

Published in final edited form as:

J Am Acad Child Adolesc Psychiatry. 2011 May ; 50(5): 441–450. doi:10.1016/j.jaac.2011.02.002.

Screening parents during child evaluations: exploring parent and child psychopathology in the same clinic Running head: Screening Parents at Child Evaluations

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Abstract

Objective—Children of depressed and/or anxious parents are at increased risk for developing psychiatric disorders. Little research has focused on screening parents bringing their children for psychiatric evaluation, and few studies have included fathers or Hispanic children. This study aimed to: 1) identify current symptom rates in parents bringing their children for evaluation and 2) determine if parental symptoms were associated with children's symptoms, diagnoses, and functioning.

Method—The sample included 801 mothers, 182 fathers, and 848 children (ages 6–18). The majority were Hispanic (55.66%) who attended a child and adolescent psychiatric evaluation service. Parent and child symptoms were assessed via parental reports. Children's diagnoses and functioning were determined by clinicians. Multiple regression analyses were used to determine if severity of parental symptoms was associated with clinical child variables adjusting for child and parent demographic variables.

Results—18.80% of mothers and 18.42% of fathers reported elevated internalizing symptoms. Maternal symptoms were significantly associated with problems in children's functioning and children's anxiety, depression and oppositional/conduct diagnoses; but not attention deficit-hyperactivity disorder. Adjusting for parental and child demographics had a reduction on the effect of maternal symptoms on child depression. Paternal symptoms and functioning were positively associated with children's diagnoses, but smaller and not significant. Both parents' symptoms were significantly associated with children's internalizing and externalizing symptoms. However, these significant effects were not moderated by marital status or child ethnicity.

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Disclosure: Dr. Shen, Ms. Heleniak, Ms. Hollin, Ms. Reyes, and Mr. Woodruff report no biomedical financial interests or potential conflicts of interest.

Conclusions—This study highlights the importance of screening parents when their children receive a psychiatric evaluation. It supports the development of mental health services that addresses psychiatric needs of the entire family within one clinical setting.

Keywords

parent screening; child psychiatric evaluation

Children and adolescents whose parents suffer from depression and anxiety are at high risk for developing their own psychiatric symptoms and disorders. Top-down studies assessing offspring of parents with lifetime symptoms as compared to non-symptomatic parents^{1–3} and bottom-up studies comparing first-degree relatives of psychiatrically ill and non-ill children^{4–6} have demonstrated significantly higher rates of psychopathology in symptomatic children and parents, respectively. However, few studies assessing the relationship between parent and child psychopathology have specifically targeted families in which either the parent or child is experiencing current psychiatric symptoms for which they are seeking treatment.

Pilowsky et al.⁷ examined children of mothers currently experiencing a major depressive disorder and found that approximately 34% of children met criteria for depressive, anxiety, or disruptive behavior disorders. Beidel and Turner⁸ also reported that 35% of children of parents with a current anxiety disorder and 38% of children of parents with a current depressive disorder met criteria for a current psychiatric disorder. This percentage increased to 45% when parents had both disorders. Identifying current parental symptoms is important because parental psychopathology has been found to lead to poorer treatment response in their children^{9–11} and increased psychopathology later in their lives.^{3, 12} Recent studies suggest that successful treatment of depressed mothers improves child outcome.^{13–15}

Given the relationship between parent and child psychopathology, the clinical evaluation should include screening mothers and fathers for symptoms of depression and anxiety at the time of their child's evaluation. It gives the clinician an opportunity to engage parents in a dialogue about the relationship between their symptoms and their child's treatment outcomes, the potential benefits of seeking their own treatment, and referral options. However, it is not standard practice to screen parents of children undergoing psychiatric evaluation. Only two studies have screened mothers bringing their children to a child mental health clinic for evaluation. Ferro et al.¹⁶ examined psychiatric problems in 117 mothers bringing their children for the evaluation or treatment of depression. Based on a modified screener of the PRIME-MD Patient Problem Questionnaire, 31% of these mothers endorsed symptoms suggesting current psychiatric diagnosis, while 43% reported subsyndromal symptoms. Swartz et al.¹⁷ assessed 222 mothers who brought their children for evaluation and found that 61% met DSM-IV criteria for an axis I disorder, most commonly depressive and anxiety disorders. This was the first paper to assess the relationship between maternal and child psychopathology at the time of a child's psychiatric evaluation. Children of mothers with a diagnosis were significantly more likely to present with a current axis I disorder and more diagnoses than children of healthy mothers.

