quick to disagree.	4.88 (1.33)
Tends to react to criticism with feelings of rage or humiliation.	4.84 (2.10)
Appears inhibited about pursuing goals or successes; aspirations or achievements tend to be below his/her potential.	4.84 (2.10)
Is unable to soothe or comfort self when distressed; requires involvement of another person to help regulate affect.	4.76 (1.94)
Tends to elicit extreme reactions or stir up strong feelings in others.	4.64 (1.71)
Tends to feel bored.	4.64 (1.68)
Lacks a stable image of who s/he is (e.g., attitudes, values, goals, and feelings about self are highly unstable).	4.52 (2.16)
Tends to be unreliable and irresponsible (e.g., may fail to meet school or work obligations).	4.48 (2.02)
Tends to use his/her psychological or medical problems to avoid school, work, or responsibility (whether consciously or unconsciously).	4.48 (1.92)

<sup>a</sup>Obtained by averaging the value of the item across all male adolescent patients in the BPD sample.

**Table 4** Gender differences in adolescent BPD patients

SWAP-200-A items	Males ( $N = 25$ ) M(SD)	Females ( $N = 54$ ) M(SD)	$t(df)$	Sig.
Appears to gain pleasure or satisfaction by being sadistic, aggressive, or a bully (whether consciously or unconsciously).	3.88 (2.51)	1.43 (2.03)	4.63 (78)	<.001
Tends to get drawn into relationships (outside of his/her own family) in which s/he is emotionally or physically abused.	.96 (1.69)	3.06 (2.37)	3.97 (78)	<.001
Has an exaggerated sense of self-importance; tends to boast or brag.	3.88 (2.04)	1.96 (2.07)	3.86 (78)	<.001
Tends to choose sexual or romantic partners who seem inappropriate in terms of age, status (e.g., social, economic, intellectual), etc.	.92 (1.68)	2.58 (2.62)	3.84 (78)	<.001
Tends to show reckless disregard for the rights, property, or safety of others.	3.56 (2.30)	1.69 (1.99)	3.71 (78)	<.001
Tends to see self as logical and rational, uninfluenced by emotion; prefers to operate as if emotions were irrelevant or inconsequential.	2.36 (2.56)	.87 (1.50)	3.25 (78)	.002
Takes advantage of others; is out for number one; has minimal investment in moral values.	3.92 (1.78)	2.40 (2.14)	3.08 (78)	.003
Has trouble making decisions; tends to be indecisive or to vacillate when faced with choices.	3.48 (1.50)	2.26 (1.85)	3.08 (78)	.003
Seeks to dominate an important other (e.g., sibling, boyfriend, girlfriend, parent) through violence or intimidation.	3.12 (2.82)	1.38 (2.10)	3.07 (78)	.003
Tends to be overly sexually seductive or provocative (e.g., may be inappropriately flirtatious).	1.24 (2.07)	2.95 (2.49)	2.98 (78)	.004
Appears to experience no remorse for harm or injury caused to others.	3.18 (2.20)	1.78 (2.01)	2.81 (78)	.006
Tends to make repeated suicidal threats or gestures, either as a 'cry for help' or as an effort to manipulate others.	1.92 (2.53)	3.47 (2.26)	2.74 (78)	.008
Appears to have little need for human company or contact; is genuinely indifferent to the presence of others.	1.44 (2.06)	.49 (1.09)	2.69 (78)	.009
Has uncontrolled eating binges followed by 'purges' (e.g., makes self vomit, abuses laxatives, fasts, etc.); has bulimic episodes.	.16 (.47)	1.27 (2.06)	2.65 (78)	.01
Tends to be preoccupied with food, diet, or eating.	1.02 (1.78)	2.40 (2.37)	2.5 (78)	.011
Tends to blame others for own failures or shortcomings; tends to believe his/her problems are caused by external factors.	5.04 (1.70)	3.75 (2.25)	2.56 (78)	.012
Promises to change but then reverts to previous maladaptive behavior; gets other people to believe that 'this time is really different.'	3.92 (2.18)	2.47 (2.41)	2.56 (78)	.012

likelihood of identifying robust and coherent factors, we conducted Promax (oblique) rotations, specifying 3, 4, and 5 factors, using multiple estimation

procedures. We report here the 4-factor Promax solution with maximum likelihood estimation, which accounted for 45.9% of the variance (24.1%, 10.5%,

