

Published in final edited form as:

J Clin Psychiatry. 2007 July; 68(7): 1102–1108.

Positive Childhood Experiences: Resilience and Recovery From **Personality Disorder in Early Adulthood**

Andrew E. Skodol, M.D., Donna S. Bender, Ph.D., Maria E. Pagano, Ph.D., M. Tracie Shea, Ph.D., Shirley Yen, Ph.D., Charles A. Sanislow, Ph.D., Carlos M. Grilo, Ph.D., Maria T. Daversa, Ph.D., Robert L. Stout, Ph.D., Mary C. Zanarini, Ed.D., Thomas H. McGlashan, M.D., and John G. Gunderson, M.D.

From the New York State Psychiatric Institute, Columbia University College of Physicians and Surgeons, New York (Drs. Skodol and Bender): the Department of Psychiatry, Case Western Reserve University, Cleveland, Ohio (Dr. Pagano); the Department of Psychiatry and Human Behavior, Brown University, Providence, R.I. (Drs. Shea and Yen); Yale Psychiatric Research, Yale University School of Medicine, New Haven, Conn. (Drs. Sanislow, Grilo, and McGlashan); McLean Hospital, Harvard Medical School, Belmont, Mass (Drs. Daversa, Zanarini, and Gunderson): and the Decision Sciences Institute, Providence, R.I (Dr. Stout) Dr. Skodol is now affiliated with the Institute for Mental Health Research, Phoenix, Ariz

Abstract

Objective—Recent follow-along studies of personality disorders have shown significant improvement in psychopathology over time. The purpose of this study was to prospectively investigate the association between positive childhood experiences related to resiliency and remission from personality disorder.

Method—Five hundred twenty patients with DSM-IV-based semistructured interview diagnoses of schizotypal, borderline, avoidant, or obsessive-compulsive personality disorders were evaluated 6 times over 4 years between September 1996 and June 2002. Positive childhood experiences, including achievements, positive interpersonal relationships with others, and caretaker competencies, were measured using the Childhood Experiences Questionnaire-Revised. The effects of positive childhood experiences on clinically significant remission from personality disorder were determined using survival and proportional hazard regression analyses.

Results—Positive achievement experiences and positive interpersonal relationships during childhood or adolescence were significantly associated with remission from avoidant and schizotypal personality disorders. The greater the number of positive experiences and the broader the developmental period they spanned, the better the prognosis of these personality disorders.

Corresponding author and reprints: Andrew E. Skodol, M.D., Institute for Mental Health Research, 222 W. Thomas Road, Suite 414, Phoenix, AZ 85013 (e-mail: E-mail: askodol@imhr.org).

This article has been reviewed and approved by the Publications Committee of the Collaborative Longitudinal Personality Disorders Study.The overall study was funded by NIMH; the members of this committee report no other financial relationships relevant to the subject of this article.

In the spirit of full disclosure and in compliance with all ACCME. Essential Areas and Policies, the faculty for this CME article were asked to complete a statement regarding all relevant financial relationships between themselves or their spouse/partner and any commercial interest (i.e., any proprietary entity producing health care goods or services Consumed by, or used on, patients) occurring within at least 12 months prior to joining this activity. The CME Institute has resolved any conflicts of interest that were identified. The disclosures are as follows: The authors have no personal affiliations or financial relationships with any proprietary entity producing health care goods consumed by, or used on, patients to disclose relative to the article.

Disclosure of off-label usage: The authors have determined that, to the best of their knowledge, no investigational information about pharmaceutical agents that is outside U.S. Food and Drug Administration-approved labeling has been presented in this article.

Conclusions—The prognosis of certain personality disorders is better in patients whose developmental histories include positive experiences. Early treatment designed to foster personal strengths and competencies and to develop inter-personal skills might benefit young patients diagnosed with personality disorders.

Considerable empirical research has focused on the pathogenic effects of negative childhood experiences, such as abuse and neglect, in the development of personality psychopathology. ^{1–3} Epidemiologic studies indicate, however, that, for many, childhood victimization has less direct impact on mental health outcomes later in life than might be expected. ^{4,5} Less attention has been paid to factors that might mitigate the deleterious effects of childhood maltreatment, protecting vulnerable children from developing personality disorders or promoting recovery.

Recently, (here has been renewed interest in concepts such as "resiliency" and "benefit finding." 6^{-11} These phenomena refer to individual differences or life experiences that help people to cope with adversity, make them better able to deal with stress in the future, and confer protection from the development of mental disorders. 12 Adaptive individual traits include intelligence, optimism, self-confidence or self-efficacy, sociability, internal locus of control, and active style of coping. $^{13-21}$ Protective life experiences are often the product of strong "social support," 22 both within the family 15 , 19 , $^{23-27}$ and in the outside community, 14 , 28

Take-Home Points

- Young patients with personality psychopathology may show improvement over time.
- The prognosis of certain personality disorders is better in patients whose developmental histories include positive achievements and interpersonal relationships.
- Early treatment designed to foster personal strengths and competencies and to develop interpersonal skills could have a beneficial effect on young patients diagnosed with personality disorders.