While these two studies demonstrate the importance of screening mothers bringing children for psychiatric evaluation, their sample sizes were small and did not include fathers. Few clinical studies have assessed paternal psychopathology. Cassano et al.¹⁸ examined 702 articles on clinical child and adolescent research that included parental participation to determine the frequency of fathers' inclusion. Overall, 55% of the studies included only mothers whereas only 1% focused solely on the fathers. When both parents were included (45% of studies), researchers rarely conducted separate analyses for each gender, making it

difficult to draw parent-specific conclusions. In addition, at least 94% of studies did not include research on Hispanics. It is important to address the gap in parent-child research for Hispanic families because little evidence is available regarding effective treatment of Hispanic parents and children, who are the largest and fastest growing minority in the United States.¹⁹

The goals of the present study were to: 1) identify the current rates of parental symptoms in families coming to New York State Psychiatric Institute (NYSPI)/Columbia University's (CU) Child and Adolescent Psychiatric Evaluation Service (CAPES), 2) determine if there was a relationship between parental symptoms and their reports of their children's symptoms, and 3) determine if severity of parental symptoms was associated with children's diagnoses and functioning. This study was the first to screen fathers bringing their children for psychiatric evaluation and has the largest sample size of parents screened during child psychiatric evaluation, more than half of whom were Hispanic. We expected elevated rates of parental depressive and anxious symptoms in this sample because children with psychopathology often have parents with psychiatric disorders themselves. We expected parents with elevated symptoms of depression and anxiety would report significantly more psychiatric symptoms and functional impairment in their children than parents without elevated symptoms. Children of parents with elevated symptoms would also be significantly more likely to have psychiatric diagnoses. In addition, we explored if results differed among Hispanic and non-Hispanic and married and single parents. Marital status was examined as a moderator because the literature suggests single mothers at lower socioeconomic status are more likely to be depressed and/or have anxiety disorders, while their children are more likely to have symptoms and functional impairment.^{20, 21}

METHOD

Study data come from the CAPES database. CAPES provides free expert consultation, evaluation, and referrals for children and adolescents suffering from a range of social, emotional, and behavioral difficulties. CAPES functions as part of the Advanced Center for Intervention and Services Research (ACISR) for Pediatric Psychiatric Disorders at NYSP/ CU and serves as a liaison between families and various research, training, and clinical programs available.

The sample includes 6–18 year-old youth evaluated between June 10, 2002 and March 27, 2008. The majority of families included in the study was referred by pediatricians and reside in New York City. Prior to evaluation, one parent (or legal guardian) completed a telephone interview assessing the presence of the child's psychiatric symptoms. This interview was designed to exclude children with a life-threatening medical illness, active psychosis, active suicidality, mental retardation, pervasive developmental disorder, or physical/sexual abuse.

To be included in analysis, children needed to have at least one parent complete the Brief Symptom Inventory 18 (BSI)²² and the Child Behavior Checklist (CBCL).²³ Children with a primary diagnosis of psychotic disorder, bipolar disorder, trichotillomania, mental retardation or pervasive developmental disorder were excluded because they were not typically included in CAPES.

Of 1,193 children evaluated, 345 were excluded for the following reasons: 1) they were younger than six ($n = 206$), 2) they did not have a parent who completed both the BSI and CBCL ($n = 87$), or 3) they met criteria for an excluded disorder ($n = 52$). Overall, 848 children and adolescents (M age = 10.43, $SD = 3.19$) met criteria for this study, and 31.49% ($N = 267$) were female. The sample included a total of 801 mothers (M age = 38.87 $SD = 7.97$) and 182 fathers (M age = 42.95, $SD = 8.56$). Of these, 135 were couples.

