ORIGINAL ARTICLE

# Personality Disorders in Adolescence and Risk of Major Mental Disorders and Suicidality During Adulthood

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**Background:** A community-based longitudinal study was conducted to investigate whether personality disorders (PDs) during adolescence increase the risk for Axis I psychiatric disorders and suicidality during early adulthood.

**Method:** Psychosocial and psychiatric interviews were administered to a representative community sample of 717 youths and their mothers from 2 counties in the state of New York in 1975, 1983, 1985-1986, and 1991-1993. Anxiety, disruptive, eating, mood, personality, and substance use disorders and suicidal ideation and behavior were assessed in 1983 and 1985-1986, when the participants were adolescents, and in 1991-1993, when they were young adults.

**Results:** Adolescents with PDs were more than twice as likely as those without PDs to have anxiety, disruptive, mood, and substance use disorders during early adulthood. These associations remained statistically significant after co-occurring Axis I disorders during adolescence were controlled statistically. Cluster A, B, and C PDs and *DSM-IV* Appendix B PDs during adolescence were all associated with elevated risk for Axis I disorders during early adulthood after co-occurring Axis I and Axis II disorders during adolescence were controlled statistically. Cluster C PDs during adolescence were associated with elevated risk for suicidal ideation or behavior during early adulthood after co-occurring psychiatric disorders and suicidality during adolescence were controlled statistically.

**Conclusions:** Adolescents in the community with personality disorders are at elevated risk for major mental disorders and suicidal ideation or behavior during early adulthood. This increase in risk is not accounted for by co-occurring Axis I disorders or suicidality during adolescence.

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RESEARCH has established that patients with personality disorders (PDs) tend to experience considerable impairment and distress and that PDs tend to have negative long-term effects, including poor treatment outcomes,[1-13] recurrence of Axis I disorders,[5,14] and suicidal behavior.[2,15,16] However, although PDs are common in the general population,[17-19] few community-based studies have investigated the long-term adverse consequences of PDs.[20] Major epidemiological studies have not assessed PDs[21,22] or have assessed only 1 of the 12 PDs identified in *DSM-IV*.[23,24] Thus, relatively little is known about the adverse consequences of PDs among individuals in the community.

In recent years, cross-sectional research has indicated that individuals in the community with PDs experience more impairment and distress[17,25] and co-occurring Axis I disorders[26,27] than individuals without PDs. However, few community-based longitudinal studies have investigated the long-term consequences of PDs. Results of 2 studies indicated that PD symptoms predicted increases in Axis I symptoms among undergraduate students over 1 month[28] and that PD symptoms were associated with increases in depressive symptoms over a 2-year period among women.[29] However, neither report included findings regarding the association between PDs and risk for subsequent Axis I disorders. Results of a recent study indicated that men in the community with PDs were more likely than men without PDs to experience onset of Axis I disorders and impaired functioning over a 3-year period.[30] However, none of these studies assessed whether PDs increased risk for subsequent suicidal ideation or behavior, and none investigated the effects of different types of PDs on risk for different types of Axis I disorders. Although data from the present sample have been used to investigate correlates and predictors of PDs during adolescence,[17] no previous longitudinal study has investigated



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## METHODS

### PARTICIPANTS AND PROCEDURE

A group of 717 youths (51% were females) and their mothers in the Children in the Community Study[31] completed research interviews in 1983, 1985-1986, and 1991-1993. The participating families were a subset of 976 families with children ranging in age from 1 to 10 years who were originally recruited in 1975 from 2 upstate New York counties using a random sampling procedure. During the 3 follow-up interviews, which were administered by extensively trained and supervised lay interviewers, the youths and their mothers were interviewed separately to assess Axis I and Axis II psychiatric disorders, demographic characteristics, and other psychosocial variables. The mean age of the youths was 13.8 years (SD, 2.57 years; range, 9-19 years) in 1983, 16.1 years (SD, 2.74 years; range, 11-23 years) in 1985-1986; and 22.0 years (SD, 2.72 years; range, 17-28 years) in 1991-1993. The families in this study were representative of families in the northeastern United States with regard to socioeconomic status and most demographic variables,[31] although there were higher rates of Catholic (54%) and white (91%) participants than in the sampled region. Study procedures were approved according to appropriate institutional guidelines. Written informed consent was obtained after the interview procedures were fully explained. Youths and their mothers were interviewed separately; interviewers of youths were blind to the responses of the mother and vice versa. Additional information regarding the study methods is available from previous reports.[17,31]