**Table 5** SWAP-200-A items for female adolescents with BPD in empirically derived subgroups

SWAP-200-A items	High- functioning internalizing <sup>a</sup>	Histrionic	Depressive internalizing	Angry externalizing
<i>Items common to multiple subtypes</i>				
Lacks a stable image of who s/he is (e.g., attitudes, values, goals, and feelings about self are highly unstable).	1.82	1.27	1.70	1.57
Emotions tend to spiral out of control, leading to extremes of anxiety, sadness, rage, excitement, etc.	2.30	2.14	1.25	1.88
Tends to fear s/he will be rejected or abandoned by those who are emotionally significant.	2.09	1.49	1.51	
Is unable to soothe or comfort self when distressed; requires involvement of another person to help regulate affect.	1.55	1.46	1.50	
Tends to feel misunderstood, mistreated, or victimized.		1.47	1.48	1.73
Tends to get into power struggles with adults.		1.53	1.25	2.47
Psychological issues interfere with appropriate functioning at school (or work, if s/he is no longer in school).		1.25	1.97	1.52
Tends to feel unhappy, depressed, or despondent.	2.06		2.04	
Tends to feel s/he is inadequate, inferior, or a failure.	1.87		2.00	
Tends to feel helpless, powerless, or at the mercy of forces outside his/her control.	1.68		1.44	
Is articulate; can express self well in words.	2.05			1.45
Appreciates and responds to humor.	1.33			1.90
Tends to express intense and inappropriate anger, out of proportion to the situation at hand.		1.41		2.26
Tries to manipulate others' emotions to get what s/he wants.		1.39		1.46
Emotions tend to change rapidly and unpredictably.		1.34		1.62
Tends to react to criticism with feelings of rage or humiliation.		1.32		1.48
Tends to be angry or hostile (whether consciously or unconsciously).		1.31		2.13
Tends to blame others for own failures or shortcomings; tends to believe his/her problems are caused by external factors.		1.28		1.46
Tends to act impulsively, without regard for consequences.		1.27		2.11
<i>Items specific to the high-functioning internalizing subgroup</i>				
Tends to be self-critical; sets unrealistically high standards for self and is intolerant of own human defects.	2.02			
Tends to elicit liking in others.	1.89			
Has moral and ethical standards and strives to live up to them.	1.79			
Tends to feel empty.	1.77			
Tends to be anxious.	1.73			
Tends to blame self or feel responsible for bad things that happen.	1.69			
Tends to feel guilty.	1.54			
Tends to be conscientious and responsible.	1.50			
Appears to want to 'punish' self; creates situations that lead to unhappiness, or actively avoids opportunities for pleasure and gratification.	1.42			
Tends to feel s/he is not his/her true self with others; tends to feel false or fraudulent.	1.35			
Is creative; is able to see things or approach problems in novel ways.	1.34			
Is psychologically insightful; is able to understand self and others in subtle and sophisticated ways.	1.28			
Tends to oscillate between undercontrol and overcontrol of needs and impulses.	1.27			
<i>Items specific to the histrionic subtype</i>				
Tends to become attached quickly or intensely; develops feelings, expectations, etc. that are not warranted by the history or context of the relationship.		2.26		
Tends to be overly sexually seductive or provocative (e.g., may be inappropriately flirtatious).		2.09		
Expresses emotion in exaggerated and theatrical ways.		1.97		
Interpersonal relationships tend to be unstable, chaotic, and rapidly changing.		1.85		
Seeks to be the center of attention.		1.85		
Fantasizes about finding ideal, perfect love.		1.62		
Tends to use his/her physical attractiveness to an excessive degree to gain attention or notice.		1.56		
Tends to elicit extreme reactions or stir up strong feelings in others.		1.47		