Measures

Demographic Form—The Demographic Form is a 23-item parent-report measure created by ACISR to collect biographical information about parents and children. Information regarding child age, gender, race, ethnicity, education, and medical history is collected. Parents also provide information concerning their age, gender, race, ethnicity, marital, education, and occupational status.

Child Behavior Checklist for Ages 6–18 (CBCL).²³—The CBCL is a measure that allows parents to rate their children's behavior and social-emotional functioning. The CBCL is normed separately for boys and girls, and consists of 118 items. Externalizing and internalizing factor T scores generated from fathers' and mothers' responses were analyzed.

Brief Symptom Inventory-18 (BSI).²²—The BSI is a self-report measure designed to assess psychological distress in medical and community samples. The BSI consists of 18 items which describe symptoms related to depression, anxiety, and somatization. A Global Severity Index of distress is derived by totaling the three subscales. For each item, parents were instructed to report on a 5-point Likert scale how much they were distressed by particular problems during the past 7 days (0 = not at all to 4 = extremely). Higher scores indicate higher levels of symptom severity.

Diagnostic interview—A clinician semi-structured diagnostic interview administered separately to the parent and child, based on the Diagnostic Interview Schedule for Children assessed DSM-IV TR criteria for anxiety, mood, oppositional defiant and conduct, attention deficit hyperactivity, eating, pervasive developmental, and substance use disorders. Clinicians asked about each potential symptom and circled “yes” or “no” on an interview form. Developmental, educational, and treatment histories were obtained. Interviews took approximately 90 minutes to complete with parents and 45–60 minutes with children. Often other sources of information were available (teachers, referring pediatrician). Axis I diagnoses were grouped into four categories: Depression (any Major Depressive Disorder without psychotic features, Dysthymic Disorder, and Depressive Disorder Not Otherwise Specified), Anxiety (Panic Disorder with or without Agoraphobia, Generalized Anxiety Disorder, Separation Anxiety Disorder, Social Phobia, Specific Phobia, Anxiety Not Otherwise Specified, Phobia Unspecified, Obsessive Compulsive Disorder, Somatization Disorder, Post Traumatic Stress Disorder and Selective Mutism), Oppositional/Conduct Disorder (Oppositional Defiant Disorder, any Conduct Disorder, and Disruptive Behavior Disorder Not Otherwise Specified) and ADHD (any type).

Children's Global Assessment Scale (CGAS).²⁴—The CGAS, an adaptation of the Global Assessment Scale for adults, is a 100-point scale measuring psychological, social, and school functioning for children ages 6–17. Scores 70 or below are associated with significant functional impairment.

Procedure

Procedures were approved by NYSPI's institutional review board. Written informed consent was obtained from a parent and informed consent or assent was obtained from the child/adolescent during the initial visit. Parents and children were instructed to complete self-report questionnaires. A master's level psychology student or post-doctoral clinical fellow in psychology conducted the semi-structured diagnostic interview. Clinicians were supervised by a licensed psychologist and child psychiatrist. Families then received feedback from the clinician and psychologist and/or psychiatrist. A bilingual translator served as an interpreter for Spanish-speaking parents during the parent interview. Spanish parent self-report measures were available.

Each evaluation lasted 3–4 hours and took place over 1–2 visits, typically within 2–3 weeks. Diagnostic consensus from a multidisciplinary team was obtained for each case. After consensus was reached, families were mailed a written report.

Data analysis

For descriptive purposes, demographic variables for mothers, fathers and children are presented. Prevalence for each child diagnosis is calculated by dividing the number of positive cases by the total number of cases assessed and presented as a percentage. To examine “accuracy” of parents' reports based on the frequency of their own psychiatric symptoms, relationships between parental reports of children's internalizing and externalizing symptoms on the CBCL and clinician's reports of children's internalizing and externalizing diagnoses are assessed.