### MEASURES

The parent and youth versions of the Diagnostic Interview Schedule for Children (DISC-I)[32] were administered in 1983, 1985-1986, and 1991-1993 to assess anxiety (generalized anxiety disorder, obsessive-compulsive disorder, overanxious disorder, panic disorder, separation anxiety disorder, and social phobia), disruptive (attention deficit disorder, conduct disorder, and oppositional defiant disorder), eating (bulimia nervosa), mood (bipolar disorder, dysthymia, and major depressive disorder), and substance use (alcohol or illicit substance abuse and dependence) disorders, as well as suicide attempts. Although disruptive behavior disorders are typically diagnosed during childhood and adolescence, research has indicated that symptoms of disruptive disorders often persist during young adulthood.[33,34] Previous research has supported the reliability and validity of the DISC-I, and the DISC-I as employed in the present study provided evidence of reliability and validity comparable with that of other structured interviews.[31]

Interview items used to assess PDs were drawn from the parent and youth versions of the DISC-I,[32] the Personality Diagnostic Questionnaire,[35] the Disorganizing Poverty Interview,[36] and other personality and behavior measures.[31] The Personality Diagnostic Questionnaire items were modified so that they were age-appropriate and could be administered in an interview format. Parents and youths were both interviewed; research has demonstrated that the use of multiple informants increases the reliability and validity of psychiatric diagnoses.[37,38] Items were originally selected on the basis of their correspondence with *DSM-III-R* diagnostic criteria and combined using algorithms developed by consensus among 1 psychiatrist and 2 clinical psychologists.[17] Following the publication of *DSM-IV*, the items selected from the study measures and the algorithms were modified to maximize correspondence with *DSM-IV* diagnostic criteria. Items from the study protocol were added when necessary, most notably to permit assessment of depressive PD, which is included in Appendix B of

whether adolescents with PDs are at increased risk for Axis I disorders during early adulthood. Thus, further investigation of the long-term consequences of PDs among adolescents is warranted.

We examined data from the Children in the Community Study, a community-based prospective longitudinal study, to investigate whether PDs during adolescence predict Axis I disorders and suicidality during early adulthood. Importantly, we investigated whether PDs in adolescence increased the risk for future Axis I disorders and suicidality after controlling for Axis I disorders and suicidality during adolescence. We wanted to ascertain whether associations between PDs during adolescence and future Axis I disorders were independent of the effects of preexisting Axis I disorders and suicidality.

## RESULTS

### PREVALENCE OF PDs AND STABILITY OF PERSONALITY DISORDER SYMPTOMS IN ADOLESCENCE

One hundred three individuals (14.4%) were diagnosed with PDs during adolescence. Forty-two adolescents (5.9%) had Cluster A PDs, 51 (7.1%) had Cluster B PDs, 35 (4.9%) had Cluster C PDs, and 24 (3.3%) had *DSM-IV* Appendix B PDs. Seventy adolescents (68%) had diagnoses in 1 PD cluster and 33 (32%) had diagnoses in 2 or more PD clusters. Personality disorder symptoms were moderately stable between 1983 and 1985-1986 ($r = 0.69$, $P < .001$).

### PDs IN ADOLESCENCE AND RISK FOR AXIS I PSYCHIATRIC DISORDERS IN EARLY ADULTHOOD

As **Table 1** indicates, adolescents with PDs were more than twice as likely as those without PDs to have 1 or more Axis I disorders during early adulthood. This association remained significant after controlling statistically for Axis I disorders in adolescence. Adolescents with Cluster A, B, and C PDs were more than twice as likely as those without these PDs to have Axis I disorders during early adulthood, while those with Appendix B PDs were more than 3 times as likely as those without Appendix B PDs to have Axis I disorders during early adulthood. These associations remained significant after accounting for Axis I disorders and co-occurring PDs in adolescence. Neither sex nor Axis I disorders interacted with PDs in adolescence to predict any Axis I disorders during early adulthood.