Table 5 Continued

SWAP-200-A items	High- functioning internalizing <sup>a</sup>	Histrionic	Depressive internalizing	Angry externalizing
Tends to idealize certain others in unrealistic ways; sees them as 'all good,' to the exclusion of commonplace human defects.		1.46		
Tends to choose sexual or romantic partners who seem inappropriate in terms of age, status (e.g., social, economic, intellectual), etc.		1.38		
<i>Items specific to the depressive internalizing subgroup</i>				
Appears inhibited about pursuing goals or successes; aspirations or achievements tend to be below his/her potential.			1.43	
Is quick to assume that others wish to harm or take advantage of him/her; tends to perceive malevolent intentions in others' words and actions.			1.37	
Is simultaneously needy of, and rejecting toward, others (e.g., craves intimacy and caring, but tends to reject it when offered).			1.38	
Has little psychological insight into own motives, behavior, etc.; is unable to consider alternate interpretations of his/her experiences.			1.33	
Tends to feel life has no meaning.			1.48	
Appears to find little or no pleasure, satisfaction, or enjoyment in life's activities.			1.77	
Tends to feel like an outcast or outsider; feels as if s/he does not truly belong.			1.71	
Tends to get ignored, neglected, or avoided by peers.			1.37	
Tends to use his/her psychological or medical problems to avoid school, work, or responsibility (whether consciously or unconsciously).			1.39	
Is easily frustrated (e.g. gives up quickly).			1.32	
<i>Items specific to the angry externalizing subgroup</i>				
Tends to be rebellious or defiant toward authority.				2.51
Tends to be oppositional, contrary, or quick to disagree.				2.19
Tends to surround self with peers who are delinquent or deeply alienated.				1.72
Tends to be unreliable or irresponsible.				1.72
Tends to see own unacceptable feelings or impulses in other people instead of in him/herself.				1.47
Tends to be critical of others.				1.44
Tends to feel bored.				1.44
Tends to be unconcerned with the consequences of his/her actions; appears to feel immune or invulnerable.				1.37
Tends to be energetic and outgoing.				1.32
Is inattentive or easily distracted; has trouble concentrating.				1.28
Is able to form close and lasting friendships.				1.27
Tends to break things or become physically assaultive when angry.				1.25
Tends to seek thrills, novelty, adventure, etc.				1.25
Tends to become irrational when strong emotions are stirred up; may show a noticeable decline from customary levels of functioning.				1.25

<sup>a</sup>Indicates item's centrality or importance in defining the Q-factor. (The scores are equivalent to factor scores in conventional factor analysis, except that they apply to items, not subjects.) Items included in this table have scores of 1.25 and above.

6.4%, and 4.1% for each factor, respectively). Other rotation and estimation procedures yielded similar Q-factors. We labeled these four factors: *high functioning internalizing*, *histrionic*, *depressive internalizing*, and *angry externalizing*.

Table 5 shows the items that best characterized patients with high loadings on each Q-factor. These Q-factors are best understood as prototypes, that is, fuzzy diagnostic sets that patients approximate to a greater or lesser degree, indexed by the correlation between their profile and the diagnostic prototype (Block, 1978; Westen & Bradley, in press; Westen & Shedler, 2000). We included in the table items with factor scores of 1.25 or above (in standard deviation units, representing the extent to which this item is

characteristic of the prototype relative to the other items in the item set; in Q-analysis, patients load on factors and items have factor scores). The table first displays items with high scores on more than one of the subtypes (indicating its centrality to multiple prototypes), followed by items that ranked highly in only one subgroup.

The subgroups have several items in common (e.g., identity disturbance), suggesting that these patients do indeed share some core features. What is perhaps more striking, however, is the heterogeneity of these patients, all of whom met DSM-IV BPD criteria. The two internalizing subgroups share a tendency to feel depressed and despondent, whereas the histrionic and angry externalizing groups share a

tendency to become angry, to manipulate others, and to blame others for their problems. In addition, each subtype has a number of distinct characteristics. Patients with strong loadings on the *high-functioning internalizing* prototype (recall that patients load on factors and items receive factor scores in Q-analysis) have a tendency to be depressed and anxious as well as self-critical. However, their profile is marked by several strengths not present in patients with strong loadings on the other prototypes. Patients who strongly match the *histrionic* prototype manifest a more impulsive, externalizing, self-centered style, marked by theatrical expression of emotions, a need to be the center of attention, chaotic relationships and sexual provocativeness. Patients who match the *depressive internalizing* prototype are characterized by emotional dysregulation, intense dysphoria, difficulty forming relationships with others and expectations of abuse. Patients who match the *angry externalizing* prototype, like the histrionic patients, have a more impulsive and externalizing style, but with a hostile, defiant, aggressive bent.

