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To cite this article: Jeffrey G. Johnson, Patricia Cohen, Stephanie Kasen, Miriam K. Ehrensaft & Thomas N. Crawford (2006) Associations of Parental Personality Disorders and Axis I Disorders with Childrearing Behavior, *Psychiatry*, 69:4, 336-350

To link to this article: <https://doi.org/10.1521/psyc.2006.69.4.336>



Published online: 16 Dec 2014.



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Associations of Parental Personality Disorders and Axis I Disorders with Childrearing Behavior

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Data from the Children in the Community Study, a community-based longitudinal investigation, were used to investigate the associations of parental anxiety, depressive, substance use, and personality disorders with parental child rearing behavior. Comprehensive psychosocial interviews, including assessments of child rearing, were conducted with 224 women and 153 men (mean age = 33 years; mean offspring age = 8 years). Findings indicated that parental personality disorders were associated with parental possessiveness, inconsistent parental discipline, low parental communication, and low parental praise and encouragement. These associations remained significant when parental gender, offspring gender, and co-occurring parental disorders were controlled statistically. Parental anxiety disorders were independently associated with parental possessiveness. Parents with personality disorders were substantially more likely than parents without personality disorders to report engaging in multiple problematic child rearing behaviors. This association was not moderated by co-occurring parental disorders. These findings suggest that the presence of a parental personality disorder may be associated with an elevated likelihood of problematic parenting behavior during the child rearing years.

A sizable body of research has investigated the association of parental psychiatric disorders with child rearing behavior and parent-child interaction. These studies have provided considerable evidence indicating that parental disorders are associated with problematic child rearing behavior, parenting difficulties, and problems in parent-child relationships (e.g., Cassidy, Zoccolillo, & Hughes, 1996; Weinberg & Tronick, 1998). Many studies have investigated the child rearing behavior of parents with common Axis I

disorders, including anxiety (Whaley, Pinto, & Sigman, 1999), conduct (Ehrensaft, Wasserman, Verdelli, Greenwald, Miller, & Davies, 2003), depressive (Boyle & Pickles, 1997; Cohn, Campbell, Matias, & Hopkins, 1990; Fendrich, Warner, & Weissman, 1990; Lizardi & Klein, 2000; Rutter, 1990;), and substance use disorders (Hans, Bernstein, & Henson, 1999; Kandel, 1990).

Most of the studies that have been conducted in this field have examined a relatively small number of parental disorders and

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parenting practices (Berg-Nielsen, Vikan, & Dahl, 2002). Co-occurring parental disorders have been controlled in some, but not all of these studies, and the range of psychiatric comorbidity that has been assessed has varied considerably. Because few investigations have examined a wide range of parental disorders and parenting practices, there are important gaps in our understanding of these associations. For example, it has not yet been determined whether certain types of parental disorders are differentially associated with parenting difficulties, inadvisable parenting practices, or problems in parent-child relationships.

Further, relatively little is currently known about the child rearing behavior of parents with personality disorders. Because personality disorders are characterized by enduring patterns of problematic interpersonal behavior (American Psychiatric Association, 1994; Johnson, Rabkin, Williams, Remien, & Gorman, 2000), it has been hypothesized that parents with personality disorders may be particularly likely to engage in problematic child rearing behavior (Berg-Nielsen et al., 2002). Research has suggested that maladaptive personality traits may account for much of the association between some types of parental Axis I disorders and problematic parenting behaviors (Hans, Bernstein, & Henson, 1999; Mills, Puckering, Pound, & Cox, 1985). In addition, there has been evidence suggesting that parental personality disorder may be independently associated with child rearing difficulties after co-occurring parental disorders are accounted for (Johnson, Cohen, Kasen, First, & Brook, 2004; Johnson, Cohen, Kasen, Smailes, & Brook, 2001). However, until now, no community-based epidemiological study has provided data regarding the child rearing behavior of mothers and fathers with personality disorders and Axis I disorders that were assessed with clinician-administered structured diagnostic interviews.

Research investigating these associations is likely to have important clinical and public health implications. Parenting may play a significant role in determining whether the children of affected parents will develop

mental disorders (Browne, Joyce, Wells, Bushnell, & Hornblow, 1995; Frick et al., 1992; Johnson et al., 2001; Rutter, 1990). Comprehensive studies of associations between parental disorders and problematic child rearing behavior may facilitate development of intervention strategies that may help to prevent transmission of psychiatric disorders from parents to their offspring (Chilcoat, Breslau, & Anthony, 1996; Redmond, Spoth, Shin, & Lepper, 1999). If certain types of parental disorders are differentially associated with problematic child rearing, it is possible that improved recognition and treatment of these parental disorders might help to reduce the extent or severity of parenting difficulties in the general population (Chilcoat et al., 1996). In addition, improved identification of high-risk parents may facilitate efforts to provide targeted interventions that can help parents to improve their child rearing skills (Irvine, Biglan, Smolkowski, Metzler, & Ary, 1999; Redmond et al., 1999; Spoth, Lopez, Redmond, & Shin, 1999).

