

# The Course and Psychosocial Correlates of Personality Disorder Symptoms in Adolescence: Erikson's Developmental Theory Revisited

Thomas N. Crawford,<sup>1</sup> Patricia Cohen,<sup>2</sup> Jeffrey G. Johnson,<sup>3</sup> Joel R. Sneed,<sup>4</sup> and Judith S. Brook<sup>5</sup>

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Personality disorder symptoms were investigated in a community sample of young people ( $n = 714$ ) to assess their relationship over time with well-being during adolescence and the emergence of intimacy in early adulthood. Drawing on Erikson's theory of psychosocial development, changes in adolescent well-being were conceptualized as indirect indicators of identity consolidation. Cluster B personality disorder symptoms (borderline, histrionic, and narcissistic symptoms) were conceptualized to represent "identity diffusion"—i.e. maladaptive personality traits that usually resolve during the identity crisis of adolescence. Latent growth models were used in 2 age cohorts to assess (1) interrelationships between Cluster B symptoms, well-being, and intimacy at mean ages 13.8 and 18.6 years; and (2) associations between their developmental trajectories over the next 6 years. As expected, higher personality disorder symptoms were associated with lower well-being during adolescence, and declines in personality disorder symptoms over time were associated with corresponding gains in well-being. Consistent with Erikson's developmental theory, there was an inverse relationship between Cluster B symptoms and intimacy that increased in strength as young people entered adulthood. As an indicator of successful identity consolidation, well-being was significantly associated with intimacy in female adolescents and young adults.

**KEY WORDS:** Axis II symptoms; psychosocial development.

As defined in DSM-IV, personality disorders reflect maladaptive and inflexible personality traits that are exhibited in a wide range of social and personal contexts and cause significant functional impairment or subjective

distress (American Psychiatric Association, 1994). To distinguish lasting personality disorders from more episodic psychiatric disorders that are recorded in DSM-IV on Axis I, personality disorders are coded separately on Axis II. Although personality disorders were once thought to emerge in early adulthood, researchers now recognize that clinically significant Axis II disturbances can appear much earlier in adolescence. Categorically defined personality disorders in adolescents have been associated with

<sup>1</sup>Assistant Clinical Professor at Columbia University. Received Ph.D. in clinical psychology at Teachers College, Columbia University. Major research interests include attachment theory and childhood and adolescent precursors of personality disorders. To whom correspondence should be addressed at Children in the Community Study, 100 Haven Avenue, Suite 31F, New York, New York 10032; e-mail: crawfor@pi.cpmc.columbia.edu.

<sup>2</sup>Professor at Columbia University. Received Ph.D. in social psychology at New York University. Major research interests include epidemiology and developmental psychology.

<sup>3</sup>Associate Professor at Columbia University. Received Ph.D. in clinical and experimental psychology at Temple University. Major research interests include the causes and consequences of adolescent personality disorders.

<sup>4</sup>Research Fellow at New York University. Received Ph.D. in clinical psychology at the University of Massachusetts at Amherst. Major research interest is the stability and change of personality across the lifespan.

<sup>5</sup>Professor of Psychiatry at New York University School of Medicine. Received Ed.D. at Teachers College, Columbia University. Major research interests include risk and protective factors for the development of tobacco and drug use and abuse. Currently conducting research in the United States, Colombia, South America, and South Africa.

functional impairment in interpersonal relationships and academic performance (Bernstein *et al.*, 1993). Adolescent personality disorders are associated with increased risk for substance abuse (Johnson *et al.*, 1995), violent or criminal behavior (Johnson *et al.*, 2000b), and suicidal ideation and behavior (Brent *et al.*, 1993, 1994; Johnson *et al.*, 1999). Furthermore, adolescent Axis II disorders are associated with increased risk for internalizing and externalizing disorders that in turn put young people at further risk for personality disorders in adulthood (Kasen *et al.*, 1999; Rey *et al.*, 1995; Rey *et al.* 1997).

Researchers have learned that adolescent personality disturbances in community samples show clear developmental patterns of change over time. Whether measured with DSM diagnoses or dimensional symptom scales, personality disturbances are highest in early adolescence and usually decline over time into early adulthood (Bernstein *et al.*, 1993; Johnson *et al.*, 2000a). Some researchers have suggested that age-related declines in personality disturbances may simply reflect normal maturational processes. For example, when adults over age 30 were compared with those under age 30, Costa and McCrae (1994) found that younger adults were more neurotic and extroverted and older adults were more agreeable and conscientious. Similarly, adolescents and young adults have been shown to use coping strategies that reflect lower levels of impulse control and self-awareness than older adults (Diehl *et al.*, 1996). Despite knowledge about age-related trends in personality development, it remains unclear when elevated Axis II disturbances in adolescence reflect normal developmental processes and when they signal long-term risks for personality dysfunction.

To gain greater understanding of how personality disorders impact on normal psychosocial development, this study used longitudinal data from a community sample to track declines in personality disorder symptoms from early adolescence to young adulthood. Insofar as Erik Erikson's theory of psychosocial development (Erikson, 1950, 1968) describes different stages of normal and abnormal personality development, we used it to formulate hypotheses about how personality disorders would impact on the normative tasks of adolescence and young adulthood: (1) developing an internal sense of well-being through the consolidation of identity and (2) establishing intimacy in the form of lasting and committed romantic relationships.

Erikson (1950) postulated predictable changes in personality development over the life span based on a set of 8 psychosocial crisis stages. Complimentary pairs of positive and negative ego qualities characterize the eight crisis stages that are determined by a combination of biological, psychological, and sociocultural forces. Success-

ful resolution of each crisis is associated with the development of basic ego strengths. As successive crises are resolved, ego strengths accumulate and are integrated into the individual's personality, thus providing an internal foundation for well-being. The fifth and most critical stage in Erikson's sequence, the crisis of identity consolidation versus identity diffusion, normally first appears in adolescence. Successful resolution of this crisis of identity provides adolescents and young adults with a clear sense of themselves, their personal beliefs and values, and their place in the community. Unsuccessful resolution, according to Erikson, leaves adolescents and young adults with a diffuse sense of identity, confusion about social roles, and uncertainty about internal subjective states and feelings. Individuals with diffuse identities also encounter difficulty selecting clear occupational goals and often adopt roles deviating from conventional social norms.

Erikson (1968) viewed the emergence of a healthy personality through successive developmental crises as a continual progression toward self-acceptance and well-being: ". . . the vital personality weathers [internal and external conflicts], re-emerging from each crisis with an increased sense of inner unity, with an increase of good judgment, and an increase in the capacity 'to do well'" (p. 92). Although researchers now agree that identity formulation is a life-long process (Grotevant, 1987; Marcia, 1994), adolescence and young adulthood provide the first real opportunity to develop a sense of continuity with the past, meaning in the present, and direction for the future (Marcia, 1994). Identity consolidation thus emerges as the cornerstone of the capacity to do well and forms the basis of self-acceptance and self-esteem. On the basis of this formulation, higher levels of well-being are assumed to reflect greater levels of identity consolidation.