The relationship of overall parental BSI scores to continuous child outcomes (CBCL, CGAS) are assessed using linear regression. When child diagnosis is used as the outcome, the effects of BSI scores are estimated using logistic regression. These models are estimated both with and without adjustments for demographic variables (child age, gender, race/ethnicity; parent age, marital status, occupation). Normality is tested for continuous predictors and outcomes (Shapiro-Wilk test statistics range from 0.85–0.99 in mothers and 0.80–0.99 in fathers). All continuous predictors and outcomes are standardized, and standardized coefficients/odd ratios are estimated.

No child demographic data are missing. Missing data on parental demographic characteristics are handled through multiple imputation. Multiple imputation with a Markov Chain Monte Carlo was used to impute missing continuous values. Multiple imputation without rounding was also used to impute categorical missing data. Five ‘completed’ datasets were created using a SAS procedure PROC MI. For each individual imputed dataset, linear regressions are carried out on continuous outcomes and logistic regression on the dichotomous outcome. Results of analyses across the five imputed datasets are combined via PROC MIANALYZE to generate final parameter estimates and their corrected standard errors.

To test the moderation effects of parental marital status on the relation of parent's BSI scores to CBCL scores, CGAS scores, or child's diagnosis, the interaction of parental marital status and BSI scores is also included in the corresponding models. Analyses are performed on mothers and fathers, respectively. Similar analyses are used to test the moderation effects of child ethnicity (Hispanic v. non-Hispanic).

All analyses were performed in SPSS v13.0 or SAS v9.0 with two-tailed 5% significance levels.

RESULTS

Demographic characteristics

Demographic information for parents and children is reported in Tables 1 and 2, respectively. Of 848 children and adolescents, 55.66% were Hispanic.

Children's diagnoses

Table 2 describes the percentage of children who received any internalizing (anxiety or depression) or externalizing diagnosis (ADHD, ODD, or CD). The percentage of children who fell into specific categories of diagnoses (i.e., ADHD, oppositional/conduct disorders, anxiety, or depression) is also reported in Table 2. As shown, the diagnostic group most

commonly represented in the sample was ADHD, followed by oppositional/conduct, anxiety, and depressive disorders, respectively.

Overall, 43.28% of children had diagnoses that fell into one of these diagnostic categories (4.95% depressive disorders only, 8.73% anxiety disorders only, 6.01% ODD/CD only, 23.58% ADHD only). Of those with comorbid disorders, 33.25% met criteria for two diagnostic categories (19.81% ADHD and ODD/CD, 4.48% ADHD and anxiety, 3.66% anxiety and depression, 2.00% anxiety and ODD/CD, 1.77% ADHD and depression, and 1.53% depression and ODD/CD), 4.49% met criteria for three diagnostic categories (most commonly anxiety, ODD/CD, and ADHD), and 0.47% met criteria for four diagnostic categories. Because we were assessing if severity of parental symptoms was associated with specific child diagnoses, we decided to include a child in a diagnostic category if they had *any* diagnosis that met that category's criteria.

Overall, 64.76% of the children met criteria for an externalizing diagnosis and 32.38% met criteria for an internalizing one, while 14.88% met criteria for both.

BSI and CBCL scores

Mean maternal and paternal BSI scores and CBCL scores are presented in Table 3. Overall, 801 mothers and 182 fathers completed the BSI. Mothers' mean BSI overall distress index score was 49.77 (SD=11.23) while fathers' was 49.37 (SD=9.47). The percentage who scored 1SD above the mean (above 60) was 18.80% for mothers and 18.42% for fathers. Mothers' reports of children's CBCL internalizing symptoms had a mean of 60.41 (SD=10.92). The mean for externalizing symptoms was 60.56 (SD=11.22). Father's mean score for CBCL internalizing symptoms was 58.18 (SD=10.75) and 58.44 (SD=10.89) for externalizing symptoms.

Parental reports on the CBCL internalizing scales were highly correlated with children's internalizing diagnoses when controlling for level of symptoms found on the BSI in both mothers' and fathers' reports (all p-values < 0.0001). The same was found for the relationships between parental reports on the CBCL externalizing scale and clinicians' reports of children's externalizing diagnosis (all p-values < 0.0001).