We report findings of the Children in the Community Study (CICS), a community-based prospective longitudinal study, regarding associations between a wide range of parental psychiatric disorders and child rearing behaviors. Parental and offspring age and gender and co-occurring parental disorders were controlled statistically to investigate whether parental anxiety, depressive, personality, and substance use disorders were independently associated with problematic child rearing behaviors, net of these parental and offspring characteristics.

METHOD

Sample and Procedure

The participants in the present study were 377 adult participants in the CICS (mean age = 33.48 years; $SD = 2.73$; 224 [59.4%] women; 153 [40.6%] men), who completed comprehensive psychosocial and psychiatric assessments regarding themselves and a randomly selected child (mean offspring age =

8.18 years; $SD = 4.67$) in 2001–2004. These participants were part of a cohort that had previously been interviewed in 1983 ($N = 778$; mean age = 13.8; $SD = 2.6$), 1985–1986 ($N = 776$; mean age = 16.1; $SD = 2.7$), and 1991–1993 ($N = 749$; mean age = 22.1; $SD = 2.7$). The participants were originally selected for inclusion in the CICS in 1975, at mean age = 5.5 ($SD = 2.8$), when their mothers completed comprehensive psychosocial assessments regarding a broad range of familial characteristics (Cohen & Cohen, 1996; Kogan, Smith, & Jenkins, 1977). A stratified random sampling procedure was used, in 1975, to obtain a representative sample of families in Albany and Saratoga counties in the State of New York. Census data were used to create primary sampling units, stratified by urban–rural status, ethnicity, and income. A systematic sample of these units was drawn with probability proportional to the number of households, and probabilities equal for members of all strata. Address lists were compiled, and interviewers were sent to the selected addresses; 1,141 families were invited to participate, and 976 mothers (85.5%) were interviewed. The families were generally representative of families in the northeastern United States with regard to most demographic variables (e.g., socioeconomic status) in 1983, but reflected the sampled region, with high proportions being Catholic (54%) and Caucasian (91%) (Cohen & Cohen, 1996).

A total of 658 participants (349 [53.0%] women, 309 [47.0%] men) were interviewed in 2001–2004. These families did not differ significantly from the remainder of the original sample with regard to demographic variables, childhood behavior problems, or most parental risk factors at mean age 5.5, although substance abuse was less prevalent among the fathers of the respondents who participated in follow-up interviews. Of the 658 participants interviewed in 2001–2004, the 377 participants with children (i.e., the respondents in the present report) did not differ significantly from the 281 respondents without children with respect to age, ethnicity, socioeconomic status, or presence of psychiatric disorder. However, the proportion of women

was significantly higher ($R^2 = 14.41$; $df = 1$; $p = .0002$) among the respondents with children than it was among the respondents who did not have children.

The CICS procedures were approved by Columbia University and New York State Psychiatric Institute Institutional Review Boards. Written informed consent or assent was obtained from all participants after the interview procedures were fully explained. A National Institute of Health Certificate of Confidentiality was obtained for these data. Additional information regarding the study methodology is available from previous reports (Cohen & Cohen, 1996; Johnson et al., 2001), and on the study website (<http://nypisys.cpmc.columbia.edu/childcom>).

Assessment of Parental Psychiatric Disorders

Anxiety (agoraphobia, generalized anxiety disorder, obsessive–compulsive disorder, panic disorder, social anxiety disorder), depression (dysthymic disorder, major depressive disorder), and substance use (alcohol abuse or dependence, drug abuse or dependence), evident during the past year, were assessed at mean age 33 using the Non-Patient Version of the Structured Clinical Interview for DSM-IV (SCID-IV-NP; First, Spitzer, Gibbon, & Williams, 1995a). The SCID-IV-NP was administered, via telephone, by mental health professionals with a master's or doctorate degree in social work or clinical psychology and ≥ 10 years of experience in the administration of semi-structured psychiatric research interviews. Research has supported the validity of telephone-administered structured clinical interviews in the assessment of Axis I and II psychiatric disorders (Crawford et al., 2005; Kanost, 1997; Lavan & Johnson, 2002; Potts, Daniels, Burnam, & Wells, 1990; Rohde, Lewinsohn, & Seeley, 1997; Serman, Johnson, Geller, Kanost, & Zacharapoulos, 2002; Wells, Burnam, Leake, & Robins, 1988).