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*DSM-IV* but not in *DSM-III-R*. The items used to assess PDs are available on request. Acceptable Cronbach α interitem reliability coefficients were obtained in 1983 and 1985-1986. For PD clusters, the median α values were .67 in 1983 and .63 in 1985-1986. For overall PD symptoms, α = .88 in 1983 and α = .89 in 1985-1986.

One hundred fifty-two items were used to assess 88 (94%) of the 94 *DSM-IV* PD diagnostic criteria. The term *diagnostic criteria* is used interchangeably with the term *symptoms* throughout this report. Thirty-one items were administered to the mothers, 116 items were administered to the youths, and 5 items regarding the youths' behavior and appearance were assessed by the interviewers. The overall correlation between the youths' responses and the mothers' responses to the items assessing PD symptoms was $r = 0.34$ ($P<.001$). Thirty-six diagnostic criteria were assessed with a single interview item. The remaining 52 criteria were assessed with 2 or more interview items. Item thresholds and algorithms were determined empirically, so that only extreme response patterns were considered diagnostically significant. An example illustrating the items and algorithms that were used to assess PDs is *DSM-IV* Paranoid PD Criterion A2 ("Is preoccupied with unjustified doubts about the loyalty or trustworthiness of friends or associates"). The following 2 items assessed this diagnostic criterion: "He/she often doesn't trust other people" (parent item) and "I often wonder if the people I know can really be trusted" (youth item). Diagnostic criterion A2 was considered to be present if an affirmative answer was given to either of these 2 items.

Personality disorder diagnoses were assigned in 1983 and 1985-1986 only if the diagnostic thresholds specified in *DSM-IV* were met or exceeded. *DSM-IV* stipulates that PD symptoms must be persistent for an adolescent to be diagnosed with a PD.[39] Therefore, a PD in adolescence was diagnosed only if the youths met the *DSM-IV* diagnostic criteria in both 1983 and 1985-1986 or if they met the *DSM-IV* diagnostic criteria on one occasion and were within 1 diagnostic criterion of the diagnosis on the other occasion. Cluster A (paranoid, schizoid, schizotypal), B (borderline, histrionic, narcissistic), and C (avoidant, dependent, obsessive-compulsive) PDs and Appendix B (depressive, passive-aggressive) PDs were assessed. Antisocial PD was diagnosed only in 1991-1993, when most participants were aged 18 years or older.

### DATA ANALYTIC PROCEDURE

Logistic regression analyses were conducted to investigate whether the PDs assessed in 1983 and 1985-1986 predicted Axis I disorders and suicidal ideation or suicide attempts in 1991-1993 after controlling for Axis I disorders, co-occurring PDs, and suicidality during adolescence. Logistic regression analyses were also conducted to investigate whether PDs interacted with sex or Axis I disorders in adolescence to predict Axis I disorders during early adulthood. In addition, logistic regression analyses were conducted to investigate whether the mean numbers of PD symptoms identified in 1983 and 1985-1986 were associated with increased risk for Axis I disorders or suicidality during early adulthood after controlling for Axis I disorders during adolescence. We also investigated whether the mean numbers of PD symptoms in 1983 and 1985-1986 were associated with increased risk for suicidality during early adulthood after controlling for Axis I disorders and suicidality during adolescence. An α value of .01 was adopted for the numerous analyses involving PD symptom levels to reduce the likelihood of a type I error. Logistic regression analyses indicated that there were no significant nonlinear associations between PD symptom counts during adolescence and Axis I disorders in early adulthood.

Schizotypal, borderline, histrionic, narcissistic, dependent, and passive-aggressive PD symptoms in adolescence were associated with increased risk for Axis I disorders in early adulthood after controlling statistically for Axis I disorders in adolescence.

Adolescents with PDs were significantly more likely than those without PDs to have anxiety disorders during early adulthood after controlling statistically for Axis I disorders in adolescence. (**Table 2**). Cluster A PDs in adolescence were associated with elevated risk for anxiety disorders in early adulthood after accounting for Axis I disorders and co-occurring PDs in adolescence. Finally, histrionic and depressive PD symptoms in adolescence were associated with an increased risk for anxiety disorders in early adulthood after accounting for Axis I disorders in adolescence.