### Validity of subtype diagnoses

One of the primary problems with cluster-analytic studies in psychopathology research historically has been that researchers have rarely progressed from deriving empirical groupings to examining their associations with external criterion variables (e.g., Andreasen, Endicott, Spitzer, & Winokur, 1977; Westen & Bradley, in press; Westen, Heim, Morrison, Patterson, & Campbell, 2002). Thus, as a first effort at validating these diagnostic distinctions, because the four personality constellations appeared to be divided into two with a more internalizing style (*high-functioning internalizing* and *depressive internalizing*) and two with an externalizing style (*histrionic* and *angry externalizing*), we compared patients with high loadings on each of these prototypes on the internalizing and externalizing scales of the CBCL. For ease of interpretation, we analyzed the data categorically, by correlating the SWAP-200-A profile of each patient meeting DSM criteria for BPD with each of the four prototypes and assigning patients to the subtype for which they received the highest score, yielding 20 patients described as high-functioning internalizing, 15 histrionic group, 11 depressive internalizing, and 9 angry externalizing group. Assigning patients to a single group provides

a conservative test of hypotheses, given that patients often had elevations on more than one scale.

To maximize power and to avoid capitalizing on spurious findings resulting from running multiple analyses, we used contrast analysis (Rosenthal, Rosnow, & Rubin, 2000) to test specific one-tailed hypotheses ( $p = .05$ ) regarding the relative ordering of means of the four groups, once we had identified the prototypes using Q-factor analysis and prior to examining correlations with any other variables. Contrast analysis is a powerful procedure that allows researchers to test focal hypotheses in comparing groups, and provides a much more specific answer than allowed by the more diffuse question addressed using ANOVA (i.e., do the groups differ among themselves in some unspecified way?). In contrast analysis, the researcher specifies a priori a hypothesized ordering of means, and the  $t$ -statistic,  $p$ -value, and corresponding effect size ( $r$ ) index the extent to which that exact prediction matches the obtained data.

Because the items that best distinguished the groups suggested differences in internalizing and externalizing pathology as well as possible differences in degree of disturbance, this permitted us to ask two specific, targeted questions. For the CBCL internalizing scale, we hypothesized that the depressive internalizing group would have the highest mean scores, followed by the high-functioning depressive group; we expected the histrionic and angry externalizing groups to be equally low in comparison. Contrast analysis supported this data:  $t(46) = 4.68$ ,  $p < .001$ ,  $r = .55$ . For CBCL externalizing, we predicted that the angry externalizing and histrionic groups would have the highest scores, followed by the depressive internalizing, with the high-functioning depressive group the lowest. The contrast analysis supported this hypothesis ( $t(51) = 4.58$ ,  $p < .001$ ,  $r = .54$ ). Table 6 reports the means and standard deviations of these CBCL variables across subgroups. (Patterns of findings for specific subscales yielded similar findings, such as a link between the histrionic subtype and the Sex Problems scale, but for parsimony we do not report all these analyses here.)

### Discussion

The primary findings are as follows. First, the BPD diagnosis does appear to be applicable to adolescents

**Table 6** Internalizing and Externalizing Scale scores from the Child Behavior Checklist (CBCL) for subtypes of female adolescents with BPD

Variable	High-functioning internalizing ( $N = 20$ ) M(SD)	Histrionic ( $N = 15$ ) M(SD)	Depressive internalizing ( $N = 10$ ) M(SD)	Angry externalizing ( $N = 9$ ) M(SD)
CBCL Internalizing <sup>a</sup>	17.60(6.04)	13.53(6.18)	24.91(9.42)	12.11(6.77)
CBCL Externalizing <sup>a</sup>	11.60(5.65)	28.73(14.47)	18.36(10.69)	23.88(14.47)

<sup>a</sup>The CBCL scores are sums for each scale (items scored 0 = not true, 1 = somewhat true, 2 = very true).

and produces a composite portrait, particularly in females, with strong resemblance to the adult BPD diagnosis. The DSM-IV description does not, however, capture the intense pain in which these patients find themselves, their inability to regulate their emotions or to self-soothe, and their desperate (and usually both maladaptive and unsuccessful) efforts to escape their pain. Research with adult samples has similarly found BPD patients to suffer from greater psychological distress than the diagnostic criteria for the disorder suggest (see Shedler & Westen, 1998, 2004b; Westen & Shedler, 1999a; Zittel & Westen, in press).

