Attachment theory provides one of the most useful frameworks for understanding risk and protective factors in development (Bowlby, 1969, 1973, 1980). Bowlby suggested that children form mental representations of relationships based on their interactions with, and adaptation to, their care-giving environment. Described as internal working models, these cognitive/affective representations help organize affect and social experience and shape not only current but future interpersonal relationships (Hamilton, 2000; Lewis et al., 2000; Sroufe et al., 1983; Waters et al., 2000).

Ainsworth was the first to classify infants' attachment styles empirically, based on a structured series of separations and reunions between the infant and caregiver, the Strange Situation (Ainsworth et al., 1978). Upon reunion, secure infants seek comforting contact with the caregiver. These infants learn to rely on the availability and sensitivity of the caregiver if the need arises. Ainsworth and her colleagues identified three variations of insecure attachment patterns. Avoidant infants are indifferent or ignore the return of the caregiver after separation. Anxious/ambivalent infants seek contact with the caregiver but fail to be soothed by it (Ainsworth et al., 1978). Main and Solomon (1986) later added a fourth attachment style, disorganized, characterized by the lack of a coherent pattern of responding to separation and reunion.

The development of the Adult Attachment Interview (AAI) (C. George et al., unpublished, 1996) made the assessment of working models in adolescence and adulthood possible. The interviewer encourages subjects to recount their childhood attachment and separation experiences and appraise the influence of those experiences on their current lives and relationships. A rating based on the degree to which the narratives appear coherent and integrated helps classify interviewees as secure/autonomous.
Numerous recent studies have linked insecure attachment and lower ego resiliency (Kobak and Sceery, 1988) and thymic personality traits (Rosenstein and Horowitz, 1996), with psychiatric hospitalization and psychopathology, particularly pathology involving interpersonal functioning and affect regulation. Bowlby (1973) linked insecure attachment styles to depression and anxiety. Research has in fact implicated insecure attachment as a risk factor for the development of childhood psychopathology (Lewis et al., 1984; Renken et al., 1989; Rubin and Lollis, 1988; Stroufe and Egeland, 1989), and a growing body of research indicates that attachment provides a diathesis for various forms of psychopathology in adulthood (e.g., Dozier, 1990; Dozier et al. 1991; Muller et al., 2000; Sable, 1995).

Research on the relation between attachment organization and psychopathology in adolescents is relatively recent (Allen et al., 1996, 1998; Kobak and Sceery, 1988; Rice, 1990; Rosenstein and Horowitz, 1996). Allen et al. (1996) investigated the relationship between severe psychopathology in adolescence (as indicated by a need for psychiatric hospitalization) and attachment classifications in young adulthood as assessed by the AAI. Whereas virtually all of the previously hospitalized adolescents were insecure as young adults, a matched sample of nonhospitalized teenagers followed longitudinally showed a mixture of attachment patterns, with roughly half secure. Across the sample, adolescents classified as insecure were more likely to abuse drugs, to be involved in criminal acts, and to have unresolved trauma histories. Rosenstein and Horowitz (1996) similarly found a high prevalence of insecure attachment style in adolescent psychiatric inpatients.

Recent research using a variety of attachment measures has linked the ambivalent/preoccupied classification in adolescents to higher levels of internalizing pathology (Allen et al., 1998), suicidal behavior (Adam et al., 1995), agoraphobia (de Ruiter and van IJzendoorn, 1992), conduct problems (Speltz et al., 1999), anxious and dysthymic personality traits (Rosenstein and Horowitz, 1996), and lower ego resiliency (Kobak and Sceery, 1988). Numerous recent studies have linked insecure attachment patterns and eating disorders in preadolescent and adolescent girls (O’Kearney, 1996; Ward et al., 2000). Similarly, college females with mood or eating disorders are more likely to be classified as preoccupied (Cole-Detke and Kobak, 1996; Suldo and Sandberg, 2000).

The unresolved classification is of particular relevance to psychopathology because it was designed to capture individuals whose attachment strategies and attempts to construct coherent working models are overwhelmed (disorganized) in the process of experiencing major loss or trauma and who remain unable to reorganize coherently (Main and Hesse, 1990). Main and Hesse (1990) hypothesized that this attachment category would be associated with more severe psychopathology in adolescents, and empirically, adolescents classified as disorganized during infancy have shown the most marked indices of psychopathology as assessed by structured interview (Clarson, 1998).

Of particular interest is the relationship between attachment styles and personality disorders (PDs), given that personality refers to enduring patterns of thought, motivation, emotion, emotion regulation, impulse regulation, and interpersonal functioning, and attachment appears to be related to most of these domains. Using the AAI with an adult sample, Fonagy (1999; Fonagy et al., 1996, 2000) found a strong association between borderline personality disorder and preoccupied attachment style. Other research with adults has found a relationship between avoidant and dependent PDs and preoccupied attachment, and between schizoid PD and dismissing attachment (Livesley, 1987; Livesley et al., 1990; West et al., 1994).

With respect to adolescent PDs, Rosenstein and Horowitz (1996) found that adolescents classified as dismissing were at elevated risk for PDs such as narcissistic and antisocial PDs (as well as conduct disorder and substance use). Preoccupied adolescents, in contrast, were more likely to have a range of PDs, including obsessive-compulsive, histrionic, borderline, or schizotypal PDs (as well as mood disorders). Brennan and Shaver (1998) studied a large nonclinical sample of adolescents and found a substantial association between insecure attachment and self-reported measures of PDs.