The identity diffusion Erikson described in his theory may be reflected in the elevated personality disturbances observed during adolescence. Identity diffusion is known to share many characteristics with personality disorder symptoms (Cloninger *et al.*, 1993; Johnson, 1993; Taylor and Goritsas, 1994). From a more clinical perspective, Kernberg (1984) developed a psychoanalytic model of borderline personality disorder based on the individual's underlying identity diffusion and inability to integrate alternating views of self and other into a cohesive whole. Other clinical theorists have associated personality disorders with identity disturbances as well, especially when individuals present with a "false self" (e.g., Kohut, 1971; Masterson, 1988; Winnicott, 1960). On the basis of the proposition that personality disorder symptoms reflect underlying identity disturbances, we hypothesized that Axis II symptoms would be negatively associated

with identity consolidation that manifests in the form of well-being.

According to Erikson, successful resolution of developmental crises provides the foundation for successful resolution of later crises, a process he referred to as the epigenetic unfolding of personality. As a result, the ability of young people to resolve the developmental crisis of identity affects their ability to meet new challenges and opportunities in young adulthood. Erikson argued that young adulthood is characterized by a developmental crisis that resolves in a mature capacity for intimacy or else a tendency toward isolation. In this context, intimacy does not refer to dating and early sexual activity that typically begins in adolescence. Instead, intimacy refers to secure interpersonal commitments that provide the foundation for enduring relationships like marriage and life-long companionship. According to Erikson, the ability of individuals to make a commitment to lasting relationships in adulthood depends on their earlier ability to achieve a secure identity and sense of well-being. Put differently, if identity diffusion so characteristic of Axis II symptoms inhibits adolescents from making value commitments or achieving role satisfaction, then it also will limit young people's ability to commit to any lasting intimate relationship in adulthood. Insofar as identity diffusion extending beyond adolescence is expected to inhibit the development of intimacy, we thus hypothesized that Axis II traits also might interfere with the ability of young people to approach and master this developmental task.

Rather than conceptualizing identity diffusion or identity consolidation as separate categorical outcomes, Erikson (1950, 1968) described them as developmental trajectories in varying degrees of conflict or resolution throughout adolescence and during subsequent life stages as well. In other words, psychosocial development is an ongoing work in progress that may include new episodes of identity diffusion and identity reconsolidation as people learn more about themselves and their social environment. Axis II symptoms and subjective experiences of well-being similarly may interact dynamically during adolescence. Until recently, however, methods for analyzing longitudinal data could not reliably model dynamic relationships between change in 2 or more variables, thus making it difficult to evaluate empirical hypotheses generated from Erikson's theory. On the basis of recent work by McArdle and Hamagami (2001), latent growth models are now available to assess change as a dynamic function between Axis II symptoms, well-being, and intimacy during adolescence and early adulthood.

Since Erikson formulated his theory, research has shown gender differences in how men and women construct their identities (Cross and Madson, 1997; Franz and

White, 1985; Gilligan, 1982). In the United States, men generally construct identities that are more independent and autonomous from others and women define themselves more by being interdependent and related to others. These gender differences appear evident during adolescence insofar as female adolescents become involved in romantic relationships at earlier ages than male adolescents (Feiring, 1999). On the basis of these findings, any developmental investigation of identity and intimacy must take gender into account.

Accordingly, this study used a community-based sample of adolescents to determine whether age-related declines in Axis II symptoms are indeed associated with increases in well-being during adolescence and interpersonal intimacy during adulthood. As a first step, we chose to focus on borderline, histrionic, and narcissistic symptoms (Cluster B symptoms in DSM-IV) because these overly dramatic, disruptive, and at times even psychotic disturbances seem especially consistent with Erikson's notion of identity diffusion during adolescence (Erikson, 1968; Kernberg, 1984). Indeed, identity disturbances are explicitly included in diagnostic criteria for borderline personality and are strongly implied in the suggestibility to other people's influence in histrionic personality and idealized but unrealistic self-perceptions in narcissistic personality. Although antisocial personality disorder is also designated as a Cluster B disorder, we did not analyze it with other adolescent Cluster B disturbances because DSM-IV specifies it can only be diagnosed in adults. Also, even though identity diffusion is associated with other Axis II symptom clusters (Taylor and Goritsas, 1994), it is beyond the scope of the present study to analyze them along with Cluster B symptoms.

Specifically, we expected Cluster B symptoms to be inversely related with well-being when assessed in adolescence and young adulthood, and we expected their developmental trajectories over time to be inversely related as well. In other words, as personality disorder symptoms decline, we also expected well-being to increase with age. Drawing on Erikson's epigenetic theory of personality, we predicted that well-being would be related to higher intimacy scores and higher developmental trajectories in this domain. Insofar as personality disorder symptoms reflect identity diffusion, we expected Cluster B symptoms would be associated with delays in the development of intimacy that takes the form of enduring and committed interpersonal relationships. On the basis of gender differences in how identities are constructed, we investigated whether gender affects the relationship between Cluster B symptoms and psychosocial development insofar as female adolescents are more interdependent in relation to others than male adolescents.

## METHOD

### Subjects

This study used subjects from the Children in the Community Study (Cohen and Cohen, 1996), a large epidemiological sample of children from 2 upstate New York counties. This randomly selected sample ( $n = 976$ ) was first investigated in 1975 and then surveyed again in a series of follow-up interviews. Families were eligible for the sample if they had at least 1 child between 1 and 10 years of age. Eighty-five percent of the original families were located and 75% were interviewed again at Time 2 in 1983. To replace the young, urban, and poor families lost to attrition, the sample was supplemented at Time 2 ( $T_2$ ) with 54 families from areas of urban poverty with children between ages 9 and 12 years. Demographically representative of the area, the redefined sample at  $T_2$  was 50% female, 91% Caucasian, and 8% African American.

This study is based on youth and parent interviews conducted at Time 3 (1985–1986) and Time 4 (1991–1993), at which times participants gave informed consent according to Institutional Review Board standards. At Time 3 ( $T_3$ ) 749 adolescents participated and about 95% completed the full study protocol again at Time 4 ( $T_4$ ). Although the 35 subjects lacking complete data at  $T_4$  were more likely to be male than female (24 vs. 11) and scored lower on a friendship quality scale, otherwise they did not differ from the 714 remaining subjects on any other  $T_3$  measure used in this study. On the basis of differences in challenges, stresses, and vulnerabilities that adolescents face at different ages, the full sample at  $T_3$  was divided into a younger cohort ( $n = 358$ ) ranging in age from 11 to 15 years and an older cohort ( $n = 356$ ) ranging in age from 16 to 22 years. The mean age in the younger sample was 13.8 years at  $T_3$  ( $SD = 1.3$ ) and 19.8 years at  $T_4$  ( $SD = 1.5$ ), and the mean age in the older sample was 18.6 years at  $T_3$  ( $SD = 1.6$ ) and 24.2 years at  $T_4$  ( $SD = 1.7$ ). Insofar as the age of the older cohort at  $T_3$  roughly overlaps with the age of the younger cohort at  $T_4$ , we thus employed a cohort-sequential longitudinal design (Schaie, 1986).