Personality disorders in adolescence were associated with substantially increased risk for disruptive disorders in early adulthood after controlling statistically for Axis I disorders in adolescence (**Table 3**). All 3 PD clusters and Appendix B PDs were associated with elevated risk for disruptive disorders during early adulthood after accounting for Axis I disorders and co-occurring PDs during adolescence. Supplemental analyses indicated that passive-aggressive PD symptoms in adolescence were

**Table 1. Risk for Axis I Disorders in Early Adulthood Associated With Personality Disorders (PDs) in Adolescence***

| PD in Adolescence | Prevalence of Axis I Disorders in Early Adulthood, No. (%) | Odds Ratio (95% CI) | Adjusted Odds Ratio† (95% CI) |
|---|---|---|---|
| No PD (n = 614) | 114 (19) | | |
| Any Cluster A PD (n = 42) | 19 (45) | 3.62 (1.91-6.88)‡ | 2.51 (1.27-4.94)§ |
| Any Cluster B PD (n = 51) | 23 (45) | 3.60 (2.00-6.49)‡ | 2.43 (1.29-4.58)§ |
| Any Cluster C PD (n = 35) | 16 (46) | 3.69 (1.84-7.40)‡ | 2.51 (1.21-5.23)‖ |
| Any *DSM-IV* Appendix B PD (n = 24) | 16 (67) | 8.77 (3.66-21.00)‡ | 5.31 (2.12-13.28)‡ |
| Any *DSM-IV* PD (n = 103) | 45 (44) | 3.40 (2.19-5.28)‡ | 2.46 (1.54-3.95)‡ |

**CI indicates confidence interval.*
*†Controlling for co-occurring psychiatric disorders during adolescence.*
*‡P<.005.*
*§P<.01.*
*‖P<.05.*



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associated with increased risk for disruptive disorders in early adulthood after controlling statistically for Axis I disorders in adolescence.

Adolescents with PDs were substantially more likely than those without PDs to have mood disorders during early adulthood after accounting for Axis I disorders in adolescence (**Table 4**). All 3 PD clusters and Appendix B PDs were associated with elevated risk for mood disorders in early adulthood after accounting for Axis I disorders and co-occurring PDs in adolescence. Supplemental analyses indicated that paranoid, borderline, histrionic, and dependent PD symptoms in adolescence were associated with an increased risk for mood disorders in early adulthood after controlling statistically for Axis I disorders in adolescence.

**Table 2. Risk for Anxiety Disorders* in Early Adulthood Associated With Personality Disorders (PDs) in Adolescence†**

| PD in Adolescence | Prevalence of Anxiety Disorders in Early Adulthood, No. (%) | Odds Ratio (95% CI) | Adjusted Odds Ratio‡ (95% CI) |
|---|---|---|---|
| No PD (n = 614) | 58 (9) | | |
| Any Cluster A PD (n = 42) | 12 (29) | 3.83 (1.86-7.89)§ | 2.31 (1.07-5.00)¶ |
| Any Cluster B PD (n = 51) | 11 (22) | 2.64 (1.28-5.42)‖ | 1.49 (0.69-3.24) |
| Any Cluster C PD (n = 35) | 9 (26) | 3.32 (1.48-7.42)§ | 1.93 (0.82-4.52) |
| Any *DSM-IV* Appendix B PD (n = 24) | 8 (33) | 4.79 (1.97-11.68)§ | 2.31 (0.90-5.94) |
| Any *DSM-IV* PD (n = 103) | 23 (22) | 2.76 (1.61-4.71)§ | 1.86 (1.04-3.33)¶ |

*Anxiety disorders include agoraphobia, obsessive-compulsive disorder, generalized anxiety disorder, panic disorder, and social phobia.
†CI indicates confidence interval.
‡Controlling for co-occurring psychiatric disorders during adolescence.
§P<.005.
‖P<.01.
¶P<.05.