Second, the nature or expression of BPD in this sample was clearly gendered, with female patients more internalizing and emotionally dramatic, and male patients more behaviorally disinhibited, externalizing, and angry. Future research should address the question of whether these are two expressions of similar underlying pathology or whether DSM-IV criteria lead to overdiagnosis of BPD in adolescent males more appropriately diagnosed with a disruptive behavior disorder or antisocial PD (if such a diagnosis were extended to adolescence). One strategy would be to use item response theory (Embretson & Reise, 2000) to identify DSM-IV criteria or SWAP-200-A candidate criteria with similar operating characteristics in males and females to develop a more gender-neutral criterion set.

Third, BPD is a heterogeneous diagnosis even within a sample of female adolescents. The subgroups identified in this study are remarkably similar to those identified in recent research with adult female patients with the disorder, suggesting that they are robust across samples and are apparent as early as adolescence. Identification of a higher-functioning group likely reflects the fact that some adolescent patients on the 'border' of borderline will develop the disorder, whereas others, who may look similar in many respects, will not. Longitudinal research is needed to address this issue. The group means on the internalizing and externalizing scales of the CBCL provided some preliminary evidence for the validity of the subgroups, although clearly studies using a larger  $N$  and incorporating interview methodologies are needed.

The identification of meaningful subgroups within a group of adolescent girls with BPD has potential implications for treatment. With respect to treatment, core features of the disorder, notably emotional dysregulation, are likely to require some combination of skills training (in Dialectical Behavior Therapy; Linehan, 1993) and reworking of defensive processes and attachment patterns that render BPD patients vulnerable to feelings such as rejection, abandonment, and emptiness (as in psychodynamic therapies that have been studied empirically; e.g., Bateman & Fonagy, 2003; Kernberg, 1967). However, adolescents with primarily internalizing or externalizing personality styles are likely to require very different interventions.

### *Potential objections and limitations*

This study has several limitations. The major limitation is our reliance on a single informant per case, the treating clinician, raising questions about the possibility of biases in clinical judgment. We have addressed these issues elsewhere in detail but will briefly address them here (see Dutra et al., 2004; Westen & Shedler, 1999a). Recent research using quantified clinician judgments finds that correlations between treating clinicians' and independent interviewers' assessments on a range of measures (including SWAP-200 scale scores) tend to be large (typically ranging from  $r = .50$  to  $.80$ ; Hilsenroth et al., 2000; Westen & Muderrisoglu, 2003; Westen et al., 1997); that the structure of clinician-report data using well-validated instruments designed for lay informants (e.g., the CBCL; Achenbach, 1991) is virtually identical to that obtained using more traditional informants (Dutra et al., 2004; Russ et al., 2003); and that clinician-report personality data are associated with a range of variables in theoretically predicted ways, such as measures of adaptive functioning, attachment patterns, and family and developmental history (e.g., Dutra et al., 2004; Westen et al., 2003). Concerns about respondent biases and reliability, though reasonable, are not specific to clinicians as informants, and apply equally to most studies in psychiatry, in which most or all data come from a single observer, the patient (whether obtained by interview or questionnaire). Thus far, we have not identified systematic biases when clinicians' responses are quantified using psychometric instruments (see, e.g., Shedler & Westen, 2004a).

A related concern is that clinicians may have selected patients with a particular diagnosis in mind, or that their knowledge of DSM categories substantially biased their descriptions of the patient. Although a genuine limitation, several factors limit this concern. First, it is important to note that we did not ask clinicians to describe patients with a particular disorder (or with *any* DSM-diagnosable disorder) but rather asked them simply to describe a patient with 'enduring maladaptive patterns of thought, feeling, motivation, or behavior.' We did this precisely to reduce such biases. Second, these biases render the present findings conservative, biasing the findings away from divergences from DSM-IV diagnostic criteria. Finally, the emergence of subgroups unknown to clinicians, which have now replicated across multiple studies, militates against the possibility that clinicians were producing theory-driven descriptions of their patients.