Personality disorders were assessed with the Structured Clinical Interview for

DSM-IV Personality Disorders (SCID-II; First et al., 1995a), a two-stage diagnostic system that includes a screening questionnaire and a semi-structured clinical interview. The self-report SCID-II screening questionnaire was completed prior to administration of the SCID-II clinical interview. During the SCID-II interview, which was administered by telephone, clinicians asked follow-up questions to determine whether affirmative responses on the questionnaire indicated the presence of personality disorder symptoms. DSM-IV Cluster A (paranoid, schizoid, schizotypal), Cluster B (antisocial, borderline, histrionic, narcissistic), and Cluster C (avoidant, dependent, obsessive-compulsive) personality disorders were assessed, as were depressive and passive-aggressive personality disorders. Research has also supported the reliability and validity of the SCID-II screening questionnaire and clinical interview (Ekselius et al., 1994; First et al., 1995b; Jacobsberg, Perry, & Frances, et al., 1995; Nussbaum & Rogers, 1992; Ouimette & Klein, 1995). Ouimette and Klein (1995) reported that scores on the SCID-II screening questionnaire were stable over a ten-week period in a nonclinical sample, and Jacobsberg, Perry, and Frances (1995) reported that the median false negative rate for the SCID-II questionnaire was only 1%. When SCID-II diagnoses were compared with diagnoses obtained using other structured interviews or the LEAD procedure, findings were comparable with those obtained with other widely-used structured clinical interviews (O'Boyle & Self, 1990; Oldham et al., 1992; Skodol et al., 1991). Research has supported the validity of the SCID-II, administered by clinicians, in telephone interviews (Crawford et al., 2005; Kanost, 1997; Lavan & Johnson, 2002; Serman, Johnson, Geller, Kanost, & Zacharopoulos, 2002).

Assessment of Child Rearing Behavior

The parental interview included 33 items assessing parental behaviors that, when present (e.g., inconsistent parental discipline), or when absent (e.g., low parental affection),

have been found to be indicative of inadvisable or problematic parenting, based on previous research (e.g., Johnson et al., 2001). These items were adapted from the Disorganizing Poverty Interview (Kogan et al., 1977) and other validated measures of child rearing behavior (Avgar, Bronfenbrenner, & Henderson, 1977; Schaefer, 1965). The items used to assess child rearing behavior in the present study, and their response formats, are listed in the Appendix. Because different response formats were used to assess different types of child rearing behavior, each item score was transformed to a *z*-score with a mean of 0.0 and a standard deviation of 1.0. To compute a total score for each type of child rearing behavior, the *z*-scores for each child rearing item were, in turn, summed and transformed to *z*-scores with a mean of 0.0 and a standard deviation of 1.0. Child Rearing behaviors were identified as being potentially problematic if they were ≥ 1 standard deviations from the sample mean at the negative end of the scale (e.g., *low* parental communication with the child).

Overall, the 33 items assessing child rearing behavior demonstrated acceptable internal consistency in the present study (Cronbach's alpha (α) = .79). Alpha coefficients for specific types of child rearing behavior tended to be somewhat lower: parental affection toward the child (2 items; α = .61), parental assistance to the child (4 items; α = .62), parental communication with the child (3 items; α = .64), parental control of the child (3 items; α = .64), parental disciplinary consistency (2 items; α = .44), parental physical punishment (1 item), parental possessiveness toward the child (2 items; α = .59), parental praise and encouragement of the child (2 items; α = .81), parental rejection of the child (1 item), parental supervision of the child (8 items; α = .49), parental time spent with the child (4 items; α = .74). Previous research has supported the validity of the items that were used in the present study to assess child rearing behavior (Brook, Whiteman, Gordon, & Brook, 1984; Cohen & Brook, 1987; Cohen & Cohen, 1996; Johnson et al., 2000; 2001; 2002; Kogan, et al., 1977; Wagner & Cohen, 1994).

Data Analysis

Analyses of contingency tables were conducted to investigate associations of gender and parental psychiatric disorders with child rearing behavior. Logistic regression analyses were conducted to investigate whether these associations were significant after controlling for age, sex, and co-occurring parental disorders. A composite index of problematic parental behavior was computed by summing the number of specific types of problematic child rearing behavior that were reported by each parent. Multiple and logistic regression analyses were conducted to investigate whether parental psychiatric disorders were associated with the composite index of problematic child rearing behavior.

RESULTS

Associations of Parental and Offspring Gender with Problematic Child Rearing Behavior

Low parental affection toward, assistance to, communication with, supervision of, and time spent with the child were significantly more prevalent among the paternal respondents than among the maternal respondents. These associations remained significant when offspring gender and parental psychiatric disorders were controlled (Table 1). The female offspring were significantly more likely than the male offspring to experience low parental assistance when parental gender and psychiatric disorders were controlled (Adjusted Odds Ratio = 0.44; 95% Confidence Interval: 0.25–0.78).