The Present Study

Recent research has thus provided support for a relationship between insecure attachment patterns and psychopathology, although few studies have focused on PDs, which are of particular relevance to attachment theory because they may represent different styles of regulating closeness and regulating emotion that develop substan-
tially through experiences in attachment relationships. In this study we examine the relation in adolescence between attachment and personality pathology broadly defined, which includes not only the severe disturbances captured on Axis II of DSM-IV (American Psychiatric Association, 1994) but also the wider range of personality problems seen in adolescents (e.g., feelings of inadequacy, self-criticism, difficulty regulating anger, emotional constriction), particularly in adolescents in treatment for psychological problems (Westen and Chang, 2000).

METHOD

Participants

As part of a broader study of personality pathology in adolescents (Westen and Chang, 2000; D. Westen et al., unpublished, 2001), we used practice network methodology to examine the relation between attachment and personality pathology in adolescents. Practice network designs rely on clinicians (rather than parents or children) as informants, making use of the training and expertise of clinical observers while quantifying their judgments using psychometrically reliable and valid instruments (Westen and Shedler, 1999a, 2000; Wilkinson-Ryan and Westen, 2000; Zarin et al., 1997). Using clinicians as informants has a number of advantages. They are experienced observers with substantially larger, more diverse implicit and explicit normative databases with which to respond to questions about psychopathology than patients have. They also do not share the biases of patients or their family members, who are the usual respondents in psychiatric research.

The use of clinicians as informants is likely to be of particular value in studying children and adolescents, who often lack insight into their own personality processes, attachment patterns, and so forth, and whose parents may have difficulty providing accurate descriptions of their personality or psychopathology (D. Westen et al., unpublished, 2001). Clinicians working with adolescents typically synthesize data from multiple sources, including the child, parents, school officials, and other mental health professionals. In this study, as in others using this design, we asked clinicians to make use of all sources available in making their assessments.

In a first wave of data collection, we recruited psychologists and psychiatrists from the membership roster of the American Academy of Child and Adolescent Psychiatry. Because of a relatively low response rate (20% response to our initial letter of inquiry), in a second wave we recruited a random sample of members of the American Psychological Association, selected by a computer search from among those who reported treating adolescents and had at least 3 years’ posttraining practice experience. The response rate of this latter group was substantially higher (approximately 40%).

Procedure

We sent clinicians an initial letter inquiring about their willingness to participate in a study of adolescent personality pathology, enclosing a postcard on which they could provide information about the number of patients in their practices at each of the following ages: 14, 15, 16, 17, and 18. Clinicians who agreed to participate subsequently received packets asking them to provide data on a randomly selected adolescent patient (operationalized as ‘the last patient you saw last week before completing this form who meets study criteria’) currently in treatment for ‘enduring maladaptive patterns of thought, feeling, motivation, or behavior—that is personality.’ To obtain an age-stratified sample, we asked clinicians to select a patient of a particular age (14, 15, 16, 17, or 18), based on their initial survey responses. To minimize rater-dependent variance, we asked each clinician to describe only one patient.

We sent out packets in batches of 50 to 100 divided equally by age. Based on the number of packets received for each age group, we adjusted the numbers sent in the next batch by age to try to obtain roughly equal representation for each age. Clinicians who contributed data received an honorarium of $25. The packets included a clinician-report version of the Relationship Questionnaire (Bartholomew and Horowitz, 1991), a clinician-report version of the Child Behavior Checklist (CBCL) (Achenbach, 1991), multiple measures of personality and personality pathology, and an adolescent version of the Clinical Data Form (Westen and Shedler, 1999a), which asks for demographic data on the clinician and patient as well as measures of adaptive functioning, diagnosis, and developmental and family history. Here we describe the measures of relevance to the present study.

Measures of Personality and Personality Pathology

To maximize the likelihood of reliable findings, we included multiple measures of personality pathology, broadly defined to include both PDs and less severe, but nevertheless maladaptive, personality traits and constellations. Given questions about the applicability of Axis II diagnoses to adolescents, we included not only measures of current Axis II disorders but also measures that can be used to derive personality diagnoses or trait dimensions empirically. Thus we included four measures of Axis II symptoms using adult Axis II criteria as well as the Shedler-Westen Assessment Procedure Q-sort for Adolescents (SWAP-200-A).

Axis II Pathology. Clinicians assessed Axis II pathology as defined by DSM-IV (American Psychiatric Association, 1994) criteria in multiple ways, both categorical and dimensional. First, we asked clinicians to provide primary and secondary Axis II (categorical) diagnoses, if applicable, as they would in clinical practice. Second, we listed the Axis II disorders and asked clinicians to rate the extent to which their patients each met criteria for each disorder (7-point rating scale; 1 = not at all, 4 = has some features, 7 = fully meets criteria) (Westen and Shedler, 1999a,b; Widiger and Sanderson, 1995). Third, we presented clinicians with a checklist of all criteria currently included on Axis II for all disorders, randomly ordered, and asked them to (a) rate each criterion as present or absent, as in the current diagnostic system, and (b) rate the extent to which each item applied using a 1–7 scale. These checklist data generated two additional dimensional measures of Axis II pathology (the number of diagnostic criteria for each PD endorsed as present, and the mean of the 1–7 ratings for each applicable criterion for each diagnosis), as well as categorical diagnoses derived by summing the number of criteria present and applying DSM-IV decision rules regarding number of criteria required for diagnosis. Similar methods have produced robust findings in previous research (Blais and Norman, 1997; Morey, 1988).