The notion of recovery from personality disorder is relatively new, even though traditional studies of the course of personality disorders have shown that only about half of patients with personality disorders retained these diagnoses over follow-up periods ranging from 6 months to 15 years. 29,30 Newer follow-along studies of personality disorders with improved methodologies, however, have also shown significant rates of improvement in personality disorder psychopathology over time in patient, $^{31-33}$ non-patient. 34 and community 35 populations. Since personality psychopathology early in life may improve, it is expedient to determine potential mediators or predictors of change.

Therefore, it is germane to search for factors to distinguish adults whose personality disorders improve from those whose personality disorders persist. 36,37 Academic achievement and competence in peer relations or other areas, such as work or activities, are some life experiences shown to be related to resilient personality traits and supportive environments that might contribute to change from maladaptive to more adaptive behavior in early adulthood, even in the context of significant adversity. 7,19,21,38

The Collaborative Longitudinal Personality Disorders Study (CLPS) is an ongoing follow-along investigation of the stability of personality psychopathology over time. The original sample included 573 patients with 1 of 4 targeted personality disorders, many of whom have experienced significant maltreatment. In addition, almost half of these patients had experienced a clinically significant remission within the first 2 years of follow-up. The

current study investigates the role of 3 types of positive childhood experiences related to resiliency— achievements, positive relationships with others, and caretaker competencies—on remission from personality disorder within the first 4 years of follow-up.

METHOD

Detailed description of the CLPS rationale, recruitment, subject demographics, diagnostic assessments, ⁴⁰ and measurement reliability ⁴¹ are available elsewhere. Axis I and Axis II comorbidity typical of patients with personality disorders was present. ⁴²

Subjects

Participants 18 to 45 years of age came primarily from clinical services affiliated with each of the 4 recruitment sites of the CLPS. Additional subjects were recruited via postings or advertising. All were previously or currently in mental health treatment. All Participants were prescreened to determine age eligibility and treatment status and to exclude those with active psychosis; acute substance intoxication or withdrawal, or other confusional states; or a history of schizophrenia, schizophreniform disorder, or schizoaffective disorder. All participants signed written informed consent after the study procedures had been fully explained. Institutional review board approvals were obtained for each site of the study.

The current report is based on 520~(91~%) of the original 573 personality disorder patients whose complete data on childhood experiences were available. There were no significant demographic differences between those with and without complete childhood experiences data. The majority of patients were women (64%), white (78%), and from Hollingshead and Redlich social classes II or III (63%), They were roughly equally distributed across the age range included in the study (mean age, 32.6 years, SD = 8.1). Eighty-five patients met DSM-IV criteria for schizotypal personality disorder, 212 for borderline personality disorder, 300 for avoidant personality disorder, and 243 for obsessive-compulsive personality disorder. Data were collected between September 1996 and June 2002.

Assessment

All patients were interviewed at intake by experienced clinicians using the Structured Clinical Interview for DSM-IV Axis I Disorders-Patient Edition (SCID-I/P)⁴⁴ arid the Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV).⁴⁵ Raters were trained by means of live or videotaped interviews, reviewed under the supervision of the senior author of the DIPD-IV (M.C.Z.). The 4 personality disorder diagnoses had good interrater and test-retest reliabilities, respectively (schizotypal personality disorder: 100% agreement [N insufficient 10 calculate κ for interrater reliability] and $\kappa=0.64$; borderline personality disorder: $\kappa=0.68$ and 0.69; avoidant personality disorder: $\kappa=0.68$ and 0.73; obsessive-compulsive personality disorder: $\kappa=0.71$ and 0.74). 41

Patients were reinterviewed at 6, 12, 24, 36, and 48 months following the baseline assessment. The course of the 4 personality disorders was assessed using a modification of the DIPD-IV, the Diagnostic Interview for DSM-IV Personality Disorders Follow-Along Version (DIPD-FAV), to record traits or behaviors indicative of each criterion for the personality disorders for each month of the follow-up period. Reliability for the retrospective reporting on the DIPD-FAV was tested and found to be good (schizotypal personality disorder, $\kappa=0.78$: borderline personality disorder, $\kappa=0.70$; avoidant personality disorder, $\kappa=0.73$; obsessive-compulsive personality disorder, $\kappa=0.68$) for month 6 of follow-up, assessed at both the 6-month and 12-month interviews.

