Parent Identification of Early Emerging Child Behavior Problems

Predictors of Sharing Parental Concern With Health Providers

Katherine D. Ellingson, BS; Margaret J. Briggs-Gowan, PhD; Alice S. Carter, PhD; Sarah M. Horwitz, PhD

Objectives: To better understand the predictors of parental discussions with pediatric care providers (pediatricians, psychologists/psychiatrists, social workers, early intervention providers, or other medical specialists) regarding early child behavior problems and to suggest strategies for eliciting early identification from parents in health care settings.

Design: A cross-sectional survey of parents of children from a representative healthy birth cohort. The survey included the Infant-Toddler Social Emotional Assessment, measurement of parental worry regarding problematic behavior, and demographic factors.

Setting: Fifteen urban and suburban towns in the northeastern United States.

Participants: The study sample consisted of all parents of 11- to 39-month-olds (n = 269) who exceeded the 90th percentile on 1 or more Infant-Toddler Social Emotional Assessment problem domain scores (representing elevated problematic behavior symptoms) from an original sample of 1278.

Results: Few parents (17.7%) who reported elevated problematic behavior spoke to a provider about such problems. In adjusted models, speaking to a provider was associated with reported worry about behavior (odds ratio [OR], 3.47 [95% confidence interval (CI), 1.74-6.92]) and with low reported child social-emotional competence (OR, 2.68 [95% CI, 1.23-5.84]). In adjusted models, worry was most likely among parents who reported low child competence (OR, 2.18 [95% CI, 1.07-4.22]) and disruption in family routines attributed to the child’s behavior (OR, 2.38 [95% CI, 1.31-4.33]).

Conclusions: Parental worry is a robust predictor of help seeking among parents of children with behavioral problems. Further, lags in social competence contribute to both parental worry and help seeking. These findings, in conjunction with previous evidence that child behavior problems amenable to early intervention are often unidentified, suggest that systematic inquiry by health care providers about parental concerns is important in the identification of early emerging behavioral health problems.


EXPRESSED PARENTAL CONCERN regarding a child’s early emerging behavioral or developmental problems has recently gained attention as an important component in the identification and referral of such problems by pediatric care providers (pediatricians, psychologists/psychiatrists, social workers, early intervention providers, or other medical specialists). Current studies reveal that 7% to 24% of 2- to 3-year-old children have social-emotional or behavioral problems. However, rates of intervention services for young children with behavioral health needs remain low despite the existence of effective early interventions and the concern of federal policy makers. Children of preschool age are dependent on caregivers (most often parents) for both recognition of behavioral problems and subsequent help seeking. Those younger than 5 years are especially sensitive to the role of parents in detection and service seeking because they are not in contact with formal school systems, considered the “de facto” mental health system for older children. Difficulties may exist in the detection and diagnosis of behavioral health problems in young children because parents may have trouble distinguishing normal from problematic behavior. Thus, examining factors that trigger parental concern and how such concern affects access to care may inform early identification efforts.

Several models of health access obtained from the broader health services literature justify the exploration of parental concern in the help-seeking process. Common to 3 seminal help-seeking models is the importance of need, sociodemo-
graphic access variables, and help seekers’ perceptions.11-13 Demographic factors have been shown to play a role in parental help seeking for child behavioral health services for older children.14,15 as have parental burden and stress.9,16,17 However, the role of parental attitudes and perceptions in help seeking for young children has been largely unexplored.

Because earlier findings showed that only 7.5% of young children with reported behavioral problems received any care and that parental worry was associated with parents’ thinking about or talking to a provider for health services in general,18 we were specifically interested in the role and predictors of worry with respect to parental help seeking for behavioral health problems. In this article, we extend prior work by examining the role of worry with respect to parental help seeking for behavioral health problems, as well as the predictors of parental worry among children at elevated risk for behavioral health concerns.

METHODS

SAMPLES

The original healthy birth cohort sample was identified from birth records at the State of Connecticut Department of Public Health, Hartford.2 Children from the New Haven–Meriden standard metropolitan statistical area, Connecticut (1990 census), born at Yale–New Haven Hospital between July 1995 and September 1997, were eligible. Recruiting of participants, baseline data collection, and all subsequent data collection efforts were approved by Yale University’s human investigation committee.