SWAP-200-A Q-Sort for Assessing Adolescent Personality Pathology. The SWAP-200-A (D. Westen et al., unpublished, 2001) is an instrument for assessing adolescent personality pathology designed for use by skilled clinical observers based on either longitudinal knowledge of the patient over the course of treatment or a systematic clinical interview of the patient and parents. A Q-sort is a set of statements, each printed on a separate index card. To describe a patient, the clinician sorts (rank-orders) the statements into eight categories based on their applicability to the patient, from those that are irrelevant or not descriptive (assigned a value of 0) to those that are highly descriptive (assigned a value of 7), thereby providing a numeric score ranging from 0 to 7 for each of 200 personality-descriptive items. Because the
standard Q-sort procedure of sorting a specified number of items (cards) to each category (pile) takes a substantial amount of time to do, we attempted to maximize response rate in the current study by foregoing this fixed distribution method and instead using a semi-constrained rating scale version of the instrument.

In this study, which was designed, among other things, to study the psychometric properties of the item set as applied to adolescents, we presented SWAP-200-A items in a 7-point rating scale questionnaire form with a semiconstrained distribution, giving clinicians general guidelines on the number of items to be given a rating of 5, 6, or 7. The SWAP-200-A can yield categorical and dimensional PD diagnoses using current adult diagnoses from the DSM-IV, as well as dimensional measures of empirically derived PDs, styles, and traits. The SWAP-200-A was adapted from its adult progenitor, the SWAP-200 (Westen and Shedler, 1999a). Both the adult and adolescent versions have shown strong evidence of validity, reliability, and utility in taxonomic research with adult and adolescent samples (Shedler and Westen, 1998; Westen and Chang, 2000; Westen and Harnden, 2001; Westen and Shedler, 1999a,b; D. Westen et al., unpublished, 2001).

**Measure of Attachment**

To maximize the reliability and validity of our data, we used both categorical and dimensional measures of attachment. Clinicians completed a clinician-report version of the Relationship Questionnaire (Bartholomew and Horowitz, 1991), which is an adaptation of Hazan and Shaver's (1987) measure of adult romantic attachment. This measure consists of four descriptions of prototypical adult attachment patterns that have been used in studies of adolescents as well. The first three descriptions were derived by Hazan and Shaver to correspond with the major attachment statuses described in the literature, namely, secure, avoidant (dismissing), and anxious (preoccupied). The secure prototype describes a person for whom becoming emotionally close to others is easy and for whom mutual dependence is experienced as safe and comfortable. The avoidant prototype describes a kind of person who is comfortable without close emotional relationships, for whom independence and self-sufficiency are central issues. The anxious prototype describes a pattern of ambivalence, in which the individual craves emotional intimacy but often finds others rejecting, unfulfilling, and so forth.

The fourth description, called fearful/avoidant by Bartholomew and Horowitz, most closely resembles the disorganized (unresolved) pattern and represents negative internal working models of both self and others. The prototype describes a person who is drawn to relationships but has difficulty with trust and safety in relationships. For purposes of continuity with other studies, we use the term disorganized unresolved here to refer to this fourth prototype. As both prior research (Alexander et al., 1998; Bartholomew and Horowitz, 1991) and our own findings below suggest, this appears to be a reasonable extrapolation. (The alternative was to develop our own fourth prototype, to represent disorganized attachment more directly, but we chose instead to use a measure that had already shown some evidence of validity.) Relationship Questionnaire ratings show convergent validity with interview ratings (Bartholomew and Horowitz, 1991; Griffin and Bartholomew, 1994) and moderately high stability over 8 months (Scharfe and Bartholomew, 1994).

We presented clinicians with the four vignettes and asked them to select the prototype that best described their patient, yielding a categorical assessment of the patient's attachment status. Similar to the method used in Bartholomew and Horowitz's (1991) Relationship Questionnaire, we then asked clinicians to use a 7-point Likert-type scale to rate each prototype for the extent to which it described the patient. These ratings yielded a dimensional assessment of the patient's attachment status, offering a more sensitive measure of attachment and enabling us to obtain data on differences among subjects within the same attachment category (Collins and Read, 1990).

Although this measure has the structure of the self-report attachment measures from which it was derived, its design is actually a hybrid between these approaches and narrative-based approaches using the AAI. Research on personality characteristics relevant to attachment (such as affect regulation, representations, and interpersonal functioning in close relationships) shows that when clinicians make judgments of these characteristics, they do so primarily by listening to patients' narratives about significant interpersonal events and observing their behavior with the clinician (Westen, 1997). Clinicians of all theoretical perspectives report minimal reliance on self-reports to assess personality processes, and the clinical setting is one in which patients typically have the opportunity to tell many narratives about many situations and relationships over time and to form an intimate relationship with a clinician that mirrors certain aspects of attachment relationships. Thus we would expect clinicians to make use of such information in completing our measure of attachment. As described below, we included validity checks to ensure that this measure was in fact assessing attachment status.

**Child Behavior Checklist**

The CBCL (Achenbach, 1991) is a parent-report questionnaire designed to assess the behavioral problems and social competencies of children and adolescents aged 4–18 years. The CBCL is composed of 118 problem items and 20 competence items grouped into 11 problem scales (including eight syndrome scales) and four competence scales (although many studies use only the problem scales because of their focus on psychopathology). The CBCL is widely used in both clinical and research settings because of its demonstrated reliability and validity, ease of administration and scoring, and applicability to clinical, nonclinical, and cross-cultural samples (Achenbach, 1991; Cohen et al., 1985; DeGroot et al., 1994; Drotar et al., 1995; Sandberg et al., 1991). In this study, we asked clinicians to complete the problem scales of a clinician-report adaptation of the CBCL, which has shown strong evidence of reliability and validity in the assessment of adolescents (L. Dutra and D. Westen, unpublished, 2001).