To assess positive childhood experiences, interviewers administered the Childhood Experiences Questionnaire-Revised (CEQ-R) 46 either at baseline or at the 6-month follow-up interview. The CEQ-R is a semistructured interview that asks about the occurrence of positive and negative experiences that may have occurred during 3 age periods: 0 to 5, 6 to 12, and 13 to 17 years. For this study, the 0-to-5 and 6-to-12 year intervals were combined (due to the infrequency with which a number of experiences were reported from 0 to 5 years) to create a single "childhood" period to compare with the 13-to-17 year "adolescent" period. The CEQ-R has demonstrated reliability: interrater reliability κ values for individual experiences by the developer ranged from 0.64 to 1.0, with a median κ of 0.88. 46 For the CLPS study, interrater reliability κ values for 19 conjoint interviews ranged from 0,31 to 1.0 with a median of 1.0. 47

In the positive experiences domain, the CEQ-R includes 8 questions about the youth's achievements: academic, athletic, other extracurricular activity, leadership, work, hobby, household responsibilities, and popularity. Ten questions about positive interpersonal relations with others are included: mother, father, other adult female relative, other adult male relative, other adult female, other adult male, female sibling, male sibling, female friend, and male friend. Finally, there are 10 questions about perceived caretaker competencies: female work, male work, female social ability, male social ability, female interests, male interests, female close friendships, male close friendships, female good family relationships, and male good family relationships. If a patient answered affirmatively to having achievements, positive relationships, or caretakers who were competent, the interviewers probed to determine the specific positive nature of the achievement, relationship, or competence. The CEQ-R also includes questions about 5 types of abuse (emotional, verbal, physical, caretaker sexual abuse, and noncaretaker sexual abuse) and 7 types of neglect (physical neglect, emotional withdrawal, inconsistent treatment, denial of feelings, lack of real relationship, parentification, and failure to protect).

Analyses

Remission from the index personality disorder was defined us 12 consecutive months with 2 or fewer criteria rated as present on the DIPD-FAV at some point during the first 4 years of follow-up. 33 A patient was eligible for a remission at the start of the first follow-up month of the study, and the first available time for a remission to occur was at the 12-month follow-up. Survival analyses (PROC LIFETEST) were conducted to determine the effects of positive experiences on overall remission rates, and for males and females separately, for each of the 4 targeted personality disorders and to assess the significance of positive experiences occurring during childhood (0–12 years) compared with those occurring during adolescence (13–17 years). Data were used from all cases to the point at which they might become missing (e.g., study dropouts), at which point they were censored. Wilcoxon tests were used to determine significance.

Proportional hazard regression analyses were conducted to assess the effects of the total number of positive experiences in each of the 3 CEQ-R domains for any individual experience that significantly predicted remission, A final set of proportional hazard regression analyses was conducted to determine the effects of total positive achievement and positive relationship experiences with any physical, sexual, or verbal abuse and any type of neglect in the model. All regression analyses controlled for gender, age, ethnicity, and number of comorbid Axis I and Axis II disorders. Analyses were performed using SAS version 8.2. 48 Given the descriptive and exploratory nature of the analyses, all tests were reported with significance values greater than 95% (p < .05), 2-tailed. Because of the number of significance tests conducted, however, caution should be used in interpreting results of only modest significance, as some of them may represent chance associations.

RESULTS

Overall remission rates (12 consecutive months at 2 or fewer criteria) for DIPD-IV diagnoses of the 4 personality disorders were as follows: schizotypal personality disorder = 45.5%, borderline personality disorder = 53.6%, avoidant personality disorder = 55.1%, and obsessive-compulsive personality disorder = 67.0%. Results of significant associations between remission and positive childhood experiences will be presented by type of experience. Significant findings are summarized in Table 1.

A positive achievement record during childhood or adolescence was significantly related to the probability of remission of avoidant personality disorder over 4 years of follow-up. Specifically, a report of achievement in extracurricular activities (60.6% remitted with achievement vs. 48.1% remitted without achievement), leadership (63.9% vs. 51.3%), work (61.2% vs. 50.1%), and popularity (69.5% vs. 48.2%) predicted avoidant personality disorder remission. These relationships were slightly stronger among female patients with avoidant personality disorder than among male patients with avoidant personality disorder, except for achievement in work, in which the relationships were nearly identical. Popularity also predicted schizotypal personality disorder remission (73.7% vs. 35.4%), with a much stronger relationship in women (88.9%) than in men (62.8%). Achievement experiences were more often significantly related to personality disorder remission if they occurred in adolescence than in childhood, although some experiences (e.g., work) were infrequently reported in childhood.

Positive relationships with female friends (62.6% remitted with vs. 43.7% remitted without) and with female relatives (62.7% vs. 48.5%) were also significantly related to avoidant personality disorder remission. The relationship for female friends was stronger among women with avoidant personality disorder (63.1%) than men (60.8%), and the relationship for female relatives was stronger among men with avoidant personality disorder (69.4%) than women (59.8%). Positive relationships with male friends predicted borderline personality disorder remission (61.7% vs. 48.2%). This relationship was slightly stronger in men with borderline personality disorder than in women. Positive relationships with mother (61.5% vs. 30.9%), female relative (64.0% vs. 34.1%), male sibling (63.6% vs. 38.9%), and female sibling (63.3% vs. 39.6%) predicted schizotypal personality disorder remission. The relationships for mother (56.8% vs. 68.8%), male sibling (58.3% vs. 70%), and female sibling (55.9% vs. 75%) were significantly weaker in men with schizotypal personality disorder than women with schizotypal personality disorder. In contrast to achievement experiences, positive relationships during both childhood and adolescence were related to personality disorder remission.