Associations of Parental Psychiatric Disorders with Specific Child Rearing Behaviors

Parental anxiety disorders were associated with high parental possessiveness, low parental affection, and low parental assistance, in bivariate analyses, when the covariates were not controlled. The associa-

tion between parental anxiety disorders and high parental possessiveness was statistically significant ($p < .05$) when parental gender, offspring gender, and co-occurring parental disorders were controlled (Adjusted Odds Ratio = 2.44; 95% Confidence Interval: 1.06–5.62). Bivariate analyses indicated that parental depressive disorders were associated with low parental affection, low parental assistance, and low parental time with the child. However, none of these associations remained significant when parental gender, offspring gender, and co-occurring parental disorders were controlled. Parental substance use disorders were associated, in bivariate analyses, with low parental affection, communication, and time spent with the child, but none of the associations between parental substance use disorders and child rearing behaviors were significant when parental gender, offspring gender, and co-occurring parental disorders were controlled.

Parental personality disorders were associated, in bivariate analyses, with high parental possessiveness and rejection, inconsistent discipline, and low parental affection, assistance, communication, praise/encouragement, supervision, and time spent with the child. The associations of parental personality disorders with high parental possessiveness, inconsistent parental discipline, low parental communication, and low parental praise and encouragement remained statistically significant ($p < .05$) when parental gender, offspring gender, and co-occurring parental disorders were controlled statistically (Table 2).

Associations of Parental Psychiatric Disorders with Composite Index of Child Rearing Behavior

Findings regarding the associations of parental anxiety, depressive, substance use, and personality disorders with the total number of problematic parenting behaviors reported by the parents are presented in Figure 1. Parental anxiety ($r = .14$; $p = .007$), depressive ($r = .12$; $p = .015$), and substance use ($r = .17$; $p = .001$) disorders were associated with the composite index of problematic child rear-

TABLE 1. Association of Parent Gender with Child Rearing Behavior (N = 377).

Child Rearing Behavior	Prevalence of Child Rearing Behavior among		Fathers% (n)	Bivariate Odds Ratio (95% CI)	Adjusted Odds Ratio ^a (95% CI)
	Mothers% (n)	Fathers% (n)			
Harsh Physical Punishment	11.2% (25 of 224)	12.4% (19 of 153)		1.22 (0.64-2.33)	1.12 (0.60-2.13)
High Parental Control of Child	14.3% (32 of 224)	15.7% (24 of 153)		1.21 (0.67-2.16)	1.12 (0.63-1.98)
High Parental Possessiveness toward Child	20.1% (45 of 224)	15.7% (24 of 153)		0.76 (0.44-1.34)	0.74 (0.43-1.28)
High Parental Rejection of Child	16.5% (37 of 224)	17.0% (26 of 153)		1.10 (0.62-1.95)	1.03 (0.60-1.79)
Inconsistent Parental Discipline	17.0% (38 of 224)	17.0% (26 of 153)		1.04 (0.59-1.83)	1.00 (0.58-1.73)
Low Parental Affection toward Child	17.4% (39 of 224)	26.8% (41 of 153)		2.26 (1.29-3.96)	1.74 (1.06-2.97)
Low Parental Assistance to Child	14.7% (33 of 224)	26.8% (41 of 153)		2.40 (1.39-4.15)	2.12 (1.27-3.54)
Low Parental Communication with Child	9.4% (21 of 224)	25.5% (39 of 153)		3.57 (1.97-6.48)	3.31 (1.86-5.89)
Low Parental Praise and Encouragement of Child	12.5% (28 of 224)	17.6% (27 of 153)		1.66 (0.91-3.02)	1.50 (0.84-2.66)
Low Parental Supervision of Child	15.2% (34 of 224)	24.2% (37 of 153)		2.25 (1.28-3.96)	1.78 (1.06-3.00)
Low Parental Time Spent with Child	8.5% (19 of 224)	26.1% (40 of 153)		4.54 (2.42-8.53)	3.82 (2.11-6.91)

Note. ^aControlling parental & offspring age, offspring gender, parental psychiatric disorder. Significant associations ($p < .05$) indicated in bold print. When the odds ratio is > 1 , as in the present tables, the adjusted odds ratio is in most case smaller in magnitude than the bivariate odds ratio.