**Clinical Data Form**

The Clinical Data Form (CDF) assesses a range of variables relevant to demographics, diagnosis, and etiology. This measure has been developed over several years and used in a number of studies (Westen and Shedler, 2000). It was adapted in this study for an adolescent sample. The CDF first asks clinicians to provide basic demographic data on themselves and the patient, including the clinician's discipline (psychiatry or psychology), theoretical orientation, years of experience, employment sites (e.g., private practice, inpatient unit, school), sex, and race, and the patient's age, sex, race, socioeconomic status, family composition, current living situation (e.g., one-parent home, foster care), and Axis I diagnoses. Following basic demographic and diagnostic questions, the CDF asks the clinician to rate the patient's adaptive functioning, including school functioning (1 = severe conduct problems/suspensions, 7 = working to potential); peer functioning (1 = very poor, 7 = very good); history of suicide attempts, arrests, and hospitalizations; and social support (number of close confidantes in which the patient feels comfortable confiding). From prior research we have found such ratings to be highly reliable and to correlate strongly with ratings made by independent interviewers (Westen et al., 1997).

The final section of the CDF assesses aspects of the patient's developmental and family history with which clinicians who have worked
with a patient for a minimum of five sessions are likely to be familiar. The adolescent version of the questionnaire assesses a wide range of variables shown in research in developmental psychopathology to be of potential relevance to the etiology of personality pathology and Axis I symptomatology. Developmental history variables include history of adoption, foster care, and residential placements; quality of relationship with mother and father; adaptive functioning of mother and father; attachment history, including significant separations, losses, and parental divorce; general family instability (including frequency of geographic moves); general family warmth or hostility; physical and sexual abuse; and maternal history of sexual abuse. In prior studies, clinicians’ judgments on such variables have not only predicted theoretically relevant criterion variables but also tend to reflect reasonable strategies of aggregating data over the course of clinical observation. For example, when asked to check off reasons for their belief that a patient had a history of sexual abuse, virtually all clinicians checked off items indicating state involvement, memories of sexual abuse prior to treatment, and corroboration from family members or court records; few indicated that their judgment reflected inferences from the symptom picture or recovered memories, and cases with borderline reasons for inference tended to receive a rating of “unsure” by clinicians (Wilkinson-Ryan and Westen, 2000).

The CDF also measures family history of psychiatric disorder, presenting clinicians with a list of diagnoses and psychiatrically related problems (e.g., psychosis, bipolar disorder, major depression, alcohol abuse, criminality, suicide) and asking them to indicate presence or absence of each in first- and second-degree relatives. The form instructs clinicians only to indicate presence if they are confident in their judgment, and to indicate absence if they are unsure, to minimize guessing and false positives. Data from previous studies suggest that this method yields valid data (D. Westen and J. Shedler, unpublished, 2001), particularly with large sample sizes, where the unreliability of any given judgment by any given clinician tends to cancel over subjects. The validity of the data appears to reflect the fact that clinicians are unlikely to know about specific symptoms in specific relatives (unless they have met them, which is frequently the case in treatment of adolescents), but they are very likely to have heard about a relative who has been in and out of psychiatric hospitals with delusions or hallucinations, who has spent time in prison, who has committed suicide, and so forth. Coding “unsure” as “no” and asking only about relatively obvious syndromes or diagnostic groupings (e.g., history of anxiety disorders, rather than specific disorders) has the advantage of preventing speculative diagnosis at a distance.

Statistical Analyses

Validity of Attachment Measure. As a test of the validity of our attachment measure, we correlated attachment status with two sets of criterion variables that should, theoretically, be related to it: data from the CBCL and a Five Factor Model Adjective Checklist.

Attachment Status and Personality Pathology. Our primary measure of Axis II pathology was the number of symptoms endorsed by the clinicians for each disorder from the Axis II checklist. However, to maximize reliability, we also created a composite measure of Axis II pathology by transforming dimensional scores obtained from the three Axis II measures (global ratings, number of Axis II criteria met, and summed ratings on each criterion for each disorder) to Z scores and then averaging these scores. We also examined the relationship between attachment status and Axis II pathology measured by the SWAP-200-A, which assigns dimensional diagnoses by correlating patients’ observed profiles with profiles of patients with each PD from a normative sample (Westen and Shedler, 1999a).

Where possible, we used the Pearson r with dimensional data, dummy-coding dichotomous variables where appropriate (e.g., coding “present”/“absent” as 0 and 1). Although we also used analysis of variance to examine the association between categorical attachment status and dimensional personality pathology and χ2 tests to examine the association between categorical attachment status and categorical personality pathology, these analyses were largely redundant with dimensional analyses, which have more useful psychometric properties (less information loss, greater power), particularly in variables not previously shown to be truly taxonic (i.e., that appear instead to be continuously distributed in the population). Thus we report primarily dimensional data except where categorical analyses are nonredundant.