The risk for substance use disorders during early adulthood was significantly elevated among adolescents with Cluster B and Appendix B PDs after accounting for Axis I disorders and co-occurring PDs in adolescence (**Table 5**). Supplemental analyses indicated that borderline, histrionic, narcissistic, and passive-aggressive PD symptoms in adolescence were associated with an increased risk for substance use disorders in early adulthood after controlling statistically for Axis I disorders in adolescence.

Adolescents with Cluster C PDs were more likely than those without PDs to report that they had thought seriously about attempting suicide during early adulthood or that they had attempted suicide during early adulthood after accounting for co-occurring PDs, Axis I disorders, suicidal ideation, and suicide attempts during adolescence (**Table 6**). Supplemental analyses indicated that (1) dependent PD symptoms in adolescence were associated with increased risk for suicidality in early adulthood after controlling statistically for Axis I disorders and suicidality in adolescence and (2) neither sex nor adolescent suicidality interacted with PDs in adolescence to predict suicidality during early adulthood.

Findings regarding the associations between PDs in adolescence and anxiety, disruptive, mood, and substance use disorders in early adulthood are summarized in the **Figure**.

## COMMENT

These are the first findings from a prospective community-based longitudinal study to demonstrate that adolescents with PDs are at increased risk for Axis I disorders and suicidal ideation or behavior during early adulthood, regardless of whether Axis I disorders and suicidal behavior were present during adolescence. Our findings are consistent with previous find-

**Table 3. Risk for Disruptive Disorders* in Early Adulthood Associated With Personality Disorders (PDs) in Adolescence†**

| PD in Adolescence | Prevalence of Disruptive Disorders in Early Adulthood, No. (%) | Odds Ratio (95% CI) | Adjusted Odds Ratio‡ (95% CI) |
|---|---|---|---|
| No PD (n = 614) | 12 (2) | | |
| Any Cluster A PD (n = 42) | 5 (12) | 6.77 (2.27-20.26)§ | 4.10 (1.13-7.80)‖ |
| Any Cluster B PD (n = 51) | 6 (12) | 6.69 (2.40-18.66)§ | 3.94 (1.25-12.37)‖ |
| Any Cluster C PD (n = 35) | 5 (14) | 8.36 (2.77-25.26)§ | 5.81 (1.11-8.70)¶ |
| Any *DSM-IV* Appendix B PD (n = 24) | 6 (25) | 16.72 (5.64-49.56)§ | 9.56 (2.72-33.63)§ |
| Any *DSM-IV* PD (n = 103) | 13 (13) | 7.25 (3.21-16.38)§ | 4.53 (1.86-11.06)§ |

*Disruptive disorders include attention-deficit/hyperactivity disorder, conduct disorder, and oppositional defiant disorder.
†CI indicates confidence interval.
‡Controlling for co-occurring psychiatric disorders during adolescence.
§P<.005.
‖P<.05.
¶P<.01.



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**Table 4. Risk for Mood Disorders* in Early Adulthood Associated With Personality Disorders (PDs) in Adolescence†**

| PD in Adolescence | Prevalence of Mood Disorders in Early Adulthood, No. (%) | Odds Ratio (95% CI) | Adjusted Odds Ratio‡ (95% CI) |
|---|---|---|---|
| No PD (n = 614) | 33 (5) | | |
| Any Cluster A PD (n = 42) | 10 (24) | 5.50 (2.49-12.15)§ | 4.69 (1.96-11.25)§ |
| Any Cluster B PD (n = 51) | 12 (24) | 5.42 (2.60-11.31)§ | 3.99 (1.75-9.09)§ |
| Any Cluster C PD (n = 35) | 7 (20) | 4.40 (1.79-10.82)§ | 3.64 (1.37-9.68)‖ |
| Any *DSM-IV* Appendix B PD (n = 24) | 7 (29) | 7.25 (2.81-18.70)§ | 5.63 (1.93-16.41)§ |
| Any *DSM-IV* PD (n = 103) | 20 (19) | 4.24 (2.33-7.74)§ | 3.35 (1.73-6.48)§ |

*Mood disorders include bipolar disorder, dysthymic disorder, and major depressive disorder.
†CI indicates confidence interval.
‡Controlling for co-occurring psychiatric disorders during adolescence.
§P<.005.
‖P<.01.