The study sample (Figure) included children reported to be at or above the 90th percentile (within the representative study population) on the internalizing, externalizing, and/or dysregulation domains of the 166-item parent-reported Infant-Toddler Social Emotional Assessment (ITSEA).19 The externalizing domain measures aggression, defiance, and impulsivity. The internalizing domain addresses depression, withdrawal, anxiety, and inhibition to novelty. Dysregulation measures problems in the areas of sleep, eating, and sensory sensitivities. Finally, ITSEA social competence assesses attention skills, compliance, empathy, imitation, and peer interactions. The ITSEA has acceptable internal consistency, test-retest reliability, and interrater reliability. Associations between the ITSEA and independent evaluator ratings and parental ratings of child behavior problems, temperament, and parental distress support its validity.19

Of the study sample of all children exceeding the 90th percentile cutpoint on at least 1 ITSEA problem domain (n=269), 129 children (48.0%) exceeded the cutpoint on the internalizing domain, 127 (47.4%) on the externalizing domain, and 125 (46.5%) on the dysregulation domain. Eighty-three children (31.3%) in the study sample exceeded the 90th percentile on 2 ITSEA problem domains, and 29 (10.8%) exceeded the 90th percentile on 3 or more ITSEA problem domains. The study sample included 129 boys (48.0%), 135 children (50.2%) who were ethnic minorities, 44 children (16.2%) living below the poverty line, 84 children (31.3%) living in poverty or borderline poverty (up to 185% of the poverty line), and 49 children (18.1%) who lived in households with no working parent. Respondents included 252 mothers (93.7%) and 16 fathers (6.0%) (hence, respondents are referred to in this article as “parents”), 80 single parents (29.7%), and 99 (37.1%) with a high school education or less.

Parents were mailed a letter describing the study, followed 1 week later by a questionnaire and children’s book. Staff members subsequently telephoned parents to address questions or concerns and to encourage participation in the study. When appropriate, parents were mailed questionnaires and/or visited in person to offer assistance. Informed consent procedures were followed, and parents received $25.

PROCEDURE

The ITSEA was used to define the sample and was described earlier. Other instruments and measures used in this analysis, including measures of child characteristics, parental factors, parent-child stress, and outcome variables, are summarized in Table 1.

MEASURES

The ITSEA was used to define the sample and was described earlier. Other instruments and measures used in this analysis, including measures of child characteristics, parental factors, parent-child stress, and outcome variables, are summarized in Table 2.

ANALYTIC METHODS

Bivariate analyses were used followed by multivariate logistic regression analyses (using stepwise backward elimination models) to control for variance shared among variables and to test for interactions. Owing to the small sample (n=269) and low baseline prevalence of outcome variables, multivariate models only included those variables exhibiting significant bivariate associations with the outcome of interest. Variables were then
individually removed from the full model. Variables were retained if their removal resulted in a significant deviance from the full (or previously reduced) model. Additionally, t tests were conducted to test for differences in raw ITSEA scores among children of parents who spoke to a provider (vs those who did not) as well as for parents who worried (vs those who did not). To run these t tests, we created a composite ITSEA score by taking the mean of raw ITSEA scores on all 3 domains. All statistical analyses were conducted using SAS software version 8.0 (SAS Institute Inc, Cary, NC).

RESULTS

Only 47 parents (17.7%) in our sample with young children exhibiting elevated problematic behavior reported having spoken to a provider about their child's behavioral health. Of parents who had spoken to a provider, 41 (87.2%) spoke with a pediatrician.

Bivariate analyses (Table 3) identified 4 factors as significantly associated with speaking to a provider about
Table 2. Study Measures

<table>
<thead>
<tr>
<th>Construct</th>
<th>Measure</th>
<th>Additional Information</th>
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<tbody>
<tr>
<td>Child characteristics</td>
<td></td>
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<tr>
<td>High emotional/behavioral problems</td>
<td>ITSEA internalizing, externalizing, and dysregulation domains</td>
<td>ITSEA scores exceeding the 90th percentile in the original sample were considered high19</td>
</tr>
<tr>
<td>Wide-ranging (multiple) behavior problems</td>
<td>ITSEA internalizing, externalizing, and dysregulation domains</td>
<td>ITSEA scores exceeding the 90th percentile on all 3 ITSEA problem domains</td>
</tr>
<tr>
<td>Low social-emotional competence</td>
<td>ITSEA competence domain</td>
<td>Parent-reported competence in the lowest 10th percentile of the original study population19</td>
</tr>
<tr>
<td>Low productive vocabulary</td>
<td>MacArthur Communicative Development Inventory Short Form20</td>
<td>Scores below the 10th percentile (by age and sex) were considered indicative of low productive vocabulary skills14</td>
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<tr>
<td>Parental factors</td>
<td></td>
<td></td>
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<tr>
<td>Elevated signs of depression/anxiety</td>
<td>CES-D21; BAI22</td>
<td>A dichotomous depression/anxiety measure was created using the CES-D and BAI; respondents scoring 16 or higher on either scale were categorized as &quot;exhibiting signs of depression and/or anxiety&quot;</td>
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<tr>
<td>Parent-child stress</td>
<td></td>
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<tr>
<td>Disruption of family routines</td>
<td>FLIS2</td>
<td>The 9-item FLIS assesses the extent to which child behavior limits participation in activities typical of families with young children</td>
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<tr>
<td>Stress in the parent-child</td>
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<td>relationship</td>
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<tr>
<td>Outcome variables</td>
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<tr>
<td>Parental worry about child</td>
<td>Parental ratings on 3 questions about worry in the areas of social,</td>
<td>Parents rated worry on a 5-point scale from &quot;1, Not at all worried&quot; to 5, Extremely worried&quot;; scores of 3 or higher were considered indicative of high level of worry</td>
</tr>
<tr>
<td>behavioral health problem</td>
<td>emotional, and behavioral health</td>
<td></td>
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<tr>
<td>Spoke to health provider about</td>
<td></td>
<td></td>
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<tr>
<td>child behavioral health problem</td>
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</table>