Attachment Status and Empirically Derived Adolescent Personality Pathology Prototypes. Because the applicability of DSM-IV Axis II categories to adolescents is not as well established as Axis II for adults, we also examined the association between attachment status and empirically derived personality pathology prototypes that do not require a priori commitment to adult Axis II categories. In a previous study (Westen and Chang, 2000), we used the SWAP-200-A data to construct empirically derived adolescent personality prototypes via a cluster-analytic technique, Q-factor analysis (or simply Q-analysis), which identifies clusters of patients who share common psychological features and are distinct from other clusters of patients. Q-analysis can be understood in relation to conventional factor analysis, which identifies groups of variables that are highly similar to one another (i.e., highly intercorrelated). Q-analysis is computationally the same procedure, except that it creates groupings of similar people, not variables. These groupings of people, called Q-factors, represent empirically derived diagnostic prototypes—that is, aggregated portraits of particular kinds of people.

Q-factor analysis yielded the following six nonoverlapping adolescent personality prototypes. The psychological health Q-factor identified a kind of adolescent with numerous psychological strengths. The items most descriptive of this prototype reflected the positive presence of psychological strengths and inner resources, including the capacity to love, find meaning in life experiences, and gain insight into the self. The antisocial/destructive Q-factor is characterized by features commonly associated with antisocial PD as well as with the clinical construct of psychopathy (Cleckly, 1941; Hare, 1998). The highest-ranked (most defining) items include imperviousness to consequences, impulsivity, hostility, physical aggressiveness, unreliability and irresponsibility, and lack of remorse, as well as a tendency to be rebellious and defiant toward authority figures. The emotionally dysregulated Q-factor is characterized by features commonly associated with borderline PD. Such features include a deficiency in the capacity to regulate and modulate affect, as well as a tendency to fear rejection or abandonment; to be self-critical and feel inadequate; to catastrophize (e.g., see problems as disastrous or irresolvable); and to struggle with suicidal feelings. The withthrawn Q-factor is characterized by features commonly associated with schizoid PD and, to a lesser extent, avoidant PD. Such features include a difficulty acknowledging or expressing emotions, as well as a tendency to be passive, shy, and unsociable; to be unreliable and irresponsible; to lack social skills; to be inarticulate; to lack energy; and to be inattentive or easily distracted. The histrionic Q-factor is characterized by features commonly associated with histrionic PD as well as some features currently defined as borderline. The most defining features of this prototype include the tendency to have unstable and chaotic relationships; to fantasize about finding ideal and perfect love; to become attached quickly or intensely; to be suggestive; to be overly sexually provocative; to seek to be the center of attention; to be overly needy or dependent; and to express emotions in exaggerated ways. Finally, the narcissistic Q-factor includes features such as self-importance, grandiosity, and entitlement, as well as the tendency to treat others as audiences to provide
admiration; to see the self as logical and rational, uninfluenced by emotion; to be controlling; and to set unrealistically high standards for the self and be intolerant of one’s own human defects.

Association Between Attachment Status and Family and Developmental History Variables. Finally, to investigate the antecedents of adolescent attachment status in this clinical sample, we examined the relationship between attachment status and developmental and family history variables selected a priori. The developmental variables we investigated included history of separations from primary caregiver, history of sexual or physical abuse (coded 0, 1, and 2 for no, unsure, and yes, respectively), quality of relationship with each parent (assessed using a 1–7 rating scale, where 1 = poor/conflictual and 7 = positive/loving), and family stability and warmth (assessed using a 1–7 rating scale, anchored by chaotic and stable, and hostile to loving, respectively). The family history variables included history of each of the conditions coded on the Clinical Data Form as present, aggregated across first- and second-degree relatives (i.e., presence or absence of history in either first- or second-degree relatives), to maximize reliability.

RESULTS

Sample Characteristics

The clinician sample consisted of 294 clinicians. Clinician-respondents (61.4% psychiatrists, 50.2% male) were on average highly experienced (mean years experience posttraining: 13.4, SD 9.4). Clinicians’ theoretical orientations were varied: 34.8% described themselves as psychodynamic, 11.6% cognitive-behavioral, 6.5% biological, 3.8% family systems, and 42.7% eclectic. Most worked in multiple settings: 77.0% private practice, 31.3% outpatient clinic, 25.8% hospital, 13.4% school, and 6.5% forensic. Clinicians tended to know the patients well: median length of treatment prior to completing the questionnaire was 20 sessions.

Patients were relatively evenly distributed by gender (52.9% female) and age (for ages 14, 15, 16, 17, and 18, the number of subjects per age was 54, 58, 67, 59, and 53, respectively). The majority of the subjects (84.9%) were white, with most of the remaining subjects being African American or Hispanic. With respect to socioeconomic status, clinicians classified 7.5% as poor, 20.9% working class, 50.7% middle class, and 20.9% upper class.

Validity of Attachment Measure

To provide a validity check on the attachment measure, we examined the correlations between attachment status and relevant scores from the CBCL, a widely used, well-validated, and reliable measure of child and adolescent psychopathology. As seen in Table 1, as expected, secure attachment status was negatively correlated with almost all of the problem scales, whereas anxious/ambivalent...
attachment was strongly associated with the Anxious/Depressed and Internalizing scales. In addition to the expected high correlation with the Withdrawn scale, avoidant attachment was also associated with the Aggressive and Externalizing scales, suggesting that avoidant attachment may have multiple meanings in an adolescent clinical sample, a point to which we return in the discussion. Finally, as was also expected based on the existing literature of the four attachment statuses, disorganized/unresolved was positively correlated with most problem scales (7 scales out of 13) and had the strongest correlation with the Total Problems scale. Although these validity data are of course not definitive, they provide initial corroboration of the validity of the measure as completed by clinicians rather than by self-report.