Relationship between parental BSI scores and CBCL scores

Table 4 represents the influence of maternal and paternal overall BSI scores on internalizing and externalizing CBCL scores. Findings indicate that independently, higher maternal and paternal overall BSI scores were significantly related to higher CBCL internalizing scores ($\beta = 0.41$, $p < 0.0001$ reported by mothers; $\beta = 0.33$, $p < 0.0001$ by fathers) and the strength of the association did not change after adjusting for child demographic (age, gender, ethnicity) and parental demographic variables (age, marital status, occupation). Higher maternal and paternal overall BSI scores were significantly associated with higher CBCL externalizing scores, the association being slightly stronger for mothers ($\beta = 0.32$, $p < 0.0001$ in mothers, $\beta = 0.20$, $p < 0.01$ in fathers). These associations remained significant when child and parental demographics variables were controlled.

Relationship between parental BSI scores and child global functioning

Linear regressions were carried out to assess the impact of parental BSI scores on children's C-GAS scores (see Table 4). Higher total maternal BSI scores were significantly associated with lower C-GAS scores. Results remained significant even after adjusting for parental and child demographics. The effect of total paternal BSI subset scores on C-GAS were not significant ($p = 0.06$).

Relationship between Parental BSI Scores and Child Diagnoses—To examine if overall parent BSI scores were associated with specific child internalizing/externalizing disorders and diagnostic categories, logistics regressions were conducted. Diagnostic groups were regressed one at a time on the overall BSI score. This procedure was conducted separately for maternal and paternal overall BSI scores (see Table 5).

Children with elevated overall maternal BSI scores were significantly more likely to be diagnosed with depression, anxiety, and oppositional/conduct disorders, but not ADHD. Adjusting for parental and child demographics has no effect of the relationship between overall maternal BSI and child anxiety or oppositional/conduct disorders. There is a substantial (36.7%) though statistically non-significant ($\chi^2 = 0.50$, $df=1$, $p=.048$) reduction in the effect of maternal BSI on child depression. It is worth noting, however, that this post-adjustment effect is similar in magnitude to the effect on anxiety, though slightly short of statistical significance at $p=.05$. Overall paternal BSI scores were shown to be positively associated with the same diagnostic categories, though the odds ratios were smaller and not significant.

Moderating effect of marital status and ethnicity—None of the interaction terms between parental BSI scores and marital status were significantly associated with CBCL scores, CGAS scores, or children's diagnoses. The interaction terms between parental BSI scores and ethnicity were also not significant for the above outcomes. Thus, moderating effects of marital status and ethnicity were not justified.

DISCUSSION

According to our results, greater maternal internalizing symptoms increased the likelihood of children receiving internalizing diagnoses. The magnitude of the effect adjusting for demographic variables is similar for child anxiety and depression, though in the latter case the 95% confidence interval encompasses 1.00. Swartz et al.¹⁷ found similar relationships between maternal and child internalizing symptoms. Maternal symptoms were also significantly associated with overall child functioning.

Greater maternal internalizing symptoms also significantly associated with children's oppositional/conduct disorder diagnoses, but not ADHD. Swartz et al.¹⁷ had not found a relationship between any maternal diagnoses and children's externalizing disorders. Unlike this study, they did not separate externalizing disorders into categories of oppositional/conduct disorders and ADHD. However, they did assess symptoms of inattention on the CBCL, and found no significant differences in reports of mothers with and without a diagnosis. The non-significant association between maternal symptoms and ADHD may be connected to biological underpinnings of this disorder rather than impaired parenting.²⁵ Nonetheless, teaching parenting skills may be important, as caregiver depression has been shown to interfere with children's adherence to ADHD medication.²⁶ The link we found between maternal symptoms and children's oppositional/conduct diagnoses may be related to poor parenting (e.g., parental inconsistency, poor quality of attachment), which has been strongly associated with child defiance.^{27, 28}