**Table 5. Risk for Substance Use Disorders* in Early Adulthood Associated With Personality Disorders (PDs) in Adolescence†**

| PD in Adolescence | Prevalence of Substance Use Disorders in Early Adulthood, No. (%) | Odds Ratio (95% CI) | Adjusted Odds Ratio‡ (95% CI) |
|---|---|---|---|
| No PD (n = 614) | 40 (7) | | |
| Any Cluster A PD (n = 42) | 6 (14) | 2.39 (0.95-6.01) | 1.89 (0.71-5.06) |
| Any Cluster B PD (n = 51) | 10 (20) | 3.50 (1.63-7.50)§ | 3.02 (1.29-7.07)‖ |
| Any Cluster C PD (n = 35) | 5 (14) | 2.39 (0.88-6.50) | 1.90 (0.66-5.51) |
| Any *DSM-IV* Appendix B PD (n = 24) | 6 (25) | 4.78 (1.80-12.72)§ | 3.76 (1.28-11.10)‖ |
| Any *DSM-IV* PD (n = 108) | 18 (18) | 3.04 (1.67-5.54)§ | 2.47 (1.28-4.77)¶ |

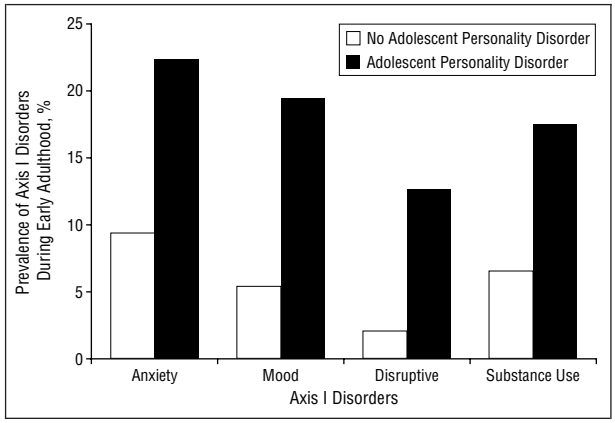
*Substance use disorders include alcohol, marijuana, and nicotine abuse or dependence.
†CI indicates confidence interval.
‡Controlling for co-occurring psychiatric disorders during adolescence.
§P<.005.
‖P<.05.
¶P<.01.

ings from community-based studies that indicate that PDs were associated with increases in Axis I symptoms among undergraduate students[28] and women[29] and with subsequent Axis I disorders among men.[30] Because PDs affect a sizable percentage of the general population,[18,19] our findings suggest that efforts directed toward increased recognition of the adverse long-term consequences of PDs might have considerable benefit.

**Table 6. Risk for Suicidal Ideation or Attempts in Early Adulthood Associated With Personality Disorders (PDs) in Adolescence***

| PD in Adolescence | Prevalence of Suicidal Ideation or Attempts in Early Adulthood, No. (%) | Odds Ratio (95% CI) | Adjusted Odds Ratio† (95% CI) |
|---|---|---|---|
| No PD (n = 614) | 58 (9) | | |
| Any Cluster A PD (n = 42) | 5 (12) | 1.84 (0.69-4.93) | 1.19 (0.47-3.01) |
| Any Cluster B PD (n = 51) | 7 (14) | 2.17 (0.92-5.10) | 1.33 (0.56-3.17) |
| Any Cluster C PD (n = 35) | 7 (20) | 3.41 (1.40-8.25)‡ | 2.36 (1.05-5.29)§ |
| Any *DSM-IV* Appendix B PD (n = 24) | 5 (21) | 3.58 (1.27-10.08)§ | 1.32 (0.54-3.26) |
| Any *DSM-IV* PD (n = 103) | 14 (14) | 2.14 (1.12-4.08)§ | 1.67 (0.72-3.91) |

*CI indicates confidence interval.
†Controlling for co-occurring psychiatric disorders and suicidal ideation or attempts during adolescence.
‡P<.005.
§P<.05.