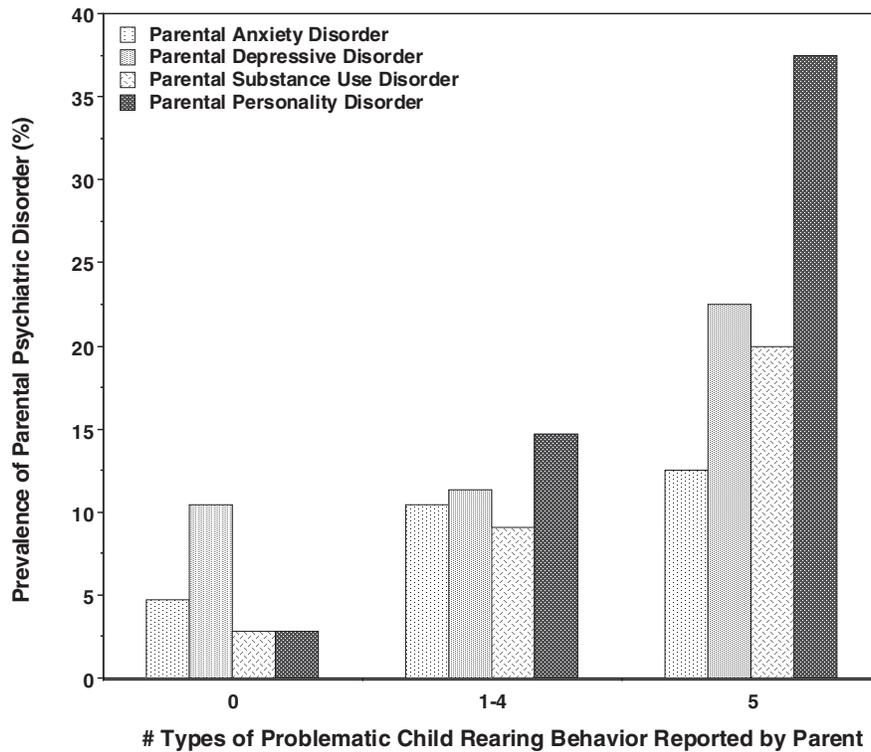


FIGURE 1. Association of Parental Anxiety, Depressive, Substance Use, and Personality Disorders with Problematic Child Rearing Behaviors.

ing behavior in bivariate analyses, but these associations did not remain significant when parental and offspring age, sex, and co-occurring parental psychiatric disorders were controlled statistically. Parental personality disorders were significantly associated with the number of problematic child rearing behaviors both before ($r = .32$; $p < .001$), and after (*partial* $r = .26$; $p < .001$) the covariates were controlled.

Parents with personality disorders were more than three times as likely as those without personality disorders to report having engaged in ≥ 5 types of problematic child rearing behavior (Adjusted Odds Ratio = 3.85; 95% Confidence Interval: 1.63–9.10). Parents with personality disorders reported a significantly greater number of problematic child rearing behaviors (*Mean* = 3.33; *SD* = 2.09) than did parents without personality disorders (*Mean* = 1.61; *SD* = 1.68; $F = 24.65$; $df = 8, 368$; $p <$

.001). The total number of parental personality disorders that were identified as being present was significantly correlated with the composite index of problematic parenting behavior ($r = 0.27$; $p < .001$).

The association between parental personality disorder and the composite index of problematic parenting behavior was not significantly moderated by the presence of a co-occurring parental anxiety, depressive, or substance use disorder (Figure 2). The statistical interaction of parental personality disorders and Axis I disorders was not significantly associated with the composite index of problematic parenting behavior. Among the 296 parents who did not have an anxiety, depressive, or substance use disorder, those with personality disorders were significantly more likely than those without personality disorders to report ≥ 5 types of problematic child rearing behavior (Adjusted Odds Ratio = 5.13; 95% Confidence

TABLE 2. Association of Parental Personality Disorder with Child Rearing Behavior (N = 377).

Child Rearing Behavior	Prevalence of Child Rearing Behavior among Parents				Adjusted Odds Ratio ^a (95% CI)
	Without Personality Disorder % (n)	With Personality Disorder % (n)	Bivariate Odds Ratio (95% CI)	Adjusted Odds Ratio ^a (95% CI)	
Harsh Physical Punishment	10.8% (35 of 325)	17.3% (9 of 52)	1.73 (0.78–3.86)	2.10 (0.83–5.26)	
High Parental Control of Child	13.8% (45 of 325)	21.2% (11 of 52)	1.67 (0.80–3.49)	1.80 (0.79–4.13)	
High Parental Possessiveness toward Child	16.0% (52 of 325)	32.7% (17 of 52)	2.55 (1.33–4.89)	2.35 (1.12–4.94)	
High Parental Rejection of Child	14.5% (47 of 325)	30.8% (16 of 52)	2.63 (1.35–5.11)	1.89 (0.89–4.05)	
Inconsistent Parental Discipline	13.5% (44 of 325)	38.5% (20 of 52)	3.99 (2.09–7.59)	3.98 (1.88–8.45)	
Low Parental Affection toward Child	18.2% (59 of 325)	40.4% (21 of 52)	3.05 (1.64–5.69)	1.85 (0.88–3.86)	
Low Parental Assistance to Child	17.2% (56 of 325)	34.6% (18 of 52)	2.54 (1.34–4.82)	1.93 (0.91–4.09)	
Low Parental Communication with Child	13.8% (45 of 325)	28.8% (15 of 52)	2.52 (1.28–4.97)	2.38 (1.08–5.25)	
Low Parental Praise and Encouragement of Child	12.0% (39 of 325)	30.8% (16 of 52)	3.25 (1.66–6.42)	2.29 (1.05–4.97)	
Low Parental Supervision of Child	17.2% (56 of 325)	28.8% (15 of 52)	1.95 (1.00–3.79)	1.27 (0.58–2.78)	
Low Parental Time Spent with Child	13.5% (44 of 325)	28.8% (15 of 52)	2.58 (1.31–5.10)	2.08 (0.93–4.66)	

Note. ^aControlling for parent and offspring age and sex and co-occurring parental disorders. Significant associations ($p < .05$) indicated in **bold print**.