### Instruments

This study measured Cluster B symptoms and their psychosocial correlates in structural equation models—a technique employing observed or manifest variables to estimate the “true” variance attributed to underlying latent variables that cannot be directly measured (Bollen and Long, 1993; Jöreskog, 1972).

### Cluster B Symptoms

Using Axis II disturbances to operationalize identity diffusion, Cluster B disturbances were assessed as categorical diagnoses and dimensional symptoms based on diagnostic algorithms and symptom scales originally developed by Bernstein *et al.* (1993) and then updated to correspond to DSM-IV diagnostic criteria (Johnson *et al.*, 1999, 2000a). These scales were created to investigate Axis II disturbances in the Children in the Community sample before any standardized personality disorder scales were available. Drawing from our original assessment of adolescent personality traits and social functioning (Brook *et al.*, 1986), items for Cluster B personality disorder scales were selected on the basis of the correspondence to diagnostic criteria for borderline, histrionic, and narcissistic personality disorders as defined in successive editions of the DSM. These items were augmented by others adapted from the Personality Diagnostic Questionnaire (Hyler *et al.*, 1988) and Structured Clinical Interview for DSM-III-R Personality Disorders (SCID II) (Spitzer and Williams, 1986). Items were adapted to render them age-appropriate for adolescents, for instance, by emphasizing school functioning more than occupational functioning, dating relationships more than marital relationships, etc. Additional items were selected from the Diagnostic Interview Schedule for Children (DISC) (Costello *et al.*, 1984) and Disorganizing Poverty Interview (Kogan *et al.*, 1977). All items were based on youth reports except 5 mother-reported items in the narcissistic scale and 3 in each of the borderline and histrionic scales. Parent reports added more complete measurement of adolescent personality disorders by providing data that youths might underreport; parent reports also assessed DSM-IV criteria when corresponding youth items were unavailable. Although youth and parents often report discrepant information, research has demonstrated that together they improve the validity of diagnoses and symptom scales (Bird *et al.*, 1992; Piacentini *et al.*, 1992). These Cluster B symptom scales assessed parallel item sets at  $T_3$  and  $T_4$  and thus are fully comparable across data waves. When measured with latent variables estimated from these scales, stability coefficients for adolescent Cluster B symptoms were greater than 0.70 across a 2-year interval and greater than 0.60 across an 8-year interval (Crawford *et al.*, 2001).

When estimating the prevalence of categorically defined Cluster B disorders in the 2 cohorts, individual symptoms were dichotomized as present or absent. Axis II diagnoses were assigned only if the diagnostic thresholds specified in DSM-IV were met or exceeded. When assessed as dimensional variables, the full range was restored to individual items to reduce positive skew resulting

from dichotomization. Prior research has validated these scales by demonstrating a link between adolescent Cluster B disturbances and impaired psychosocial functioning (Bernstein *et al.*, 1993), increased risk for suicidal ideation or suicide attempts (Johnson *et al.*, 1999), increased risk for violent or criminal behavior (Johnson *et al.*, 2000b), and comorbidity with internalizing and externalizing symptoms (Crawford *et al.*, 2001). For additional details describing how scales and diagnostic algorithms were constructed and validated, readers are referred to Bernstein *et al.* (1993) and Johnson *et al.* (2000).

Latent variables for Cluster B symptoms were indicated by borderline, histrionic, and narcissistic symptom scales. The borderline scale consisted of 23 items ( $\alpha = 0.73$ ) that assessed instability in affect, self-image, and interpersonal relationships as well as impulsive and self-destructive behavior. The histrionic symptom scale used 16 items ( $\alpha = 0.65$ ) to assess exaggerated expressions of emotions, excessive need for attention, vague and impressionist speech, suggestibility, inappropriate seductive dress or behavior, and a tendency to overstate intimacy in relationships. The narcissistic symptom scale consisted of 19 items ( $\alpha = 0.72$ ) assessing grandiose fantasies and behavior, exploitative and unempathic interpersonal behavior, and excessive feelings of entitlement, envy, and rage.

#### *Well-Being*

On the basis of Erikson's broad conceptualization of well-being, we chose to operationalize this construct by drawing on various domains of subjective and psychological well-being (Diener *et al.*, 1999; Keyes *et al.*, 2002; Ryan and Deci, 2001). Subjective well-being consists of an affective component indexed by positive and negative affect and a cognitive/evaluative component indexed by life and role satisfaction (Keyes *et al.*, 2002). For the purposes of this study, we operationalized the cognitive/evaluative component of subjective well-being by using self-reports of life and role satisfaction to measure how far youths perceived themselves to be from their goals and aspirations. Psychological well-being (Ryff, 1989) represents well-being in the existential sense of what it means to be psychologically healthy, self-actualized, and fully functioning. Drawing from Ryff's (1989) measure of psychological well-being, we selected self-esteem and locus of control as proxy measures for self-acceptance and autonomy. Latent variables for well-being thus were indicated by manifest scales for role satisfaction, life satisfaction, self-esteem, and locus of control.

The role satisfaction scale used 6 items ( $\alpha = 0.85$ ) to measure how much satisfaction, stimulation, appreciation, and sense of importance each subject derived from their

roles as student, employee, or homemaker. The life satisfaction scale used 8 items ( $\alpha = 0.59$ ) to assess youth satisfaction with where they lived, how basic material needs were met, their sex life and relationship with close friends, involvement in clubs and organizations, and overall variety in their lives. The self-esteem scale used 4 items ( $\alpha = 0.66$ ) measuring each subject's perception of self-worth (e.g., "I am a useful person to have around"). The locus-of-control scale employed 4 items ( $\alpha = 0.54$ ) to measure how much agency and control each subject experienced when working towards a goal or overcoming a hardship. Higher scores indicate internal locus of control ("What happens to me in the future mostly depends on me") and lower scores indicate external locus of control ("I often feel helpless in dealing with the problems of life"). Alphas for some scales were relatively low because they were based on few items; when all 22 items for well-being were assessed together, the alpha increased to 0.81.

#### *Intimacy*

Latent variables for intimacy were indicated by manifest scales assessing friendship quality, commitment to a mate, and availability of a confidant, thereby reflecting Erikson's emphasis on committed relationships in his definition of intimacy but also including an age-appropriate assessment of a more general capacity for closeness. The friendship quality scale used 9 items ( $\alpha = 0.79$ ) to measure how much the respondents felt their relationship with a spouse or their closest friend was characterized by open communication, trust, shared interests, consensus in values and beliefs, and mutual expression of interest, affection, and support. The mate scale used 4 items ( $\alpha = 0.87$ ) to assess how much respondents expected to marry their romantic partners, how often they saw each other, whether they lived together, and how long they expected to stay together. Subjects not involved with any romantic partner were assigned a score of 0 for each item, and married subjects who had not separated were assigned the maximum possible score for each item. The confidant scale used 4 dichotomous items ( $\alpha = 0.62$ ) to register the presence or absence of someone in the subject's life (including a spouse) available to talk about anything, provide reliable support, and offer advice or understanding.