Caretaker competence as exhibited by a female caretaker having close friends was associated with remission of avoidant personality disorder (60.0% remitted, vs. 43.7% remitted). This effect was stronger in female patients (61.2%) with avoidant personality disorder than males (57.9%). No other caretaker competency variables were associated with remission from personality disorder.

Table 2 presents the effects of the total number of positive experiences in each of the 3 domains for each of the 3 personality disorders for which any individual experience was significant (i.e., avoidant personality disorder, schizotypal personality disorder, and borderline personality disorder; no individual experience predicted obsessive-compulsive personality disorder remission) controlling for gender, age, ethnicity, and number of comorbid Axis I and Axis II disorders. The total numbers of positive achievement experiences and of positive relationships were related to remission from avoidant personality disorder, and the total number of positive relationships was related to remission from schizotypal personality disorder. There were no significant relationships between total number of any type of positive childhood experience

and remission from borderline personality disorder. The hazard ratios reveal that for every additional type of positive achievement experience, the potential for remission from avoidant personality disorder increased by 17% and for every additional type of positive relationship, the potential for remission from avoidant personality disorder increased by 12%. For every type of positive relationship, the potential for remission from schizotypal personality disorder increased by 19%.

Regression analyses (see Table 3) showed that total positive childhood experiences in the achievement and relationship domains predicted remission from avoidant personality disorder over and above other variables, including physical, sexual, and verbal abuse and neglect. Physical abuse was a significant predictor of not remitting, i.e., personality disorder persistence or stability. Total number of positive relationship experiences also continued to predict remission from schizotypal personality disorder. Younger age also predicted remission from schizotypal personality disorder. No positive childhood experiences or abuse or neglect variables significantly predicted borderline personality disorder remission. Male gender, white ethnicity, and fewer comorbid Axis II disorders, however, were associated with remission from borderline personality disorder.

DISCUSSION

This study investigated the impact of positive achievement experiences, positive interpersonal relationships, and caretaker competencies during childhood and adolescence on adult remission from 4 different personality disorders. Positive achievement experiences demonstrated a significant relationship to remission from avoidant personality disorder and schizotypal personality disorder. Achievement motivation has long been recognized as a key ingredient of resiliency in young people. A variety of positive interpersonal relationships with others were also associated with remission from avoidant personality disorder, schizotypal personality disorder, and borderline personality disorder. There were no significant predictors of remission from obsessive-compulsive personality disorder, perhaps because of the generally higher functioning of this group. 50

Interestingly, achievements in activities that might be expected in an outgoing, extroverted, or sociable personality, i.e., leadership, extracurricular activities, and popularity, and positive interpersonal relationships were associated with remission from the 2 personality disorders most characterized by social inhibition or withdrawal— avoidant personality disorder and schizotypal personality disorder. These findings are particularly striking for patients with avoidant personality disorder, for whom we have previously found lower rates of popularity in adolescence than in patients with other personality disorders, and less involvement in extracurricular activities and leadership roles than in patients with major depressive disorder. ⁴⁷ Self-confidence and interpersonal competencies are often mentioned as aspects of resiliency and positive youth development. ^{13,18,21,51,52} In our sample, these effects were generally stronger in females than in males, consistent with the belief that females are by nature more sociable than males⁵³ and may rely on more interpersonal types of coping.

Although competent parenting $^{15,24-27}$ and positive role models 54,55 are often said to be associated with resiliency, the perceived caretaker competency variables measured in this study showed only 1 significant relationship with remission: female caretaker's close friends associated with remission from avoidant personality disorder.

The greater the number of positive childhood experiences and the broader the development period they spanned, the better the prognosis of personality disorders was in our study. We did not attempt to date specific abuse or neglect experiences. Yet, the fact that patients with avoidant personality disorder who had positive childhood achievement and interpersonal

experiences and patients with schizotypal personality disorder who had positive relationship experiences were more likely to remit, even in the presence of abuse experiences that predicted nonremission, suggests that these positive experiences reflect personal characteristics of resiliency, the capacity to do well even in the face of adversity. Interestingly, although childhood abuse and neglect are frequently reported in the histories of patients with borderline personality disorder (e.g., see Battle et al.³), neither abuse nor neglect were related to the stability (i.e., nonremission) of borderline personality disorder psychopathology. In a previous report, ⁵⁶ we showed that childhood abuse predicted poor outcome for patients with borderline personality disorder based on level of functioning, measured by the Global Assessment of Functioning scale, but not based on level of borderline personality disorder psychopathology, measured by a count of diagnostic criteria at 2-year follow-up. Those results are consistent with the results of this study.