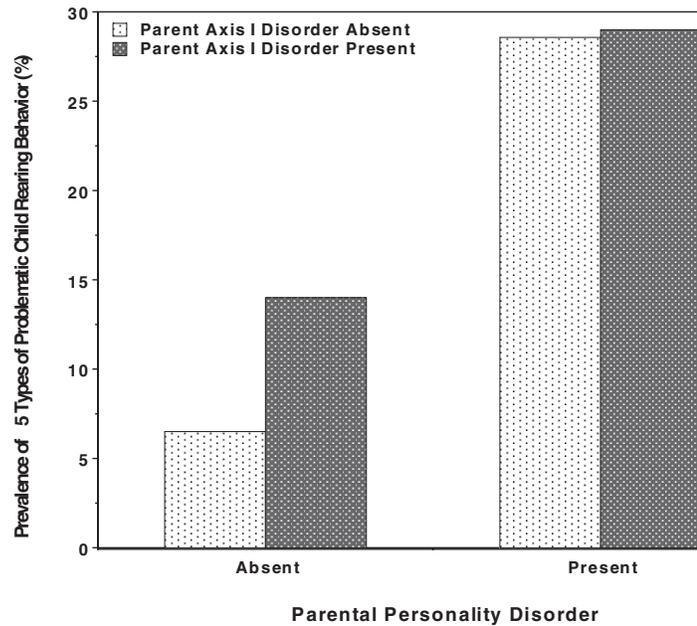


FIGURE 2. Association of Parental Personality Disorders and Axis I Disorders with Composite Index of Problematic Child Rearing Behavior.

Interval: 1.58–16.70). The association between parental personality disorder and child rearing behavior among the 81 parents with co-occurring parental anxiety, depressive, or substance use disorders was not statistically significant (Adjusted Odds Ratio = 2.88; 95% Confidence Interval: 0.82–10.11). Among the parents with ($n = 52$) and without ($n = 325$) personality disorders, those with anxiety, depressive, or substance use disorders were not significantly more likely than those without anxiety, depressive, or substance use disorders to report engaging in ≥ 5 types of problematic child rearing behavior.

Findings regarding the associations between specific types of parental personality disorder symptoms and the composite index of problematic child rearing behavior are presented in Figure 3. There were significant associations between parental DSM-IV Cluster A (paranoid, schizotypal), B (antisocial, histrionic, narcissistic), and C (avoidant, dependent) personality disorder symptoms and the composite problematic parenting index. Specifically, parental antisocial ($F = 16.96$; $df = 5, 371$; $p < .0001$), avoidant ($F = 5.78$; $df = 5,$

371 ; $p = .02$), dependent ($F = 8.13$; $df = 5, 371$; $p = .005$), histrionic ($F = 9.34$; $df = 5, 371$; $p = .002$), narcissistic ($F = 4.82$; $df = 5, 371$; $p = .03$), paranoid ($F = 13.01$; $df = 5, 371$; $p = .0004$), passive-aggressive ($F = 5.01$; $df = 5, 371$; $p = .007$), and schizotypal ($F = 15.49$; $df = 5, 371$; $p = .0001$) personality disorder symptoms were significantly associated with the total number of problematic child rearing behaviors reported by the parents when parental and offspring age, sex, and the presence of a parental anxiety, depressive, or substance use disorder was controlled statistically.

DISCUSSION

The present findings suggest that parental personality disorders may be associated with problematic child rearing behaviors, including parental possessiveness, inconsistent parental discipline, low communication with the child, and low praise and encouragement of the child. Our findings suggest that these associations may not be attributable to parental or offspring gender, or co-occurring pa-