Aside from dichotomous items in the confidant scale, all items for Cluster B, well-being, and intimacy scales were measured with Likert scales mostly ranging from 1 to 4. Whereas high scores on Cluster B scales indicate greater personality disturbance, high scores on well-being and intimacy scales indicate higher psychosocial functioning. Prior to statistical analysis, all raw scales were transformed into "percentage of maximum possible scores" to render

them in familiar percentage scores that are easier to interpret (Cohen *et al.*, 1999). As such, all transformed scores range between 0 and 100 percentage units.

### Missing Data

Approximately 3.9% of the data assessed in both cohorts at *T3* and *T4* were missing. For Cluster B scales at *T3* and *T4*, missing data occurred mostly in cases where parents had not been interviewed. Accordingly, complete scores were imputed using multiple regression equations based on the available youth reports and youth gender. For other manifest variables at *T4*, missing scores were imputed based on (1) earlier scores from the same measures at *T3*, (2) related measures from the corresponding latent variables at *T4*, and (3) youth gender. Unlike other variables at *T3*, role and life satisfaction were assessed only in high-school graduates ( $n = 200$ ). Because no subjects in the younger sample had completed high school when assessed at *T3*, role and life satisfaction were not measured and could not be reliably imputed for that cohort at that time. In the older cohort, missing role and life satisfaction data at *T3* were imputed on the basis of concurrent locus-of-control and self-esteem measures at *T3* and subsequent role and life satisfaction measures at *T4*.<sup>6</sup>

### Design

#### *Measurement Models*

Using the computer program *EQS* (Bentler, 1989), measurement models were specified as separate confirmatory factor analyses for Cluster B, well-being, and intimacy latent variables. As indicated by manifest variables described above, latent variables were specified for each construct at *T3* and *T4*. On the basis of evidence of a stable factor structure over time, loadings for corresponding repeated measures were estimated by parameters fixed to be equal at each data interval. To account for each construct's continuity over time, covariance was specified between latent variables at *T3* and *T4* in each measurement model. Residual scores for repeated measures were allowed to covary across data intervals to control for method variance. (Identical controls were specified for correlated residuals in latent growth models below.) Finally, using

<sup>6</sup>Given the disproportionately large percentage of data missing for role and life satisfaction in the older cohort at *T3* (about half of the missing data in that sample), all substantive models were tested with the subsample of 200 subjects with complete data for these variables. When compared with the same models using imputed data, there were no material differences in parameter estimates or model fits for the older sample.

the 2-group method in *EQS*, all corresponding specifications were fixed to be equal in separate samples of male and female adolescents to test for gender differences.

#### *Latent Growth Models*

When analyzing Cluster B, well-being, and intimacy latent variables and dynamic relationships between their trajectories over time, we used latent growth modeling to estimate "fixed" starting values (i.e., mean scores at *T3*) and "fixed" changes over time (i.e., mean slopes from *T3* to *T4*) for each construct. Theoretically representing the "true" initial score in the population, the mean starting value corresponds to the intercept in simple regression models and thus is called the "fixed intercept." Similarly, the average change corresponds to the slope in regression models and is called the "fixed slope." After estimating these mean values, latent growth models assessed between-subject variance around these parameters. By convention, variance around the mean starting value is called the "random intercept" and variance around the mean change score is called "random slope" and both represent "random" individual deviations from mean values.

Technically, latent growth modeling usually requires 3 or more data intervals to estimate latent growth curves instead of the 2 data waves available to us. On the basis of our cohort-sequential design, however, we assessed 4 age points across the 2 age cohorts (mean ages 13.8, 18.6, 19.8, and 24.3 years), thus permitting us to extrapolate growth curves and depict them graphically even though they could not be fully estimated in latent growth models.

When Cluster B, well-being, and intimacy latent variables are modeled simultaneously, it is possible to measure covariance between random intercepts and covariance between random slopes. In other words, it becomes possible to measure the substantive relationship between these 3 constructs at an initial assessment and the dynamic relationship between the corresponding developmental trajectories that Erikson hypothesized in his theory.<sup>7</sup> Using maximum likelihood estimation methods, all

<sup>7</sup>Following convention in latent growth modeling, covariation between random intercepts and random slopes were specified within each construct for all models presented here. This specification acknowledges that individuals scoring high on Cluster B symptoms at *T3*, for instance, tend to have greater reductions in symptoms over time than subjects with average or low scores. However, this regression artifact can be removed without changing any material relationships when the slope is centered against the intercept (Kreft *et al.*, 1995). Because it reflects an artifact of method more than any substantive effect, covariance between random intercepts and random slopes specified in latent growth models analyzed in this study will not be reported below.

**Table I.** Estimated Prevalence of DSM-IV Cluster B Personality Disorders by Gender and Cohort

	Females		Males		Total	
	Time 3	Time 4	Time 3	Time 4	Time 3	Time 4
Younger cohort (ages 11–15) <sup>a</sup>						
Borderline PD	4 (2.3%)	5 (2.9%)	4 (2.1%)	5 (2.7%)	8 (2.2%)	10 (2.8%)
Histrionic PD	6 (3.4%)	4 (2.3%)	2 (1.1%)	3 (1.6%)	8 (2.2%)	7 (2.0%)
Narcissistic PD	13 (7.4%)	0 (0.0%)	13 (7.1%)	4 (2.1%)	26 (7.3%)	4 (1.1%)
Any Cluster B PD	18 (10.3%)	9 (5.1%)	16 (8.7%)	8 (4.4%)	34 (9.5%)	17 (4.7%)
Older cohort (ages 16–22)						
Borderline PD	0 (0.0%)	2 (1.1%)	0 (0.0%)	2 (1.2%)	0 (0.0%)	4 (1.1%)
Histrionic PD	5 (2.7%)	1 (0.5%)	4 (2.3%)	4 (2.3%)	9 (2.5%)	5 (1.4%)
Narcissistic PD	9 (4.9%)	1 (0.5%)	8 (4.7%)	2 (1.2%)	17 (4.7%)	3 (0.8%)
Any Cluster B PD	14 (7.6%)	4 (2.2%)	11 (6.4%)	7 (4.1%)	25 (7.0%)	11 (3.1%)

<sup>a</sup>Females:  $N = 175$ ; males:  $N = 183$ ; total:  $N = 358$ .