Consistent also with earlier reports from the CLPS^{31,33} and other studies,^{32,34,35} we found that personality disorder psychopathology continued to improve with increasing length of follow-up. By 4 years, over half of patients receiving intake diagnoses of borderline, avoidant, or obsessive-compulsive personality disorders had had at least 12 consecutive months during which they fulfilled only 2 or fewer criteria for their original disorder. This represents substantial and clinically significant improvement. Although it is too early to say whether the improvement will be sustained and for how long, or whether substantial numbers of patients will relapse to again having a diagnosable disorder, the unexpected improvement compels searching further for protective factors associated with a more benign prognosis in patients diagnosed with personality disorders. Future work might also address the relationship between positive experiences and learning mechanisms, such as reward, fear conditioning, and extinction, to forge the link between these developmental and social experiences and resiliency in neurobiological development that might later mediate remission from psychopathology.

Younger age significantly predicted remission from avoidant personality disorder (trend) and schizotypal personality disorder. This finding is consistent with the notion that some personality disorder diagnoses among younger patients may be developmental phases that at least those with adaptive personality strengths may outgrow. The literature on traits of general personality functioning indicates that traits may not become stable until the fourth decade. 57,58

A strength of the study is its prospective design, in which reports of childhood experiences taken during the first 6 months of the study predicted the future course of personality psychopathology. Since these experiences were reported retrospectively by the study participants themselves, it is possible that better prognoses for participants reporting positive experiences reflect cognitive phenomena (e.g., IQ) or personality characteristics (e.g., optimism) rather than the positive experiences per se.

The results of this study have significance for treatment and prevention. Early intervention with treatments designed to foster personal strengths and competencies and to develop interpersonal skills could have a beneficial effect on young patients diagnosed with personality disorders. Furthermore, youth programs promoting social, emotional, cognitive, behavioral, and moral competencies may help prevent the development of personality psychopathology in vulnerable youth. 59

Acknowledgments

This work was funded by the National Institute of Mental Health (NIMH) grants MH 50837, MH 50838, MH 50839, MH 50840, MH 50850.

References

 Zanarini MC, Williams AA, Lewis RE, et al. Reported pathological childhood experiences associated with the development of borderline personality disorder. Am J Psychiatry 1997;154:1101–1106.
 [PubMed: 9247396]

- Johnson JG, Cohen P, Brown J, et al. Childhood maltreatment increases risk for personality disorders during early adulthood. Arch Gen Psychiatry 1999;56:600–606. [PubMed: 10401504]
- 3. Battle CL, Shea MT, Johnson DM, et al. Childhood maltreatment associated with adult personality disorders: findings from the Collaborative Longitudinal Personality Disorders Study. J Personal Disord 2004;18:193–211.
- 4. Rind B, Tromovitch P, Bauserman R. A meta-analytic examination of assumed properties of child sexual abuse using college samples. Psychol Bull 1998;124:22–53. [PubMed: 9670820]
- Horowitz AV, Widom CS, McLaughlin J, et al. The impact of childhood abuse and neglect on adult mental health: a prospective study. J Health Soc Behav 2001;42:184–201. [PubMed: 11467252]
- 6. Affleck G, Tennen H. Construing benefits from adversity: adaptational significance and dispositional underpinnings. J Pers 1996;64:899–922. [PubMed: 8956517]
- Masten AS, Coatsworth JD. The development of competence in favorable and unfavorable environments. Am Psychol 1998;53:205–220. [PubMed: 9491748]
- 8. Luthar SS, Cicchetti D, Becker B. The construct of resilience: a critical evaluation and guidelines for future work. Child Dev 2000;71:543–562. [PubMed: 10953923]
- 9. Bell CC. Cultivating resiliency in youth. J Adolesc Health 2001;29:375-381. [PubMed: 11691598]
- 10. Richardson GE. The metatheory of resilience and resiliency. J Clin Psychol 2002;58:307–321. [PubMed: 11836712]
- 11. Bonanno GA. Loss, trauma, and human resilience: have we underestimated the human capacity to thrive after extremely aversive events? Am Psychol 2004;59:20–28. [PubMed: 14736317]
- 12. Rutter M. Resilience in the face of adversity: protective factors and resistance to psychiatric disorder. Br J Psychiatry 1985;147:598–611. [PubMed: 3830321]
- Rutter M. Psychosocial resiliency and protective mechanisms. Am J Orthopsychiatry 1987;57:316–329. [PubMed: 3303954]
- 14. Werner EE. High-risk children in young adulthood: a longitudinal study from birth to 32 years. Am J Orthopsychiatry 1989;59:72–81. [PubMed: 2467566]
- Wyman PA, Cowan EL, Work WC, et al. Developmental and family correlates of resiliency in urban children who have experienced major life stress. Am J Community Psychol 1991;19:405–426.
 [PubMed: 1892136]
- 16. Werner EE. The children of Kauai: resiliency and recovery in adolescence and adulthood. J Adolesc Health 1992;13:262–268. [PubMed: 1610840]
- 17. Cowen EL, Wyman PA, Work WC. Resilience in highly stressed urban children: concepts and findings. Bull N Y Acad Med 1996;73:267–284. [PubMed: 8982521]
- 18. Klohnen EC. Conceptual analysis and measurement of the construct of ego-resiliency. J Pers Soc Psychol 1996;70:1067–1079. [PubMed: 8656335]
- Masten AS, Hubbard JJ, Gest SD, et al. Competence in the context of adversity: pathways to resilience and maladaptation from childhood to late, adolescence. Dev Psychopathol 1999;11:143–169. [PubMed: 10208360]
- 20. Pengilly JW, Dowd ET. Hardiness and social support as moderators of stress. J Clin Psychol 2000;56:813–820. [PubMed: 10877469]
- 21. Shiner RL. Linking childhood personality with adaptation: evidence for continuity mid change across time into late adolescence. J Pers Soc Psychol 2000;78:310–325. [PubMed: 10707337]
- 22. Schultz U, Mohamed NE. Turning the tide: benefit finding after cancer surgery. Soc Sci Med 2004;59:653–662. [PubMed: 15144772]
- 23. Luthar SS, Zigler E. Vulnerability and competence: a review of research on resilience in childhood. Am J Orthopsychiatry 1991;61:6–22. [PubMed: 2006679]
- 24. Cowan EL, Wyman PA, Work WC, et al. Follow-up study of young stress-affected and stress-resilient urban children. Dev Psychopathol 1997;9:565–577. [PubMed: 9327240]