*Associations between personality disorders in adolescence and anxiety, disruptive, mood, and substance use disorders in early adulthood.*

Previous studies with clinical samples have suggested that some types of PD symptoms may be particularly associated with certain types of Axis I disorders.[6,14,40-42] However, until now, only cross-sectional findings from community-based studies have been available regarding associations between different types of PDs and specific Axis I disorders.[43] Our findings suggest that Cluster A PDs and histrionic PD symptoms during adolescence may be uniquely associated with an increased risk for anxiety disorders in early adulthood, and Cluster B and *DSM-IV* Appendix B PDs and borderline, histrionic, narcissistic, and passive-aggressive PD symptoms during adolescence may be uniquely associated with increased risk for substance use disorders during early



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adulthood. These findings also suggest that Cluster A, B, and C and Appendix B PDs in adolescence may increase the risk for disruptive and mood disorders in early adulthood. Specifically, passive-aggressive PD symptoms during adolescence were associated with an increased risk for disruptive disorders in early adulthood, and paranoid, borderline, histrionic, and dependent PD symptoms during adolescence were associated with an increased risk for mood disorders in early adulthood.

Limitations and methodological issues that may affect interpretation of the present findings also merit consideration. Although the sample size in the present study is large, the low prevalence of some PDs made it impossible for us to investigate associations between specific PD diagnoses in adolescence and Axis I disorders and suicidality during early adulthood. However, we have reported findings regarding associations between elevated PD symptom levels during adolescence and Axis I disorders and suicidality during early adulthood. Data were not available regarding interrater reliability. However, it should be noted that the interview items and procedures were highly structured, and interviewers were not called on to make any diagnostic judgments. Because 6 PD diagnostic criteria were not assessed, it is possible that some PDs were slightly underdiagnosed. There was concern that sample attrition (8%) between 1983 and 1991-1993 might have had an effect on the present findings. However, the prevalence of psychiatric disorders among the adolescent participants who remained in the study through early adulthood was not significantly different from that among the participants who did not remain in the study through early adulthood, which suggests that sample attrition is unlikely to have affected our findings. Another concern is that, because no validated structured clinical interviews were available for the assessment of PDs among adolescents in the early 1980s, it was necessary to draw items from measures that were then available to assess PD symptoms in 1983 and 1985-1986, and the sensitivity, specificity, and predictive power of the PD diagnoses could not be ascertained. Because the measures used to assess PDs are unique to this study, it will be of particular interest for future longitudinal research to use a structured clinical interview, such as the Structured Clinical Interview for *DSM-III-R* Personality Disorders,[44] to investigate the associations between PDs in adolescence and Axis I disorders and suicidality in early adulthood.

However, many factors support the validity of the measures and procedures used to assess PDs in the present study. First, items assessing PD diagnostic criteria were administered to both the youths and the youths' mothers, and several criteria were assessed directly by the interviewer. Research has demonstrated that the use of multiple informants increases the reliability and validity of psychiatric diagnoses.[37,38] Second, PD diagnoses in adolescence were not assigned unless the *DSM-IV* diagnostic criteria were met during 1 of the 2 assessments conducted during adolescence and either threshold or subthreshold diagnostic criteria were met at the other assessment. Therefore, the prevalence of PDs in the present study is comparable with but somewhat lower than the prevalence rates obtained in other community-based studies of adolescents, which assessed PDs only on a single occasion.[45,46] The predictive validity of the items used to assess PDs in the present study is supported by our findings that Cluster A, B, and C PDs and Appendix B PDs during adolescence all predicted Axis I disorders during early adulthood after controlling statistically for Axis I disorders during adolescence.

The present study has a number of other important methodological strengths, including the representativeness of the sample; the use of a longitudinal design; the systematic assessment of a wide range of Axis I and II disorders; suicidal ideation and behavior during adolescence and early adulthood, based on interviews with both the youths and their mothers; and the use of statistical procedures to control for the effects of preexisting Axis I disorders, co-occurring PDs, and suicidality. For these reasons, and because this is the first published report to present longitudinal findings concerning the association between PDs in adolescence and risk for Axis I disorders and suicidality during early adulthood, the present findings contribute to increased understanding of the association among PDs, Axis I psychiatric disorders, and suicidality.

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