A second limitation regards the question of the durability of personality pathology in adolescence and the appropriateness of diagnosing personality pathology at all in teenagers, an issue we have addressed in detail elsewhere (Westen & Chang, 2000). The data presented here are cross-sectional,

and only longitudinal designs can produce definitive findings in this regard. For example, future research should address the trajectories of the high-functioning borderline patients identified in this study, to see which ones go on to maintain the diagnosis and which ones 'grow out of it.' As noted in the introduction, however, an emerging body of research finds both stability to adolescent personality pathology and predictive validity in predicting later Axis I and Axis II pathology. The similarity of the empirically derived subtypes to data from adult samples; the item content of the SWAP-200-A, which clearly assesses personality and not states; and the fact that clinicians were instructed to describe only enduring aspects of the patient's personality, not state-dependent features, all support the hypothesis that the personality variables we studied are not likely to be ephemeral.

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### References

- Achenbach, T.M. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 Profile*. Burlington: University of Vermont, Department of Psychiatry.
- American Psychiatric Association. (1980). *Diagnostic and statistical manual of mental disorders* (3rd edn). Washington, DC: American Psychiatric Press.
- Andreasen, N.C., Endicott, J., Spitzer, R.L., & Winokur, G. (1977). The family history method using diagnostic criteria: Reliability and validity. *Archives of General Psychiatry*, *34*, 1229–1235.
- Bateman, A.W., & Fonagy, P. (2003). The development of an attachment-based treatment program for borderline personality disorder. *Bulletin of the Menninger Clinic*, *67*, 187–211.
- Bernstein, D.P., Cohen, P., Skodol, A., Bezirgianian, S., & Brook, J.S. (1996). Childhood antecedents of adolescent personality disorders. *American Journal of Psychiatry*, *153*, 907–913.
- Blais, M., & Norman, D. (1997). A psychometric evaluation of the DSM-IV personality disorder criteria. *Journal of Personality Disorders*, *11*, 168–176.
- Block, J. (1971). *Lives through time*. Berkeley, CA: Bancroft.
- Block, J. (1978). *The Q-Sort method in personality assessment and psychiatric research*. Palo Alto, CA: Consulting Psychologists Press.
- Brent, D., Zelenak, J.P., Bukstein, O., & Brown, R.V. (1990). Reliability and validity of the structured interview for personality disorders in adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, *29*, 349–354.
- Caspi, A. (1998). Personality development across the life span. In N. Eisenberg (Ed.), *Handbook of child psychology: Social emotional, personality development* (vol. 3, pp. 311–388). New York: John Wiley and Sons.
- Dutra, L., Campbell, L., & Westen, D. (2004). Quantifying clinical judgment in the assessment of adolescent psychopathology: Reliability, validity, and factor structure of the Child Behavior Checklist for Clinician-Report. *Journal of Clinical Psychology*, *60*, 65–85.
- Embretson, S.E., & Reise, S.P. (2000). *Item response theory for psychologists*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Garnet, K.E., Levy, K.N., Mattanah, J.J.F., Edell, W.S., & McGlashan, T.H. (1994). Borderline personality disorder in adolescence: Ubiquitous or specific? *American Journal of Psychiatry*, *151*, 1380–1382.
- Grilo, C.M., Walker, M.L., Becker, D.F., Edell, W.S., & McGlashan, T.H. (1997). Personality disorders in adolescents with major depression, substance use disorders, and coexisting major depression and substance use disorders. *Journal of Consulting and Clinical Psychology*, *65*, 328–332.
- Hilsenroth, M.J., Ackerman, S.J., Blagys, M.D., Baumann, B.D., Baity, M.R., Smith, S.R., et al. (2000). Reliability and validity of DSM-IV axis V. *American Journal of Psychiatry*, *157*, 1858–1863.
- Johnson, B.A., Brent, D., Connolly, J., Bridge, J., Matta, J., Constantine, D., et al. (1995). Familial aggregation of adolescent personality disorders. *Journal of the American Academy of Child and Adolescent Psychiatry*, *34*, 798–804.
- Johnson, J.G., Cohen, P., Skodol, A., Oldham, J., Kasen, S., & Brook, J.S. (1999). Personality disorders in adolescence and risk of major mental disorders and suicidality during adulthood. *Archives of General Psychiatry*, *56*, 805–811.
- Johnson, J.G., Cohen, P., Smailes, E., Kasen, S., Oldham, J.M., Skodol, A. E., et al. (2000). Adolescent personality disorders associated with violence and criminal behavior during adolescence and early adulthood. *American Journal of Psychiatry*, *157*, 1406–1412.
- Kernberg, O. (1967). Borderline personality organization. *Journal of the American Psychoanalytic Association*, *15*, 641–685.
- Kessler, R.C., Stang, P.E., Wittchen, H.-U., Ustun, T., Roy-Burne, P.P., & Walters, E.E. (1998). Lifetime panic-depression comorbidity in the National Comorbidity Survey. *Archives of General Psychiatry*, *55*, 801–808.
- Lenzenweger, M.F., & Clarkin, J. (1996). The personality disorders: History, classification, and research issues. In J. Clarkin & M.F. Lenzenweger (Eds.), *Major theories of personality disorders* (pp. 1–35). New York: Guilford.