25. Strage AA. Family context variables and the development of self-regulation in college students. Adolescence 1998;33:17–31. [PubMed: 9583657]

- 26. Wyman PA, Cowan EL, Work WC, et al. Caregiving and developmental factors differentiating Young at-risk urban children showing resilient versus stress-affected outcomes: a replication and extension. Child Dev 1999;70:645–659. [PubMed: 10368913]
- 27. Lin KK, Sandler IN, Ayers TS, et al. Resilience in parentally bereaved children and adolescents seeking preventive services. J Clin Child Adolesc Psychol 2004;33:673–683. [PubMed: 15498735]
- 28. Garmezy, N. Stress-resistant children: the search for protective factors. In: Stevenson, JE., editor. Recent Research in Developmental Psychopathology. Oxford England: Pergamon Press; 1985. p. 213-233.
- 29. Perry JC. Longitudinal studies of personality disorders. J Personal Disord 1993;7(suppl):63–85.
- 30. McDavid JD, Pilkonis PA. The Mobility of personality disorders diagnoses. J Personal Disorder 1996;10:1–15.
- 31. Shea MT, Stout RL, Gunderson JG, et al. Short-term diagnostic stability of schizotypal, borderline, avoidant, and obsessive-compulsive personality disorders. Am J Psychiatry 2002;159:2036–2041. [PubMed: 12450953]
- 32. Zanarini MC, Frankenburg FR, Hennen J, et al. The longitudinal course of borderline psychopathology: 6-year prospective follow-up of the phenomenology of borderline personality disorder. Am J Psychiatry 2003;160:274–283. [PubMed: 12562573]
- 33. Grilo CM, Shea MT, Sanislow CA, et al. Two-year stability and change in schizotypal, borderline, avoidant and obsessive-compulsive personality disorders. J Consult Clin Psychol 2004;72:767–775. [PubMed: 15482035]
- 34. Lenzenweger MF. Stability and change in personality disorder features: the Longitudinal Study of Personality Disorders. Arch Gen Psychiatry 1999;56:1009–1015. [PubMed: 10565501]
- 35. Johnson JG, Cohen P, Kasen S, et al. Age-related change in personality disorder trait levels between early adolescence and adulthood: a community-based longitudinal investigation. Acta Psychiatr Scand 2000;102:265–275. [PubMed: 11089726]
- 36. Cohen, P.; Crawford, T. Developmental issues. In: Oldham, JM.; Skodol, AE.; Bender, DS., editors. The American Psychiatric Press Textbook of Personality Disorders. Arlington, Va. American Psychiatric Publishing; 2005. p. 171-185.
- 37. Johnson, JG.; Bromley, E.; McGeoch, PG. Role of childhood experiences in the development of maladaptive and adaptive personality traits. In: Oldham, JM.; Skodol, AE.; Bender, DS., editors. The American Psychiatric Press Textbook of Personality Disorders. Arlington, Va: American Psychiatric Publishing; 2005. p. 209-221.
- 38. Masten AS, Burt KB, Roisman GI, et al. Resources and resilience in the transition to adulthood: continuity and change. Dev Psychopathol 2004;16:1071–1094. [PubMed: 15704828]
- 39. Skodol AE, Shea MT, McGlashan TH, et al. The Collaborative Longitudinal Personality Disorders Study (CLPS): overview and implications. J Personal Disord 2005;19:487–504.
- 40. Gunderson JG, Shea MT, Skodol AE, et al. The Collaborative Longitudinal Personality Disorders Study: development, aims, design, and sample characteristics. J Personal Disord 2000;14:300–315.
- 41. Zanarini MC, Skodol AE, Bender D, et al. The Collaborative Longitudinal Personality Disorders Study: reliability of axis I and II diagnoses. J Personal Disord 2000;14:291–299.
- 42. McGlashan TH, Grilo CM, Skodol AE, et al. The Collaborative Longitudinal Personality Disorders Study: baseline axis I/II and II/II diagnostic co-occurrence. Acta Psychiatr Scand 2000;102:256–264. [PubMed: 11089725]
- 43. Bender DS, Dolan RT, Skodol AE, et al. Treatment utilization by patients with personality disorders. Am J Psychiatry 2001;158:295–302. [PubMed: 11156814]
- 44. First, MB.; Spitzer, RL.; Gibbon, M., et al. Structured Clinical Interview for DSM-IV Axis I Disorders, Patient Edition (SCID-I/P). New York, NY: New York State Psychiatric Institute, Biometrics Research; 1996.
- 45. Zanarini, MC.; Frankenburg, FR.; Sickel, AE., et al. The Diagnostic Interview for DSM-IV Personality Disorders (DIPD-IV). Belmont, Mass: McLean Hospital; 1996.
- 46. Zanarini MC, Gunderson JG, Marino MF, et al. Childhood experiences of borderline patterns. Compr Psychiatry 1989;30:18–25. [PubMed: 2924564]