<sup>b</sup>Females:  $N = 185$ ; males  $N = 171$ ; total:  $N = 356$ .

measurement and structural equation models were evaluated with the Comparison Fit Index (CFI) (Bentler, 1990) and Incremental Fit Index (IFI) (Bollen, 1989), which both produce scores ranging from 0 to 1.00. By convention, model fits are considered acceptable if their fit indices achieve scores of 0.90 or higher. Traditional  $\chi^2$  statistics are reported even though they are less reliable as a goodness-of-fit index (Hu and Bentler, 1995). Nonsignificant  $\chi^2$  values indicate a close correspondence between the covariance matrices estimated in the model and observed in the data. Gender differences in these models were tested using the two-group method in *EQS*.

## RESULTS

Diagnostic algorithms based on DSM-IV criteria estimated the prevalence of categorically defined Cluster B disorders (excluding antisocial personality) and confirmed their expected decline over time in both cohorts. Table I indicates that 34 adolescents in the younger cohort met criteria for at least 1 Cluster B disorder at *T3* compared with 17 youths at *T4* (9.5% vs. 4.7%). In the older cohort, 25 youths met criteria for at least 1 Cluster B disorder at *T3* compared with 11 youths at *T4* (7% vs. 3%). When subjects who met criteria either at *T3* or *T4* are pooled, a total of 46 youth from the younger cohort (13%) and 33 from the older cohort (9%) had diagnoses for at least 1 Cluster B personality disorder.

### Measurement Models

When assessed as a dimensional construct, measurement models for Cluster B symptoms produced excellent

fits both in the younger cohort ( $\chi^2(28, N = 358) = 45.58$ ,  $p = 0.02$ ; CFI = 0.98, IFI = 0.98) and the older cohort ( $\chi^2(28, N = 356) = 47.69$ ,  $p = 0.01$ ; CFI = 0.99, IFI = 0.99). Factor loadings to borderline, histrionic, and narcissistic scales averaged about 0.79 and 0.81 in the younger and older cohorts, respectively. Although  $\chi^2$  scores failed to reach the criterion of nonsignificance, Cluster B measurement models were accepted on the basis of high CFI and IFI scores and high factor loadings for symptom scales. No gender differences were observed in measurement models for Cluster B symptoms.

On the basis of Erikson's broad definition of well-being and intimacy, the manifest variables we selected to assess different content domains of the underlying constructs initially did not correlate enough with each other to produce adequate latent variables—an outcome often encountered when measuring such multidimensional constructs. To adjust for this, Graham and Tatterson (2000) recommend redistributing items from distinct content domains into new composite scales known as "parcels" (Kishton and Widaman, 1994). When thus redistributed, individual items from different domains produce composite scales that have much stronger loadings from the latent variable being measured. Also, parcels helped reduce skew and kurtosis in manifest variables with nonnormal distributions (West *et al.*, 1995). Graham and Tatterson (2000) provide empirical and algebra-based demonstrations of the parceling strategy we adopted here.

When reestimated using parcels, measurement models for well-being produced an excellent fit in the older cohort ( $\chi^2(28, N = 356) = 28.36$ ,  $p = 0.45$ ; CFI = 1.00, IFI = 1.00) with factor loadings averaging around 0.84. On the basis of parcels, measurement models for intimacy achieved acceptable fits both in the younger sample ( $\chi^2(28, N = 358) = 89.12$ ,  $p < 0.001$ ; CFI = 0.94,

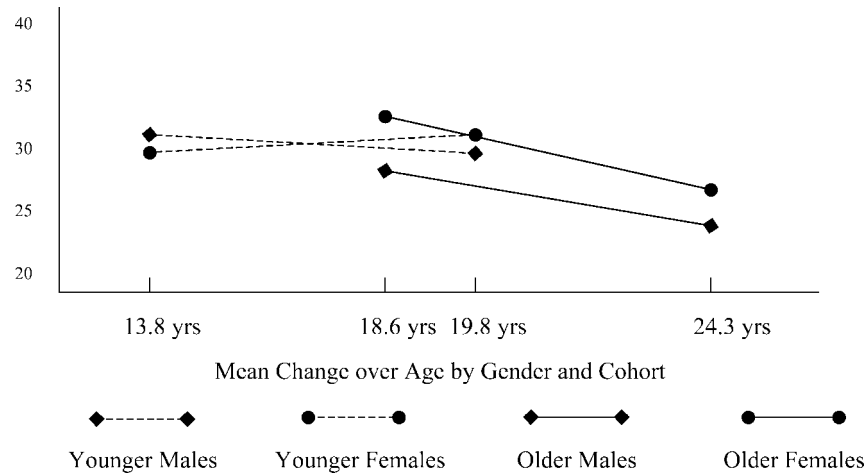


Fig. 1. Cluster B Symptoms in younger and older adolescent cohorts.

IFI = 0.94) and the older sample ( $\chi^2(28, N = 356) = 29.80, p = 0.37; CFI = 1.00, IFI = 1.00$ ). Compared with intimacy in the younger cohort, the factor structure in the older cohort was more stable and thus resulted in a better fit. Factor loadings averaged around 0.80 and 0.86 in the younger and older samples, respectively. In measurement models using parcels, no gender differences were observed in intimacy or well-being.

**Latent Growth Models**

When Cluster B symptoms and intimacy were estimated simultaneously in the younger cohort, the latent

growth model fit the observed data well ( $\chi^2(100, N = 358) = 224.32, p < 0.001; CFI = 0.94, IFI = 0.94$ ). In the older cohort, where well-being could be estimated along with Cluster B symptoms and intimacy, the latent growth model also fit the data well ( $\chi^2(246, N = 356) = 566.01, p < 0.001; CFI = 0.93, IFI = 0.93$ ). Using percent of maximum possible scores, Figs. 1–3 depict fixed intercepts and fixed slopes observed for male and female adolescents in the 2 cohorts, and the corresponding parameter estimates are reported in Table II. Along with fixed intercepts and slopes, Table II also reports variance estimates for random intercepts and random slopes.

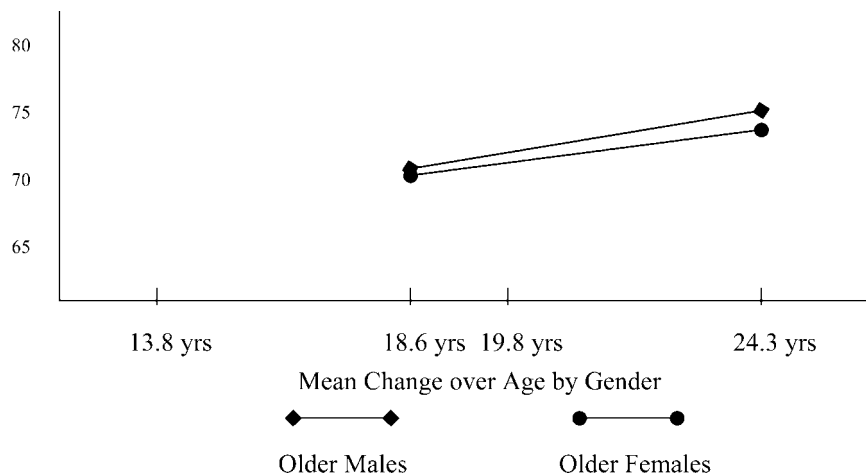


Fig. 2. Well-being in the older adolescent cohort.  
 Note: Well-being was not measured in the younger cohort.