Association Between Attachment Status and Axis II Pathology

Our primary goal was to examine the relation between attachment and personality pathology. We report here the correlations between dimensional attachment status and dimensional Axis II pathology scores, as measured by the number of diagnostic criteria for each PD that clinicians endorsed as present for each patient. As can be seen in Table 2, secure attachment was negatively correlated with every PD. Notably, secure attachment tended to be most strongly negatively correlated with those PDs characterized by social withdrawal (e.g., schizoid, schizotypal, and avoidant PD). Conversely, disorganized/unresolved attachment was positively correlated with every PD, except for antisocial and histrionic PDs. In a second set of analyses, we measured Axis II pathology using the SWAP-200-A Q-sort. In this assessment method, patients receive scores for each current Axis II PD based on the correlation or match between their 200-item profile and composite profiles of patients with each disorder in a normative sample. Once again, these analyses yielded similar results, suggesting that the findings are robust across multiple measures.

As noted earlier, dimensional data tend to outperform categorical data in PD research (Widiger, 1993). However, because attachment status and PDs tend to be assessed categorically in research, in an additional set of analyses we used $\chi^2$ tests to examine the relation between these variables treated categorically. Thus we used clinicians’ rankings of the four attachment statuses to indicate primary status (using a ranking of 1 as categorical status) and

<table>
<thead>
<tr>
<th>Attachment Status</th>
<th>Cluster A</th>
<th>Clusters B</th>
<th>Cluster C</th>
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<td></td>
<td>Paranoid</td>
<td>Schizoid</td>
<td>Antarisocial</td>
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<td>Secure</td>
<td>-0.25**</td>
<td>-0.50**</td>
<td>-0.24**</td>
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<td>Avoidant Anxious</td>
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<td>0.12</td>
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<td>Ambivalent</td>
<td>0.14</td>
<td>-0.19**</td>
<td>-0.10</td>
</tr>
<tr>
<td>Disorganized/U</td>
<td>0.37**</td>
<td>0.25**</td>
<td>0.03</td>
</tr>
</tbody>
</table>

* $p \leq .01$; ** $p \leq .001$. 

TABLE 2

Correlations Between Dimensional Attachment Status and Axis II Dimensional Diagnoses Using Adult Criteria ($n = 288–290$)
determined presence/absence of each Axis II PD by summing the number of symptoms endorsed for each PD and applying *DSM-IV* decision rules regarding number of criteria required for diagnosis (e.g., the patient must meet five of nine borderline criteria for a categorical diagnosis of borderline PD). With the exceptions of schizotypal, antisocial, and obsessive-compulsive PDs, \( \chi^2 \) analyses yielded significant differences for all PDs. This makes sense given that thought disorder, antisocial behavior, and obsessive-compulsive symptoms do not have obvious equivalents in attachment status. Overall, categorical data produced a pattern of findings similar to the dimensional data. For example, among subjects categorized as having disorganized/unresolved attachment, 49.6% met *DSM-IV* diagnostic criteria for avoidant PD, 39.7% met diagnostic criteria for borderline PD, and 31.3% met diagnostic criteria for paranoid PD. Of the subjects categorized with anxious/ambivalent attachment, 36.5% met criteria for borderline PD, 30.8% met criteria for histrionic PD, and 23.1% met criteria for dependent PD. Of subjects categorized as having avoidant attachment, 53.7% met diagnostic criteria for schizoid PD.

**Association Between Attachment Status and Empirically Derived Personality Pathology Categories**

Because the PD diagnoses in Axis II of *DSM-IV* were developed exclusively from adult samples, and research on their applicability to adolescents is relatively recent and not yet conclusive (e.g., Johnson et al., 1999; Ludolph et al., 1990), we investigated the relation between attachment and personality pathology one more way, using diagnostic prototypes (Q-factors) derived empirically from this sample (see "Method"). These personality prototypes, unlike Axis II diagnoses, have the advantages of being (a) empirically rather than intuitively derived, (b) nonoverlapping and hence providing nonredundant information, and (c) derived directly from a large sample of adolescent patients with personality pathology rather than assumed to match categories and criteria developed through research and clinical observation with adults. In addition, because clinicians were unfamiliar with these prototypes (unlike current Axis II diagnoses), any diagnostic biases that may have produced artifactual links between attachment status and Axis II would not be reproduced in these analyses.

As displayed in Table 3, secure attachment was the only attachment status that was significantly positively correlated with the psychological health Q-factor. Similar to results obtained from our previous analyses, secure attachment was negatively correlated with most of the other disorders. Disorganized/unresolved attachment was the only attachment status that was significantly negatively correlated with the psychological health Q-factor. As predicted, this attachment status was most strongly associated with the emotionally dysregulated prototype. Similar to the findings using Axis II diagnoses, anxious/ambivalent attachment was strongly correlated with the histrionic Q-factor, which includes dependent as well as histrionic and borderline features as currently conceptualized using *DSM-IV*, and negatively correlated with the avoidant Q-factor. Most notably, contrary to the findings using *DSM-IV* avoidant PD, avoidant attachment was the only attachment style that was significantly associated with the avoidant-withdrawn Q-factor. This suggests that the personality pathology prototype represented by our empirically derived avoidant-withdrawn Q-factor may significantly differ from *DSM-IV* avoidant PD and may be closer to the construct of avoidant attachment.