- Lewinsohn, P., Rohde, P., Seeley, J.R., & Klein, D.N. (1997). Axis II psychopathology as a function of Axis I disorders in childhood and adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 1752–1759.
- Linehan, M.M. (1993). *Cognitive-behavioral treatment of borderline personality disorder*. New York: Guilford.
- Ludolph, P., Westen, D., Mislis, B., Jackson, A., Wixom, J., & Wiss, F.C. (1990). The borderline diagnosis in adolescents: Symptoms and developmental history. *American Journal of Psychiatry, 147*, 470–476.
- McManus, M., Lerner, H., Robbins, D., & Barbour, C. (1984). Assessment of borderline symptomatology in hospitalized adolescents. *Journal of the American Academy of Child Psychiatry, 23*, 685–694.
- Meijer, M., Goedhart, A.W., & Treffers, P.D.A. (1998). The persistence of borderline personality disorder in adolescence. *Journal of Personality Disorders, 12*, 13–22.
- Morey, L.C. (1988). Personality disorders in DSM-III and DSM-III-R: Convergence, coverage, and internal consistency. *American Journal of Psychiatry, 145*, 573–577.
- Nakash-Eisikovits, O., Dutra, L., & Westen, D. (2003). The relationship between attachment patterns and personality pathology in adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 1111–1123.
- Parker, G., Tupling, H., & Brown, L.B. (1979). A parental bonding instrument. *British Journal of Medical Psychology, 52*, 1–10.
- Pinto, A., Grapentine, W.L., Francis, G., & Picariello, C. (1996). Borderline personality disorder in adolescents: Affective and cognitive features. *Journal of American Academy of Child and Adolescent Psychiatry, 35*, 1338–1343.
- Robins, R.W., John, O., Caspi, A., Moffitt, T.E., & Stouthamer-Loeber, M. (1996). Resilient, overcontrolled, and undercontrolled boys; Three replicable personality types. *Journal of Personality and Social Psychology, 70*, 157–171.
- Rosenthal, R., Rosnow, R.L., & Rubin, D.B. (2000). *Contrasts and effect sizes in behavioral research*. New York: Cambridge University Press.
- Russ, E., Heim, A., & Westen, D. (2003). Parental bonding and personality pathology assessed by clinician report. *Journal of Personality Disorders, 17*, 522–536.
- Shedler, J., Mayman, M., & Manis, M. (1993). The illusion of mental health. *American Psychology, 48*, 1117–1131.
- Shedler, J., & Westen, D. (1998). Refining the measurement of Axis II: A Q-sort procedure for assessing personality pathology. *Assessment, 5*, 333–353.
- Shedler, J., & Westen, D. (2004a). Dimensions of personality pathology: An alternative to the Five Factor model. *American Journal of Psychiatry, 161*, 1743–1754.
- Shedler, J., & Westen, D. (2004b). Refining DSM-IV personality disorder diagnosis: Integrating science and practice. *American Journal of Psychiatry, 161*, 1–16.
- Skodol, A.E., Gunderson, J., Pfohl, B., Widiger, T.A., Livesley, W.J., & Siever, L. (2002). The borderline diagnosis I: Psychopathology, comorbidity, and personality structures. *Biological Psychiatry, 51*, 936–950.
- Thompson, B. (2000). Q-technique factor analysis: One variation on the two-mode factor analysis of variables. In L.G. Grimm & P.R. Yarnold (Eds.), *Reading and understanding MORE multivariate statistics* (pp. 207–226). Washington, DC: American Psychological Association.
- Torgersen, S., Kringle, E., & Cramer, V. (2001). The prevalence of personality disorders in a community sample. *Archives of General Psychiatry, 58*, 590–596.