Like mothers, paternal symptoms were not associated with ADHD. The effects of paternal internalizing symptoms on child depression, anxiety, and oppositional/conduct disorders and functioning were similar to results found for mothers, but smaller. Fewer fathers in the sample may explain why these relationships did not reach significance. In contrast, clinician's reports may be more influenced by maternal reports of their children. Both parents symptoms were significantly associated with their reports of children's internalizing and externalizing problems. This may be due to parents' symptoms influencing their

interpretation of their children's problems. Although the impact of paternal symptoms on children's clinical status only approached significance, finding a pattern similar to mothers suggests that more effort should be made to obtain paternal input during child evaluations.

In this sample, rates of maternal overall internalizing symptoms were high. Approximately 19% of mothers endorsed "elevated" symptoms. Specifically, 19% endorsed elevated depression symptoms and 17% endorsed elevated anxiety. These symptom rates reflect similar diagnostic rates found in Ferro et al.¹⁶ and Swartz et al.¹⁷ Ferro et al. examined the same community assessed in this study and found that 14% of the mothers in their sample screened positive for Major Depressive Disorder, while 17% met criteria for Panic Disorder and Generalized Anxiety Disorder. Swartz et al. found even larger rates of depression (30%) in a rural community pediatric mental health clinic, suggesting the need for parental screening in many types of child settings.

This study was the first to examine depression and anxiety in fathers bringing their children in for psychiatric evaluation. The percentage of fathers screening positive was similar to mothers. Specifically, more than 18%, 23% and 20% of fathers endorsed elevated overall internalizing symptoms, depression, and anxiety scores, respectively. Similar rates among maternal and paternal internalizing symptoms are striking given that internalizing symptoms are typically reported more frequently in women. However the fathers screened had elected to attend the appointment (often with the mother), and may not accurately reflect the fathers of all children evaluated. As help-seeking behavior in men is consistently lower than in women,²⁹ fathers who did attend may have been more likely to endorse internalizing symptoms than men who did not participate. We used children's demographic information to look at differences between fathers who did and did not participate. The only difference was that fathers of Hispanic children were significantly less likely to participate than fathers of children from other ethnic categories.

Strengths of this study include having a large clinically referred sample and the inclusion of fathers and mothers. Additionally, more than half our sample is Hispanic, and there is little known about the relationship between parent and child psychopathology in this population. Our results regarding the relationship between parental symptoms and children's diagnoses, symptoms, and functioning did not differ between Hispanic and non-Hispanic families.

This study had several limitations. Our parent assessment was not clinically diagnostic but rather a self-report. However, symptoms measured on the BSI seemed just as related to more children's symptoms, functional impairment, and diagnoses as symptoms measured in diagnostic interviews used by Ferro et al.¹⁶ and Swartz et al.¹⁷ This suggests that current parental symptoms may be as detrimental to children's well-being as stable parental diagnoses. Vidair et al.³⁰ recently found few significant differences in treatment history, interest in help, and reports of children's problems between parents with major depression and subthreshold depression. These findings seem to indicate the importance of screening parents for even transient psychiatric symptoms in order to address current treatment needs of all family members. Furthermore, given limited resources, time, and training in formal diagnostic interviewing in community mental health clinics, utilizing a brief screen for parents at a child's evaluation ensures feasibility.

It would have been helpful to have a measure of parental attention problems, hyperactivity, and impulsivity that might directly relate to child ADHD. We also did not assess parental past or present treatment, which was infrequent in similar studies.^{16, 17} Proximal factors such as chronicity and severity of parental depression, marital problems, and parenting style have been found to play a role in the relationship between parental depression and child outcome.^{31–33} This information may be useful in determining links between parental

treatment and children's clinical status. There could also be a bidirectional relationship between parental symptoms and child psychopathology. Future research should conduct a comprehensive history of both parent and child to determine the chronology of parent and child symptoms. Finally, there is concern about parental overreporting of children's problems due to their own psychopathology.³⁴ To minimize this potential effect, we included clinician's reports of child diagnoses in our analyses. Parental reports of children's symptoms were highly correlated with clinicians' reports of children's diagnoses regardless of the level of parental symptomatology. However, clinician diagnosis is still influenced by parental perception of their children's symptoms and functioning.