### Table 3

<table>
<thead>
<tr>
<th>Attachment Status</th>
<th>Psychological Health</th>
<th>Antisocial/Defiant</th>
<th>Emotionally Disregulated</th>
<th>Avoidant/Withdrawn</th>
<th>Histrionic</th>
<th>Narcissistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure</td>
<td>0.59**</td>
<td>-0.08</td>
<td>-0.24**</td>
<td>-0.29**</td>
<td>-0.04</td>
<td>-0.34**</td>
</tr>
<tr>
<td>Avoidant</td>
<td>-0.17*</td>
<td>0.11</td>
<td>-0.07</td>
<td>0.19**</td>
<td>-0.25**</td>
<td>0.32**</td>
</tr>
<tr>
<td>Anxious/Ambivalent</td>
<td>0.11</td>
<td>-0.16*</td>
<td>0.12</td>
<td>-0.22**</td>
<td>0.37**</td>
<td>-0.07</td>
</tr>
<tr>
<td>Disorganized/Unresolved</td>
<td>-0.25**</td>
<td>-0.06</td>
<td>0.40**</td>
<td>-0.00</td>
<td>0.08</td>
<td>0.15*</td>
</tr>
</tbody>
</table>

* \( p \leq 0.01; ** p \leq 0.001. \)
Association Between Attachment Status and Family and Developmental History Variables

In a final set of analyses, we investigated the antecedents of adolescent attachment by examining the association between attachment and a set of potentially relevant variables (family and developmental history) selected a priori. First, we investigated the association between attachment status and family history of psychopathology. These analyses yielded no significant correlations. This is noteworthy, given that the same variables in the same sample strongly predict diagnostic variables, such as CBCL and personality pathology scale scores. Thus in this sample, attachment status appears unrelated to family history of psychiatric disorders.

Next we examined the association between attachment status and each of the psychosocial developmental history variables presented in Table 4. The results are striking. Whereas secure attachment was positively correlated with good maternal and paternal relationships and with family stability and warmth, disorganized/unresolved status was significantly associated with every developmental history variable (risk factor). Of particular relevance were the specific associations between disorganized/unresolved attachment style and (a) history of lengthy separations from primary caretaker and (b) history of physical and sexual abuse. Avoidant and anxious/ambivalent attachment styles were not associated with any developmental history variable.

Because prior research suggests that gender often moderates the relation between child risk factors and later psychopathology (e.g., Block et al., 1991), in an additional set of analyses we examined the association between attachment and the developmental history variables separately for males and females. Disorganized/unresolved attachment was associated with physical and sexual abuse for females only ($r = 0.21$ and $0.22$, respectively, $df = 148$ and $150, p < .01$). Furthermore, disorganized/unresolved attachment was significantly associated with lengthy separation from primary caregiver and good paternal relationship variables for males only ($r = 0.24, df = 132, p < .01; r = -0.39, df = 141, p < .001$, respectively). These analyses suggest that for the disorganized/unresolved attachment style, the association between attachment and developmental experiences may to some extent be gender-specific.

**DISCUSSION**

The purpose of this study was to examine the relation between attachment style and personality pathology in a large clinical sample of adolescents. The results support the conclusion that attachment patterns are indeed related to personality pathology in adolescents. Across dimensional and categorical analyses, secure attachment was negatively correlated with adolescent pathology and positively correlated with healthy functioning, whereas disorganized/unresolved attachment was associated with various forms of personality pathology. Anxious/ambivalent attachment tended to be associated with measures of withdrawal and internalizing. Of interest, avoidant attachment style was associated with a variety of *DSM* PDs, which reflected a mixture of internalizing and externalizing pathology. Attachment status also showed meaningful patterns of association with developmental experiences, such as separation from primary caretaker, physical and sexual abuse, and family stability, but was unrelated to family history of psychiatric disorders. These findings accord with other studies showing that environmental influences account
for the majority of variance in attachment status (e.g., Brussoni et al., 2000; Finkel et al., 1998).

Two aspects of these findings are particularly noteworthy. The first regards the meaning of avoidant PD, and whether the avoidant construct is itself a “coherent working model.” In recent editions of the DSM the definition of avoidant PD has evolved as a changing blend of schizoid, depressive, and phobic character traits (Millon and Martinez, 1995). In the most recent revisions of the DSM, the construct of avoidant PD has shifted toward the phobic dimension and away from the view of avoidant patients as loners. Thus the most recent version of the disorder describes a shame-prone, interpersonally insecure person who worries constantly about being inadequate.

This shift in emphasis links avoidant PD with anxiety disorders on Axis I, but it has the disadvantage of divorcing the avoidant concept from promising developments in attachment research that may be highly relevant to the construct (Dozier and Kobak, 1992; Main et al., 1985; Pilkonis, 1995). As our data show, avoidant PD no longer maps onto either the avoidant/dismissive or the anxious/preoccupied attachment style, because the former is defined by a tendency to avoid intimacy without manifest anxiety about attachment, whereas the latter is characterized by much greater social engagement reflecting fears of losing the other person. In contrast, when we examined empirically derived adolescent personality prototypes, avoidant attachment was the only attachment style associated with the avoidant Q-factor (which is characterized by features commonly associated with schizoid PD, such as difficulty acknowledging or expressing emotions, as well as a tendency to be passive, shy, and unassertive).

A second issue regards the nature of the disorganized/unresolved status in adolescents with psychopathology. In this study, disorganized/unresolved attachment was associated with virtually all PDs, particularly the more severe ones. Although this could be an artifact of our use of the Bartholomew fearful/avoidant prototype as a proxy for disorganized attachment, the data are consistent with the hypothesis that the unresolved attachment category is associated with more severe psychopathology in adolescents (Clarson, 1998; Main and Hesse, 1990). Of particular note is the relation between disorganized/unresolved status and the empirically derived emotionally dysregulated prototype, which describes a type of adolescent who is overwhelmed by emotion and uses desperate measures to try to escape it. The unresolved classification thus appears, in this study as in others, particularly relevant to psychopathology, as it characterizes individuals whose attempts to find useful strategies for engaging attachment figures and to construct coherent working models have been overwhelmed by separation, loss, or trauma.