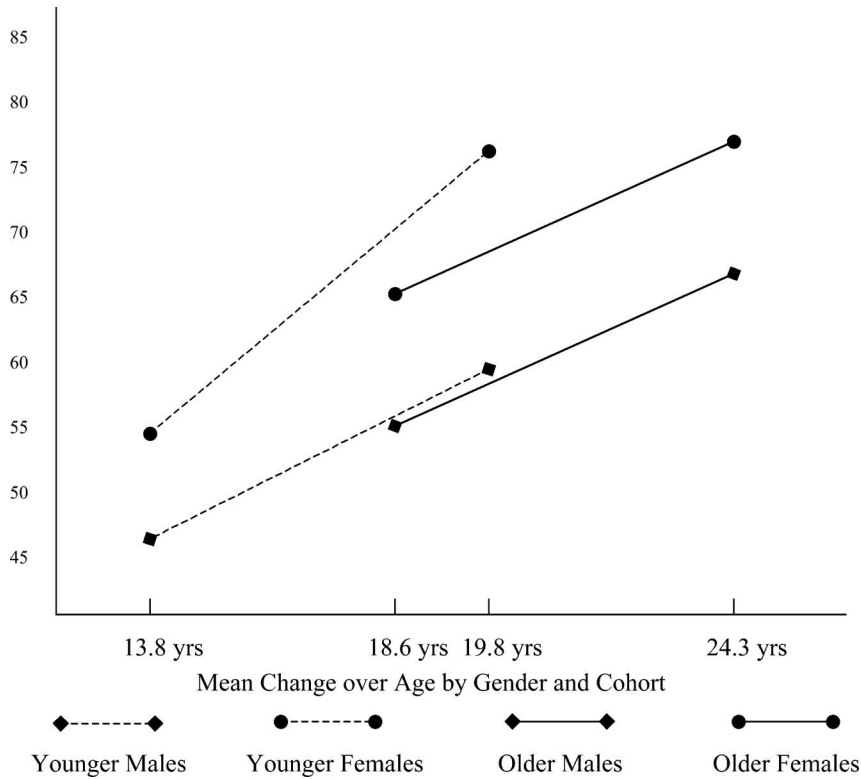


Fig. 3. Intimacy in younger and older adolescent cohorts.

*Fixed Effects*

As depicted in Fig. 1, Cluster B symptoms showed significant linear declines ( $p < 0.05$ ) in male adolescents in the younger sample ( $-1.58$  units over 6 years). In the older sample, Cluster B symptoms decreased significantly in both genders (approximately 3.00 units over 6 years). Extrapolating results across the 2 cohorts, there appears to be a curvilinear trend reflecting accelerated decreases in symptoms as young people enter adulthood. Female adolescents in the older cohort were statistically higher on Cluster B symptoms at  $T3$  than their male age peers (32.53 vs. 29.13). However, inspection of manifest scales determined that female adolescents in the older cohort were significantly higher on borderline symptoms at  $T3$  and  $T4$  and male adolescents were significantly higher on narcissistic symptoms at  $T3$ , a finding consistent with gender differences observed in clinical samples (e.g., Grilo *et al.*, 1996).

Older male and female adolescents in Fig. 2 had comparable mean scores on well-being (about 70.50 units) that increased at the same rate (about 3.35 units over 6 years). As depicted in Fig. 3, female adolescents in the younger sample had significantly higher initial intimacy scores than

male age peers (54.46 vs. 46.88) that increased at almost twice the male rate (20.58 vs. 12.64 over 6 years). Female adolescents in the older sample remained significantly higher on intimacy scores than male adolescents, but both genders showed increases at the same average rate (about 10.84 over 6 years). Extrapolating results across cohorts, there appears to be curvilinear increases in intimacy for female adolescents reflecting rapid early growth that then decelerates somewhat upon entry into adulthood. In contrast, there appears to be a linear increase in intimacy in male adolescents who lag behind female adolescents by about 2 years.

*Covariance Between Random Effects*

Covariation between random effects provides information about the strength of association between Cluster B symptoms, well-being, and intimacy. Table III reports standardized correlations between random intercepts at  $T3$  ( $r_{int}$ ) that measure the relationship between latent variables when initially assessed. Table IV reports correlations between random slopes ( $r_{slope}$ ) that represent dynamic relationships between the developmental trajectories of these variables from  $T3$  to  $T4$ .

**Table II.** Cluster B, Intimacy, and Well-Being Latent Variables: Estimated Intercepts and Slopes by Gender and Age Cohort

	Parameter estimates (standard error)			
	Mean value of latent variables at Time 3 (fixed intercept)	Variance of latent variables at Time 3 (random intercept)	Mean latent change score over 6 years (fixed slope)	Variance of latent change scores (random slope)
Cluster B Symptoms				
Initial ages 11–15				
Males	31.63 <sup>a</sup> (0.67)	48.79 <sup>a</sup> (6.46)	−1.58 <sup>a</sup> (0.81)	45.91 <sup>a</sup> (6.86)
Females	30.59 <sup>a</sup> (0.85)	72.40 <sup>a</sup> (9.26)	0.91 (0.87)	60.59 <sup>a</sup> (8.50)
Initial ages 16–22				
Males	29.13 <sup>a,b</sup> (0.77)	55.36 <sup>a</sup> (7.26)	−2.40 <sup>a</sup> (0.71)	32.01 <sup>a</sup> (5.10)
Females	32.53 <sup>a,b</sup> (0.79)	70.37 <sup>a</sup> (8.89)	−3.67 <sup>a</sup> (0.62)	28.61 <sup>a</sup> (4.60)
Well-being				
Initial ages 16–22				
Males	70.67 <sup>a</sup> (0.89)	100.66 <sup>a</sup> (12.55)	3.70 <sup>a</sup> (0.88)	78.97 <sup>a</sup> (10.91)
Females	70.33 <sup>a</sup> (0.85)	95.09 <sup>a</sup> (11.52)	3.00 <sup>a</sup> (0.96)	93.98 <sup>a</sup> (12.78)
Intimacy				
Initial ages 11–15				
Males	46.88 <sup>a,b</sup> (0.94)	62.07 <sup>a</sup> (8.64)	12.64 <sup>a,b</sup> (1.45)	209.99 <sup>a</sup> (26.67)
Females	54.46 <sup>a,b</sup> (0.89)	64.51 <sup>a</sup> (8.69)	20.58 <sup>a,b</sup> (1.43)	228.00 <sup>a</sup> (28.26)
Initial ages 16–22				
Males	55.21 <sup>a,b</sup> (1.27)	157.70 <sup>a</sup> (19.85)	10.75 <sup>a</sup> (1.58)	275.41 <sup>a</sup> (34.03)
Females	65.26 <sup>a,b</sup> (1.16)	127.01 <sup>a</sup> (15.96)	10.92 <sup>a</sup> (1.46)	229.52 <sup>a</sup> (28.33)

Note. Well-being was not measured in the younger cohort. All scores were transformed to “percentage of maximum possible scores” and range between 0 and 100 percentage units.