Overall, this study highlights the feasibility of screening parents in addition to their children when they are brought in for psychiatric evaluation. Our results confirmed that a significant percentage of parents presenting with their children for a psychiatric evaluation are suffering from depressive and anxious symptoms themselves. This demonstrates the importance of addressing services needs in parents with elevated clinical symptoms. Unfortunately, the presence of parental psychopathology has serious implications for child treatment outcome. Garber and colleagues¹⁰ recently found that adolescents fared worse in treatment when their parent was presently depressed. It has been suggested that every child who has a parent with a serious affective disorder be screened.³⁵ Based on our findings, we advise that all parents be assessed at their child's psychiatric evaluation. Given limited resources and diagnostic training in real world clinics, a parent symptom screen is likely to be feasible.

Given the National Institute of Mental Health's priority to personalize treatment for individuals,³⁶ there is also a need for development of treatment paradigms for children whose parents have their own psychopathology. Initial evidence indicates that treating parental psychopathology alone is associated with child improvement.^{3, 13–15} Yet factors such as parental understanding of their symptoms and its effect on their children, ways to communicate with their child about their mental health, and improvement in parenting style are important targets for evaluation and treatment.^{14, 32, 37} Innovative and effective programs for parents with depression have focused not only on symptom alleviation, but on understanding and managing the parent-child relationship.^{14, 37} There is a great need to develop mental health systems that will be able to provide assessments and deliver evidenced-based treatments to children, mothers, *and* fathers within the same clinical setting.

Acknowledgments

Child and Adolescent Psychiatric Evaluation Service (CAPES) was supported by Grant P30MH071478 from the National Institute of Mental Health (NIMH).

We thank clinical interviewers and supervisors, particularly Dr. Kelly Posner of the New York State Psychiatric Institute and Dr. Lisa Kotler of the NYU Child Study Center. We also thank Drs. David Shaffer and Lawrence Greenhill, founders of CAPES, Dr. Laura Mufson of New York State Psychiatric Institute for manuscript review, and participating parents and children.

Dr. Vidair has received research support from the National Institute of Mental Health. Dr. Parilla-Escobar was supported by an Alicia Koplowitz Fellowship. Dr. Turner serves as a consultant for Suicide Prevention International. He has received research support from the National Institute of Mental Health. He participates in DSM-V related research with the American Psychiatric Association. Ms. Rynn has received research support from the National Institute of Mental Health, Boehringer Ingelheim, Wyeth, and Neuropharm. She has served as a consultant for Wyeth and Pharmastar. She receives royalties from American Psychiatric Publishing Inc.

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Table 1

Parental Demographics

Characteristic	Mothers (N = 801)		Fathers (N = 182)	
	N	%	N	%/SD
Marital Status	560 ^a		118	
Married/cohabitating	345	61.61	96	81.36
Single/divorced/separated /widowed	215	38.39	22	18.64
Employment Status	540 ^a		114	
Employed	364	67.41	96	84.21
Unemployed	34	6.30	9	7.89
Homemaker/retired/other	142	26.30	9	7.89
Employment Type	537 ^a		114	
Manager/professional	164	30.54	62	54.39
Skilled	181	33.71	26	22.81
Unskilled	61	11.36	19	16.67
Homemaker/disability/other	131	24.39	7	6.14
Education	481 ^a		98	
Graduate/professional graduate	229	47.61	49	50.00
College graduate/some college	118	24.53	20	20.41
High school graduate	72	14.97	18	18.37
Some high school or below	62	12.89	11	11.22
Race / Ethnicity	547 ^a		121	
Hispanic	279	51.01	37	30.58
Caucasian	154	28.15	58	47.93
African-American	73	13.35	15	12.40
Other	41	7.50	11	9.09
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Age	38.87	7.97	42.95	8.56

Note:

^aN reflects number of parents who provided this information.