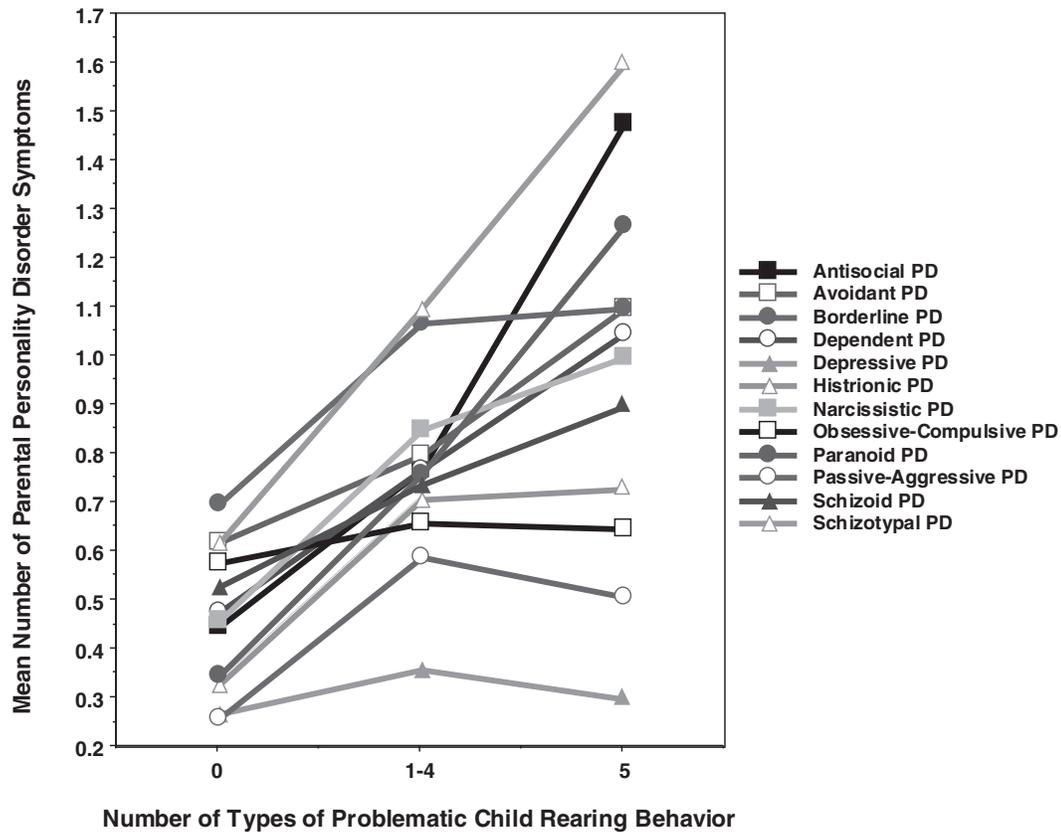


FIGURE 3. Association of Specific Types of Parental Personality Disorder Symptoms with Composite Index of Problematic Child Rearing Behavior.

rental anxiety, depressive, or substance use disorders. Moreover, the present findings suggest that parental personality disorders may be associated with a high overall level of problematic parenting behavior. Our findings suggest that parents with personality disorders may be more than three times as likely as those without personality disorders to engage in several different kinds of problematic child rearing behavior. The present findings suggest that antisocial, avoidant, dependent, histrionic, narcissistic, paranoid, passive-aggressive, and schizotypal personality disorder symptoms may all be associated with problematic child rearing behavior.

The present findings are particularly striking and noteworthy because the associations of parental personality disorders with

child rearing behavior remained significant after co-occurring parental anxiety, depressive, and substance use disorders were controlled statistically. This suggests that parents with personality disorders may be more likely than those without personality disorders to engage in problematic child rearing behavior, whether or not they have co-occurring anxiety, depressive, or substance use disorders. Our findings contribute to a growing body of research (e.g., Hans et al., 1999; Johnson et al., 2001; Johnson, Cohen, Kasen, & Brook, in press; Mills et al., 1985) consistent with the hypothesis that parental personality disorders may have particularly important implications with respect to risk for problematic child rearing behavior (Berg-Nielsen et al., 2002). It will be of interest for ongoing and future

multi-generation longitudinal studies to investigate the long-term association between parental personality disorder, parenting behavior, and risk for development of offspring psychiatric symptoms and disorders.

Although parental anxiety, depressive, and substance use disorders were associated with problematic child rearing behavior in bivariate analyses, only one of these associations remained significant when parent and offspring gender and co-occurring parental disorders were controlled statistically. Moreover, the association of parental personality disorder with problematic child rearing was neither moderated by, nor attributable to co-occurring parental anxiety, depressive, or substance use disorders. This set of findings may have important clinical and public health implications. If parents with personality disorders are particularly likely to engage in problematic child rearing behavior, it might be advisable to assess and treat parental personality disorders, and to provide targeted interventions, designed to improve parenting skills, to parents with personality disorders. Research has suggested that providing targeted services to high-risk families may help parents to develop more effective child rearing skills (Irvine et al., 1999; Redmond et al., 1999; Spoth et al., 1999). It will be of interest for future studies to examine whether providing mental health services to parents with personality disorders may contribute to improved parenting behavior and offspring outcomes.

It is of interest that, in the present study, the associations of parental personality disorders with child rearing behavior remained significant after parental and offspring gender were controlled statistically. This finding suggests that both mothers and fathers with personality disorders may be more likely than those without personality disorders to engage in problematic child rearing behavior with their sons and daughters. Our review of the

literature indicates that this is the first community-based epidemiological study to provide systematic data regarding the associations of clinician-assessed maternal and paternal personality disorders and co-occurring parental disorders with child rearing behavior.