47. Rettew DC, Zanarini MC, Yen S, et al. Childhood antecedents of avoidant personality disorder: a retrospective study. J Am Acad Child Adolesc Psychiatry 2003;42:1122–1130. [PubMed: 12960713]

- 48. SAS Institute Inc. SAS/STAT User's Guide, Version 8. Cary, NC: SAS Institute Inc; 1999.
- 49. Werner, EE.; Smith, RS. Vulnerable But Invincible: A Study of Resilient Children. New York, NY: McGraw-Hill; 1982.
- 50. Skodol AE, Gunderson JG, McGlashan TH, et al. Functional impairment in patients with schizotypal, borderline, avoidant, or obsessive-compulsive personality disorder. Am J Psychiatry 2002;159:276–283. [PubMed: 11823271]
- 51. Caplan M, Weissberg RP, Grober JS, et al. Social competence promotion with inner-city and suburban young adolescents: effects on social adjustment and alcohol use. J Consult Clin Psychol 1992;60:56–63. [PubMed: 1556286]
- Charney DS. Psychobiological mechanisms of resilience and vulnerability: implications for successful adaptation to extreme stress. Am J Psychiatry 2004;161:195–216. [PubMed: 14754765]
- 53. Feingold A. Gender differences in personality: a meta-analysis. Psychol Bull 1994;116:429–456. [PubMed: 7809307]
- 54. Scales PC, Benson PL, Roehlkepartain EC, et al. The role of parental status and child age in the engagement of children and youth with adults outside their families. J Fam Issues 2004;25:735–760.
- 55. Scales PC, Gibbons JL. Extended family members and unrelated adults in the lives of young adolescents: a research agenda. J Early Adolesc 1996;16:365–389.
- 56. Gunderson JG, Daversa MT, Grilo CM, et al. Predictors of 2-year outcome for patients with borderline personality disorder. Am J Psychiatry 2006;163:822–826. [PubMed: 16648322]
- 57. Costa, PT., Jr; McCrae, RR. Set like plaster? evidence for the stability of adult personality. In: Heatherington, TF.; Wemberger, JL., editors. Can Personality Change?. Washington DC: American Psychological Association; 1994. p. 21-40.
- 58. McCrae RR, Costa PT Jr, Ostendorf F, et al. Nature over nurture: temperament, personality, and life span development. J Pers Soc Psychol 2000;78:173–186. [PubMed: 10653513]
- 59. Commission on Positive Youth Development. The positive perspective on youth development. In: Evans, DL.; Foa, EB.; Cur, RE., et al., editors. Treating and Preventing Adolescent Mental Health Disorders. New York, NY: Oxford University Press; 2005. p. 497-527.