Clinical Implications

Our findings bear on the broader relation between attachment status and personality pathology, the boundaries of each set of constructs, and the clinical relevance and comprehensiveness of the two sets of constructs. On the one hand, the construct of PD as currently defined by the DSM-IV appears too limited in clinical scope, lacking the range to address styles of representing relationships and regulating affect relevant to psychopathology but not severe enough to warrant a PD diagnosis (Westen and Arkowitz-Westen, 1998). Thus high-functioning adolescents with an avoidant status that may include clinically significant features cannot be diagnosed using the DSM-IV. The same is true of a subset of anxious/preoccupied adolescents who are able to form meaningful relationships and function well at school but whose ways of attaching to others may nonetheless make them vulnerable to depression or anxiety (and hence to anxious/depressed and internalizing symptoms on the CBCL). Thus clinicians working with adolescents need—and appear—to attend to a broader range of clinically significant personality pathology than recognized on Axis II of DSM-IV.

On the other hand, the attachment construct has always borne an important but ambiguous relation to psychopathology, leading in recent years to tremendous enthusiasm about attachment research among clinicians but continued questions about how precisely to use it in clinical practice. The attachment construct as developed by Bowlby was not designed to describe psychopathology per se, and in fact cannot account for phenomena such as impulsivity and aggression in adolescents, which are not associated with any particular attachment status. For example, in the present study, antisocial PD was negatively correlated with secure attachment style but was not associated with any of the insecure attachment patterns.

Bowlby initially recognized the importance of attachment phenomena from clinical observation of children with attachment pathology (children with a history of early neglect or loss), but he then expanded the scope of the theory and construct to include the range of attachment processes seen in the broader population. When Ainsworth (1967) developed a model of individual differences in attachment, interest in the field moved away
from responses to extreme environments to responses to the “average expectable” environments provided by most attachment figures. The discovery of disorganized and unresolved attachment patterns in infants and adults (Main et al., 1985; Main and Solomon, 1986) has inevitably led the field back to an integration with research on clinically significant attachment disturbances. It may well be that the three insecure attachment patterns seen in infants differentiate into a more varied yet related set of pathways in adolescence and adulthood of considerable relevance to PDs, for which disturbances in attachment are one of the primary features.

At present, attachment constructs call attention to clinically crucial phenomena seen in many adolescents and adults—ways of representing the self and others in intimate relationships, ways of regulating emotions in close relationships, and so forth—that are likely to require substantial time to change over the course of treatment and to place a priority on using experiences within the therapeutic relationship as a crucible for exploring and altering problematic patterns. To what extent interventions with the broader family system, and particularly with the adolescent’s primary attachment figures from childhood, may also alter adolescent attachment patterns (including ways of representing relationships and regulating affects that have presumably become structuralized over many years of interaction) is an additional question worthy of empirical attention.

Potential Objections and Limitations

One might raise three primary objections to this study. First, we measured attachment with a clinician-report adaptation of a self-report attachment measure. As noted earlier, this method is probably best described as a hybrid between narrative and self-report methods, with infer-ences similar to the former informing clinicians’ ratings but a format similar to the latter. The strength of the AAI lies in its ability to transform inferences about the structure of the subject’s narrative into a description of the person’s enduring ways of representing and regulating attachment relationships. Similarly, we relied on clinicians as informants, who had an average of 20 sessions of narratives to “code,” and who, empirically, tend to use narratives to assess important aspects of personality such as ways of representing and regulating relationships and emotion (Westen, 1997). Perhaps most importantly, our results indicated that our attachment measure, though imperfect, showed predictable patterns of correlations with other reliable and valid measures, notably relevant scales of the CBCL. Nevertheless, future research on PDs in adolescents using the AAI is clearly warranted.

Second, the findings reflect data provided by one inform-ant, the treating clinician. Although multiple informants would clearly be optimal, several considerations limit this concern. First, most studies of PDs rely on a single observer, usually the patient, either through self-report questionnaires or structured interviews. We believe the judgments of experts (with an average of more than 14 years’ practice experience, who have known the patient over an extended period of time) are likely to be at least as informative as either self-reports or judgments made in brief interviews, often by lay observers, that sample a cross-section of verbal behavior on a single day. This is particularly true given the potential confounds of state and trait that make assessment of PDs difficult. Nevertheless, research using multiple data sources, notably studies including clinician observation, self-report, informant report, and laboratory tests, is clearly preferable.

Third, the data are correlational and thus cannot address questions of causality or etiology. In all likelihood, attachment styles in infancy (which themselves are influenced by heredity, environment, and their interaction) influence subsequent attachment and personality processes (such as representations and affect regulation strategies). As children develop, templates for relatedness, self-understanding, and affect regulation forged in infancy and early childhood influence subsequent experiences and choices in ways that ramify throughout the child’s life, not only in attachment relationships but also in peer relationships, at school and work, and so forth. Understanding the links between attachment and subsequent personality pathology in adolescents and adults will, however, require longitudinal data, which are now becoming available as infants first assessed in the Strange Situation are moving into their teens and twenties, particularly in the high-risk samples.

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