- Westen, D. (1997). Divergences between clinical and research methods for assessing personality disorders: Implications for research and the evolution of Axis II. *American Journal of Psychiatry, 154*, 895–903.
- Westen, D., & Bradley, R. (in press). Prototype diagnosis of personality. In S. Strack (Ed.), *Handbook of personology and psychopathology*. New York: Wiley.
- Westen, D., & Chang, C. (2000). Personality pathology in adolescence: A review. *Adolescent Psychiatry, 25*, 61–100.
- Westen, D., & Harnden-Fischer, J. (2001). Personality profiles in eating disorders: Rethinking the distinction between Axis I and Axis II. *American Journal of Psychiatry, 165*, 547–562.
- Westen, D., Heim, A.K., Morrison, K., Patterson, M., & Campbell, L. (2002). Classifying and diagnosing psychopathology: A prototype matching approach. In L. Beutler & M. Malik (Eds.), *Rethinking the DSM: Psychological perspectives* (pp. 221–250). Washington DC: APA Press.
- Westen, D., Ludolph, P., Lerner, H., Ruffins, S., & Wiss, F.C. (1990). Object relations in borderline adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 29*, 338–348.
- Westen, D., & Muderrisoglu, S. (2003). Reliability and validity of personality disorder assessment using a systematic clinical interview: Evaluating an alternative to structured interviews. *Journal of Personality Disorders, 17*, 350–368.
- Westen, D., Muderrisoglu, S., Shedler, J., Fowler, C., & Koren, D. (1997). Affect regulation and affective experience: Individual differences, group differences, and measurement using a Q-sort procedure. *Journal of Consulting and Clinical Psychology, 65*, 429–439.
- Westen, D., & Shedler, J. (1999a). Revising and assessing Axis II, Part 1: Developing a clinically and empirically valid assessment method. *American Journal of Psychiatry, 156*, 258–272.
- Westen, D., & Shedler, J. (1999b). Revising and assessing Axis II, Part 2: Toward an empirically based and clinically useful classification of personality disorders. *American Journal of Psychiatry, 156*, 273–285.
- Westen, D., & Shedler, J. (2000). A prototype matching approach to diagnosing personality disorders toward DSM-V. *Journal of Personality Disorders, 14*, 109–126.
- Westen, D., Shedler, J., Durrett, C., Glass, S., & Martens, A. (2003). Personality diagnosis in adolescence: DSM-IV axis II diagnoses and an empirically derived alternative. *American Journal of Psychiatry, 160*, 952–966.
- Westen, D., & Weinberger, J. (in press). When clinical prediction becomes statistical prediction. *American Psychologist*.

- Wilkinson-Ryan, T., & Westen, D. (2000). Identity disturbance in borderline personality disorder: An empirical investigation. *American Journal of Psychiatry*, *157*, 528–541.
- Zinner, J., & Shapiro, R.L. (1989). Projective identification as a mode of perception and behavior in families of adolescents. In J.S. Scharff (Ed.), *Foundations of object relations family therapy* (pp. 109–126). Northvale, NJ: Jason Aronson.
- Zittel, C., & Westen, D. (2004). *Subtyping borderline personality disorder*. Unpublished manuscript, Emony University.
- Zittel, C., & Westen, D. (in press). Borderline personality disorder as seen in clinical practice: Implications for DSM-V. *American Journal of Psychiatry*.

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