NIH-PA Author Manuscript NIH-PA Author Manuscript NIH-PA Author Manuscript

 Table 1

 Positive Childhood Experiences and Gender in Relation to Remission From Personality Disorders in 520 Patients

					Gender Difference ^a	ence ^a
Positive Childhood Experience	Personality Disorder	χ_{2}^{2}	đţ	d	Male	Female
Extracurricular activities	Avoidant	10.18	1,300	.0014		*
Leadership	Avoidant	8.05	1,300	.0046		*
Work	Avoidant	7.73	1,300	.0054	II	II
Popularity	Avoidant	13.87	1,300	.0002		*
	Schizotypal	12.03	1,85	.0005		*
Positive relations with female friends	Avoidant	10.69	1,300	.0011		*
Positive relations with female relatives	Avoidant	7.63	1,300	.0058	*	
	Schizotypal	7.72	1,85	.0055	II	II
Positive relations with male friends	Borderline	4.32	1,212	.0378	*	
Positive relations with mother	Schizotypal	7.92	1,85	.0049		*
Positive relations with male siblings	Schizotypal	7.66	1,85	.0057		*
Positive relations with female siblings	Schizotypal	5.49	1,85	.0191		*
Female caretaker having close friends	Avoidant	6.14	1,300	.0132		*

 a_{**} . Indicates the effect is stronger for specified gender. " = " Indicates the effect is similar for both females and males.

NIH-PA Author Manuscript

NIH-PA Author Manuscript

NIH-PA Author Manuscript

Effect of Total Number of Positive Achievement, Positive Relationship, and Caretaker Competence Experiences on Remission From Personality Disorders Over 4 Years

							Õ	Diagnostic Group	dı						
		Avoida	Avoidant Personality Disorder)isorder			Schizotyl	Schizotypal Personality Disorder	Disorder			Borderlin	Borderline Personality Disorder	Disorder	
Positive Experience	В	SE	χ,	ď	Hazard Ratio	В	SE	χ^2	ď	Hazard Ratio	В	SE	χ_{5}	ď	Hazard Ratio
Total achievements	0.16	0.04	12.03	.0005	1.17	0.08	0.08	0.84	.359	1.08	-0.03	0.05	0.29	.592	0.97
Total relationships	0.11	0.04	10.11	.0015	1.12	0.18	90.0	8.19	.004	1.19	0.00	0.05	0.01	.931	1.00
Total caretaker competencies	0.03	0.03	69.0	.407	1.03	90.0	90.0	0.95	.330	1.06	-0.01	0.04	0.10	.752	0.99

NIH-PA Author Manuscript NIH-PA Author Manuscript

NIH-PA Author Manuscript

Table 3	Effects of Positive Childhood Experiences, Abuse, and Neglect on Remission From Personality Disorders Over 4 Years

							D	Diagnostic Group	đi						
		Avoidar	Avoidant Personality Disorder	Disorder			Schizotyl	Schizotypal Personality Disorder	' Disorder			Borderlin	Borderline Personality Disorder	Disorder	
Variable	В	SE	x ₂	ď	Hazard Ratio	æ	SE	χ ₂	ď	Hazard Ratio	В	SE	2×2	ď	Hazard Ratio
Total achievement experiences	0.13	0.05	6.34	.011	1.14	-0.07	0.12	0.35	.553	0.93	-0.01	0.06	0.04	.834	0.99
Total positive relationships	0.09	0.04	5.19	.022	1.10	0.23	0.10	5.87	.015	1.27	0.02	0.05	0.10	.753	1.02
Total caretaker competencies	-0.05	0.04	1.46	722.	96:0	-0.03	0.07	0.13	.714	0.97	-0.04	0.04	0.86	.352	96.0
Gender	0.09	0.18	0.23	.633	1.09	0.36	0.35	0.74	.389	1.35	-0.45	0.23	3.89	.049	0.64
Age	-0.02	0.01	3.48	.062	86.0	-0.05	0.02	5.21	.022	0.95	-0.01	0.01	0.71	.399	0.99
Ethnicity	-0.01	0.11	0.01	.926	0.99	-0.03	0.30	0.01	.933	0.98	-0.29	0.12	5.23	.022	0.75
No. of comorbid Axis I disorders	-0.07	0.05	1.69	.194	0.93	0.02	0.11	0.02	.881	1.02	0.08	90.0	1.84	.175	1.09
No. of comorbid Axis II disorders	-0.07	90.0	1.45	.228	0.93	-0.01	60:0	0.02	.884	0.99	-0.17	90.0	7.75	.005	0.84
Verbal abuse	0.21	0.19	1.23	.267	1.24	-0.63	0.49	1.69	.193	0.53	-0.13	0.25	0.28	.596	0.88
Physical abuse	-0.63	0.20	10.02	.002	0.53	0.10	0.46	0.04	.834	1.10	-0.27	0.24	1.24	.266	0.77
Sexual abuse	0.08	0.18	0.22	.640	1.09	-0.28	0.41	0.47	.491	0.76	-0.02	0.21	0.01	.926	0.98
Neglect	0.06	0.25	90.0	.813	1.06	0.72	0.55	1.73	.189	2.05	-0.25	0.33	0.58	.447	0.78