Table 2

Demographics and Diagnoses of Children and Adolescents (n = 848)

Characteristic	N	%
Gender		
Male	581	68.51
Female	267	31.49
Ethnicity		
Hispanic	472	55.66
Caucasian	205	24.17
African-American	127	14.98
Other	44	5.19
	<i>M</i>	<i>SD</i>
Age		
	10.43	3.19
Diagnosis		
	<i>N</i>	<i>%</i>
Internalizing	272	32.38
Externalizing	544	64.76
Both Internalizing & Externalizing	125	14.88
Anxiety	192	22.86
Depression	123	14.64
Oppositional/Conduct Disorder	285	33.93
Attention Deficit Hyperactivity Disorder	461	54.88

Table 3

Maternal and Paternal Brief Symptom Inventory (BSI) Scores

BSI Scale	M	SD	≥ 63 (%) ^a	> 60 (%) ^b
Maternal Symptom				
Somatic	50.46	10.12	16.17	20.65
Depressive	50.25	10.28	13.93	18.78
Anxiety	49.67	10.17	11.94	17.16
Overall	49.77	11.23	14.07	18.80
Paternal Symptom				
Somatic	48.54	8.00	11.22	15.82
Depressive	49.32	9.01	15.31	22.96
Anxiety	49.21	9.76	13.78	19.90
Overall	49.37	9.47	12.63	18.42
Child Behavior Checklist (CBCL) Scale Maternal				
Internalizing	60.41	10.91		
Externalizing	60.57	11.21		
Paternal				
Internalizing	58.26	10.61		
Externalizing	58.38	10.70		

Note:

^a ≥ 63 is considered a clinical "case" in the BSI manual.

^b > 60 is one standard deviation above the BSI mean.

Table 4

Multiple Regression of Brief Symptom Inventory (BSI) Maternal and Paternal Symptoms Separately on the Child Behavior Checklist (CBCL) and the Children's Global Assessment Scale (CGAS)

BSI*	CBCL			CGAS		
	Internalizing		Externalizing	Total		
	β	Adjusted β^a	β	Adjusted β^a	β	Adjusted β^a
Overall Maternal	0.41 (0.03) ***	0.38 (0.03) ***	0.32 (0.03) ****	0.31 (0.03) ****	-0.18 (0.04) ****	-0.16 (0.04) ****
Overall Paternal	0.33 (0.07) ***	0.31 (0.07) ***	0.20 (0.07) **	0.21 (0.08) **	-0.14 (0.07)	-0.14 (0.08)

Note: Bold text indicates statistically significant results.

^aParent and child demographic variables (parental age, marital status, occupation and child's age, gender, ethnicity) were adjusted.

** p<0.01

*** p<0.0001

Table 5
Odds Ratios (95% CI) of Brief Symptom Inventory (BSI) Maternal and Paternal Symptoms Separately on Each Child Diagnosis

BSI	Depression			Anxiety			Oppositional/Conduct Disorder			Attention Deficit Hyperactivity Disorder		
	Crude OR	Adjusted ^a OR	95% CI	Crude OR	Adjusted ^a OR	95% CI	Crude OR	Adjusted ^a OR	95% CI	Crude OR	Adjusted ^a OR	95% CI
Overall Maternal	1.35 (1.11,1.64)	1.20 (0.95,1.52)	1.20 (1.02,1.42)	1.22 (1.02,1.46)	1.35 (1.16,1.56)	1.39 (1.18,1.64)	1.00 (0.87,1.15)	1.09 (0.94,1.27)				
Overall Paternal	1.29 (0.85,1.94)	1.19 (0.66,2.12)	1.15 (0.83,1.58)	1.10 (0.76,1.57)	1.21 (0.88,1.66)	1.39 (0.96,2.03)	0.96 (0.72,1.29)	1.04 (0.74,1.44)				

Note: Bold text indicates statistically significant results. CI = confidence interval; OR = odds ratio.

^aParent and child demographic variables (parental age, marital status, ethnicity, occupation and child's age, gender, ethnicity) were adjusted.