<sup>a</sup>  $p < 0.05$ .

<sup>b</sup>  $|Females| > |Males|$ ,  $p < 0.05$ .

The link between well-being and Cluster B symptoms was the strongest relationship observed in this study. When assessed as latent variables at  $T3$ , Cluster B symptoms and well-being were inversely related in older male and female adolescents ( $r_{int} = -0.53$  and  $-0.39$ , respectively,  $p < 0.05$ ). This inverse relationship was stronger in male adolescents than female adolescents ( $p < 0.05$ ). As expected, changes in well-being from  $T3$  to  $T4$  were negatively associated with changes in Cluster B symptoms in older male and female adolescents ( $r_{slope} = -0.22$  and  $-0.54$ , respectively,  $p < 0.05$ ). In other words, the greater the increase in well-being over time, the greater the decrease in Cluster B symptoms, especially in female adolescents.

In younger female adolescents, correlations between Cluster B symptoms and intimacy approached significance ( $p < 0.10$ ) when assessed as latent variables at  $T3$  ( $r_{int} = -0.18$ ) and as developmental trajectories ( $r_{slope} = -0.18$ ). Compared with younger female adolescents, this negative association doubled in strength in female adolescents in the older cohort ( $r_{int} = -0.32$  and  $r_{slope} = -0.38$ ,  $p < 0.05$ ). Also, there was a significant association between well-being and intimacy in older female adolescents ( $r_{int} = 0.31$  and  $r_{slope} = 0.20$ ,  $p < 0.05$ ).

Taken together, Cluster B symptoms were increasingly associated with lower intimacy scores as female adolescents entered into early adulthood.

When assessed in male adolescents at  $T3$ , Cluster B symptoms were not associated with intimacy in either cohort. Changes in Cluster B symptoms, however, began to be associated with changes in intimacy ( $r_{slope} = -0.27$ ,  $p < 0.05$ ) in male adolescents of the older sample. Whether assessed as latent variables at  $T3$  or developmental trajectories over time, well-being and intimacy were not significantly associated in older male adolescents.

In post hoc tests, we examined differences in latent growth models between subjects meeting DSM-IV criteria for Cluster B disorders and those who did not. The trajectories of the three major constructs studied and their intercorrelation were statistically the same for those who met diagnostic criteria for Cluster B disorders and those whose symptoms did not reach threshold. Aside from differences in the level of personality disorder symptoms at  $T3$ , which are higher in those with diagnoses by definition, the only other variable that distinguished the 2 groups was the lower well-being scores at  $T3$  in the group meeting diagnostic criteria. These post hoc tests, however, may be limited by low statistical power associated with the

**Table III.** Correlations Between Random Intercepts ( $r_{int}$ ) for Cluster B, Well-Being, and Intimacy Latent Variables at Time 3 by Age Cohort and Gender

	Males		Females	
	Well-being	Intimacy	Well-being	Intimacy
Intimacy				
Ages 11–15	—		—	
Ages 16–22	0.13		0.31 <sup>a</sup>	
Cluster B symptoms				
Ages 11–15	—	–0.03	—	–0.18 <sup>b</sup>
Ages 16–22	–0.53 <sup>a,d</sup>	–0.01 <sup>c</sup>	–0.39 <sup>a,d</sup>	–0.32 <sup>a,c</sup>

Note. Well-being was not measured in the younger cohort (ages 11–15).  
<sup>a</sup>  $p < 0.05$ .  
<sup>b</sup>  $p < 0.10$ .  
<sup>c</sup> |Females| > |Males|,  $p < 0.05$ .  
<sup>d</sup> |Males| > |Females|,  $p < 0.05$ .

relatively small number of subjects in the groups with Cluster B diagnoses (46 and 33 subjects in the younger and older cohorts, respectively).

**DISCUSSION**

Two cohorts from a community-based longitudinal sample were investigated to determine if age-related declines in Cluster B symptoms (borderline, histrionic, and narcissistic symptoms) are associated with increases in well-being and interpersonal intimacy during adolescence and early adulthood. To the extent that personality disorder symptoms reflect identity diffusion in Erikson’s theory of psychosocial development, we expected Cluster B symptoms would inhibit identity consolidation at least insofar as it manifests in well-being. We also expected Cluster B symptoms to be associated with delays in the development of intimacy.

**Cluster B Symptoms and Well-Being**

High scores on Cluster B symptoms were clearly related to lower scores on well-being. In other words, the latent traits underlying borderline, histrionic, and narcissistic symptoms are associated with lower role and life satisfaction, less perceived agency, and lower self-esteem. When developmental trajectories were assessed in the older cohort, declines in Cluster B symptoms were clearly correlated with gains in well-being around the time when adolescents typically finish high school, enter college or the workforce, or become homemakers. Before addressing the substantive meaning of these results, we

**Table IV.** Correlations Between Random Slopes ( $r_{slope}$ ) for Cluster B, Well-Being, and Intimacy Latent Variables From Time 3 to Time 4 by Age Cohort and Gender

	Males		Females	
	Well-being	Intimacy	Well-being	Intimacy
Intimacy				
Ages 11–15	—		—	
Ages 16–22	0.11		0.20 <sup>a</sup>	
Cluster B symptoms				
Ages 11–15	—	–0.05	—	–0.18 <sup>b</sup>
Ages 16–22	–0.22 <sup>a,c</sup>	–0.27 <sup>a</sup>	–0.54 <sup>a,c</sup>	–0.38 <sup>a</sup>

Note. Well-being was not measured in the younger cohort (ages 11–15).  
<sup>a</sup>  $p < 0.05$ .  
<sup>b</sup>  $p < 0.10$ .  
<sup>c</sup> |Females| > |Males|,  $p < 0.05$ .

wondered whether the observed association between these general constructs could be an artifact of overlapping content (but not items) between the low self-esteem assessed in Cluster B variables (e.g., “I’m never satisfied with anything I do”) and the high self-esteem assessed in well-being parcels (e.g., “I am a useful person to have around”). When all self-esteem items were deleted from well-being and Cluster B symptoms scales, associations between the latent variables changed little from those reported above. The relationship between Cluster B symptoms and well-being thus does not appear to be an artifact of overlapping definitions of the 2 constructs.