The limitations of the present study require consideration. Although a wide range of child rearing behaviors were assessed in the present study, using items from validated parenting measures, relatively few items were used to assess each type of child rearing behavior. Some of the inter-item consistency (i.e., alpha) coefficients were modest, and two types of child rearing behavior were assessed using a single item (see Appendix). However, the composite index of child rearing behavior demonstrated satisfactory internal consistency, enhancing confidence in the overall findings regarding parental disorders and problematic child rearing behavior. It will be of particular interest for future studies to investigate the associations between specific types of parental disorders and child rearing behaviors in a detailed and systematic manner. In addition, it will be of interest for future research to investigate the effects that the combined effects of maternal and paternal personality disorder may have on offspring mental health. It is also important to note that the cross-sectional data in this report do not permit causal inferences to be made. Although our findings are consistent with the hypothesis that parental personality disorder is associated with problematic child rearing behavior, it is possible that parental personality disorder and problematic child rearing behavior share common risk factors. This alternative hypothesis merits further investigation. Nonetheless, the cross-sectional findings in this report are of value in clarifying our understanding of the relative magnitudes of the associations of parental anxiety, depressive, personality, and substance use disorders with problematic child rearing behavior.

**APPENDIX. ITEMS ADMINISTERED TO ASSESS PARENTS'
CHILD REARING BEHAVIOR**

Child Rearing Behavior	Interview Item	Response Format
Physical Punishment	"I hit or smack my child if he/she does something I do not like."	"never" (1) to "often" (5)
Parental Control of Child	"I teach my child to have unquestioning loyalty to me."	"never" (1) to "often" (5)
	"I expect my child not to question my authority."	"never" (1) to "often" (5)
	"I expect my child to do what I say, no matter what."	"never" (1) to "often" (5)
Parental Possessiveness toward Child	"I worry about my child when I'm not around him/her."	"not at all like me" (1) to "exactly like me" (5)
	"I sometimes feel that I am the only one who can take really good care of my child."	"not at all like me" (1) to "exactly like me" (5)
Parental Rejection of Child	"I sometimes reject my child if he/she does something I do not like."	"never" (1) to "often" (5)
Consistency of Parental Discipline	"It sometimes depends on my mood how strict I am with my child."	"not at all like me" (1) to "exactly like me" (5)
	"I often change the rules or routines my child is supposed to follow."	"not at all like me" (1) to "exactly like me" (5)
Parental Affection toward Child	"I frequently show my love for my child."	"not at all like me" (1) to "exactly like me" (5)
	"I always hug and kiss my child good night."	"not at all like me" (1) to "exactly like me" (5)
Parental Assistance to Child	"I give my child a lot of care and attention."	"not at all like me" (1) to "exactly like me" (5)
	"I often give up something to get something for my child."	"not at all like me" (1) to "exactly like me" (5)
	"My child can count on me to take care of his/her needs in all situations."	"never" (1) to "often" (5)
	"I help my child with things if he/she can't do them."	"never" (1) to "often" (5)
Parental Communication with Child	"I like to talk to my child and to be with him/her much of the time."	"not at all like me" (1) to "exactly like me" (5)
	"I really try to understand how my child sees things."	"not at all like me" (1) to "exactly like me" (5)
	"I do not mind if my child tells me his/her ideas are better than mine."	"not at all like me" (1) to "exactly like me" (5)
Parental Praise and Encouragement of Child	"I often praise my child."	"not at all like me" (1) to "exactly like me" (5)
	"I frequently tell my child he/she makes me happy."	"not at all like me" (1) to "exactly like me" (5)
Parental Supervision of Child	"Do you have rules for your child about homework?"	"yes" (1) to "no" (2)
	"Do you have rules for your child about time spent watching TV?"	"yes" (1) to "no" (2)
	"Do you have rules for your child about time for being in at night?"	"yes" (1) to "no" (2)
	"Do you have rules for your child about not hanging around with certain kids?"	"yes" (1) to "no" (2)
	"Do you have rules for your child about not smoking?"	"yes" (1) to "no" (2)
	"Do you have rules for your child about not drinking alcohol or using drugs?"	"yes" (1) to "no" (2)
	"Do you have rules for your child about telling you their whereabouts when they are away from home?"	"yes" (1) to "no" (2)
	"Do you have rules for your child about not watching violent TV?"	"yes" (1) to "no" (2)
Parental Time Spent with Child	"I spend almost all of my free time with my children."	"not at all like me" (1) to "exactly like me" (5)
	"I am always available when my child needs me."	"not at all like me" (1) to "exactly like me" (5)
	"About how many hours a day on the average do you spend with your child? Include all activities."	"<1 hour a day" (1) to "≥8 hours a day" (5)
	"About how many hours a day on the average do you spend taking care of your child's physical needs? This would include such tasks as shopping for clothes, supervising his/her personal hygiene, preparing food, and the like."	"<1 hour a day" (1) to "≥ 8 hours a day" (5)

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