Although we were unable to measure identity directly in this study, we assume that the observed relationship between Cluster B symptoms and well-being is governed by the process of identity consolidation that Erikson associated with adolescence and young adulthood. To the extent that young people experience identity diffusion, they may adopt Cluster B symptoms as temporary but maladaptive defenses to protect themselves from any distress or dissatisfaction arising from a poorly consolidated identity. Young people with low self-esteem, for instance, may be more likely to express distress in the form of self-destructive impulses and behaviors. To compensate for emptiness or unstable self-perceptions, individuals with borderline traits may become excessively dependent on others and feel threatened by any possibility of being abandoned. Narcissistic youth may demand excessive admiration from others to reduce any co-occurring shame or envy, which in turn, they may try to mask with idealized but unrealistic self-perceptions or goals. To the extent young people with histrionic traits are uncertain about their identity, they may become easily suggestible to the influence of others. On the basis of underlying identity

diffusion, young people with Cluster B disturbances may pursue goals inflexibly or in self-defeating ways, thus interfering with any role or life satisfaction they might find. As adolescents gain experience and greater clarity about themselves, thereby experiencing greater well-being, they may gradually feel less need for the maladaptive defenses associated with Cluster B traits.

Alternatively, it could be that the observed link between Cluster B symptoms and low well-being derives from overlapping external risk factors associated with the 2 constructs. For instance, parental depression, antisocial personality, alcohol abuse, sexual and physical abuse, and maternal inconsistency all have been associated with borderline personality in adolescents (Bezirgianian *et al.*, 1993; Goldman *et al.*, 1992; Guzder *et al.*, 1996; Links *et al.*, 1988), and they could similarly inhibit well-being and identity consolidation in young people.

### Intimacy

Higher intimacy scores in female adolescents represent the clearest gender difference in this study. Male adolescents showed steady gains in intimacy over time but nevertheless lagged behind female age peers by at least 2 years. Consistent with prior research (Feiring, 1999), male and female adolescents followed the same trajectory by late adolescence despite clear differences in timing. Female adolescents may seek out intimacy sooner insofar as they are more oriented toward relationships in general than male age peers (Archer, 1989; Gilligan, 1982). Also, adolescent girls may develop interest in sexual or romantic partners at earlier ages in part because they enter puberty and develop secondary sex characteristics before adolescent boys (Marshall and Tanner, 1986). Certain risk factors may contribute to gender differences in intimacy. Compared with male adolescents, female adolescents are more likely to be the victims of sexual abuse (Powers and Eckenrode, 1988), which has been linked to earlier onsets of dating, sexual intercourse, and first pregnancy in adolescents (Brown *et al.*, 2001). This outcome may be especially problematic for youths who have not consolidated stable identities, which might be further undermined by low self-worth stemming from histories of abuse.

Do Cluster B disturbances interfere with the development of intimacy in adolescents and young adults? Compared with female adolescents in the younger cohort, the negative association between intimacy and Cluster B symptoms doubled in strength in female adolescents and young adults in the older cohort, suggesting that personality disturbances may represent a risk factor that increases with age. In contrast, no association was observed between

Cluster B symptoms and intimacy for male adolescents and young adults except in the relationship between random slopes in the older sample ( $r_{\text{slope}} = -0.27$ ). The absence of any association between these variables in the younger cohort and the emergence of a connection in the older cohort, especially in young women, appears to reflect the epigenetic unfolding of personality central to Erikson's developmental theory. Adolescents in the younger cohort were most likely to be immersed in the task of identity consolidation, not the new task of establishing life-long relationships faced by the older cohort, so it makes sense the link between intimacy and Cluster B symptoms would emerge only in the older cohort. As Erikson predicted, the ability of an individual to undertake new life tasks in adulthood appears to be affected by his or her ability to resolve the identity crisis of adolescence. Depending on how well that crisis is resolved, Cluster B symptoms may either decline or persist over time.

Given gender differences in salience and timing, there appears to be a dynamic association between intimacy and Cluster B symptoms that may unfold at different times and perhaps at different rates for male and female adolescents. This finding is consistent with the 2-path model advocated by Franz and White (1985) that emphasizes how attachment and relationships are primary in the psychosocial development of female adolescents and identity consolidation is more prominent in the psychosocial development of male adolescents. In this context, the 2-path model explains why a significant association would be observed between well-being and intimacy in female but not male adolescents, presumably because male adolescents are more focused on developing a sense of individual identity instead. Similarly, the 2-path model explains why Cluster B symptoms at *T3* would be more associated with well-being (our proxy measure for identity) in male adolescents than female age peers ( $p < 0.05$ ) insofar as female adolescents define their well-being more based on the relationships they have.

### Distinguishing Normative and Pathological Cluster B Symptoms

When comparing youths meeting diagnostic criteria for Cluster B personality disorders with those who did not, we found no clear differences in trajectories or psychosocial correlates between these 2 groups. Adolescents who met criteria for Cluster B disorders, thus differing from others in overall levels of symptoms, nevertheless had symptom trajectories that were roughly parallel to those in adolescents without diagnoses. On average, the symptom trajectory in young people with Cluster B diagnoses

remained about 9 units higher than those without Cluster B diagnoses, thus placing them well above the norm throughout adolescence and early adulthood. Material deviations from average symptom levels, even in early adolescence, thus represent an enduring risk for personality dysfunction over time. The 33 adolescents in the older sample with Cluster B diagnoses at *T3* or *T4* had lower well-being scores than those without diagnoses but no differences were observed in intimacy scores. When subjects meeting categorical diagnoses were distinguished from those who did not meet criteria, outcomes largely paralleled those observed when Axis II disturbances were more simply defined as dimensional syndromes for all subjects. This pattern of effects is more consistent with the conceptualization of Axis II psychopathology as maladaptive and inflexible variants of normally distributed personality traits than as categorically defined psychiatric disorders that can be clearly distinguished from normal personality functioning (Widiger, 1992).

### Significance and Limitations

On the basis of a randomly selected nonpatient sample, results from this study probably generalize well to adolescents and young adults in the community. Although well-being is an integral part of Erikson's theory of identity development, well-being variables investigated here nevertheless reflect one component of his full construct of identity. Indeed, given the breadth and clinical applicability of Erikson's definition of identity, any empirical measure of it may inevitably capture only a portion of his multidimensional construct. Accordingly, future research should use other measures of identity consolidation to determine if they produce effects comparable to those observed here. This study hinged largely on the theory that personality disorders are enduring manifestations of identity diffusion normally occurring during adolescence. Given the paucity of relevant research (Taylor and Goritsas, 1994), there is a need for additional research into the connection between adolescent identity diffusion and personality disorders. Although Cluster B symptoms are consistent with Erikson's broad description of identity diffusion, they nevertheless represent only one of many possible manifestations of this developmental construct. As a result, findings reported here may not generalize to other personality disturbances such as Cluster A disorders (schizoid, schizotypal, and paranoid disorders) or Cluster C disorders (avoidant, dependent, and obsessive-compulsive disorders). Insofar as the intimacy scales we used assessed whether young people were involved in current relationships, they may only partially capture the more

elusive *capacity* for intimacy elaborated in Erikson's theory. Finally, latent growth models investigated dynamic forces affecting adolescent development without addressing how and when young people resolve individual crises of identity or intimacy, thereby permitting them to change the course of their trajectories. It remains for future research to investigate such turning points and how they may have lasting consequences for a young person's individual growth and development.

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