Abbreviations: BAI, Beck Anxiety Inventory; CES-D, Center for Epidemiological Studies Depression Scale; FLIS, Family Life Impairment Scale; ITSEA, Infant-Toddler Social Emotional Assessment; PSI-PCDI, Parenting Stress Index-Parent-Child Dysfunctional Interaction Scale.

A child’s behavior: parental worry, low social competence, elevated parental depression/anxiety, and disruption of family routines because of the child’s behavior. Notably, sociodemographic factors, such as ethnic minority status, living in poverty/borderline poverty, parental unemployment, and parental education, were not significantly associated with the likelihood of speaking to a provider. Several characteristics specific to the child, including the child’s sex, age, wide-ranging behavioral problems (scores above the 90th percentile in all ITSEA domains), and low vocabulary skills, also showed no association with speaking to a provider.

The multivariate logistic regression analysis (Table 4) used to predict the likelihood of a parent speaking to a provider regarding early behavioral problems showed that only parental worry (odds ratio [OR], 3.47 [95% confidence interval (CI), 1.74-6.92]) and low social-emotional competence (OR, 2.68 [95% CI, 1.23-5.84]) remained significant predictors of speaking to a provider in our final model. Interruption of family life because of the child’s behavior was eliminated from the model via backward stepwise elimination. However, elevated parental depression/anxiety remained in the final model because removing it changed the fit of the model significantly. There were no statistically significant interactions. Finally, a t test conducted among parents who spoke to a provider (vs those parents who did not) revealed that there was no difference in raw ITSEA scores between the 2 groups (P = .48), indicating no difference in overall symptoms between the 2 groups.

Given the importance of parental worry as a predictor of accessing services, characteristics associated with worry were investigated. Parents who reported being worried about their child’s behavior (n = 101; 37.8%) were compared with parents who did not worry in a series of analyses. Bivariate analyses (Table 3) indicated that parental worry was associated with child sex (male), living in poverty/borderline poverty, low parent-reported social competence, and difficult parent-child relations. Further, parents worried more about children’s wide-ranging behavior problems (high ITSEA scores in all domains) and about children who contributed to high levels of disruption in family routines on the Family Life Impairment Scale.

All significant predictors of parental worry about a child’s behavior from bivariate analyses were included in multivariate regression analyses to adjust for shared variance (Table 5). Using stepwise backward elimination, poverty/borderline poverty and wide-ranging behavioral problems (high ITSEA scores in all domains) were eliminated from the final model. All remaining variables were significant, including low social competence.
Finally, a test conducted among parents who worried about their child's behavioral health (vs those who did not) revealed that there was a significant difference in raw ITSEA scores between the 2 groups (high worry, mean±SD, 0.83±0.182; low worry, mean±SD, 0.74±0.162; P = .001). Thus, among our sample of children with elevated symptom reporting, parents who worried about their children were more likely to have children with significantly higher ITSEA scores than those parents who did not worry.

**COMMENT**

Our results strongly suggest that parental worry is a primary trigger in the initiation of contact with a provider for children with behavior problems, even after controlling for low age-related social competence and elevated...
parental depression/anxiety. Our findings confirm assertions that parental worry is an indication that a child is failing to meet developmental or behavioral expectations within the family context and may be a key determinant of whether parents access any services for behavioral health problems.

Additionally, we found that having elevated scores on multiple domains of the ITSEA did not significantly predict either worry or speaking to a provider. However, when we ran t tests on the composite raw ITSEA scores by the outcomes of worry and speaking to a provider, we found that parents who worried tended to have children with significantly higher overall ITSEA scores. However, parents who spoke to providers about behavior problems did not have significantly higher raw ITSEA scores than those parents who did not. This underscores our conclusion that parental worry is an important correlate of behavioral problems in young children and suggests that there are parents who report high levels of problems and worry yet do not speak to a provider regarding these problems. There may be several reasons why parents choose not to speak to a health care provider about their child's behavioral problems. Parents may not consider problematic behavior atypical or may be reluctant to acknowledge their concerns because of the stigma of mental health problems, fear of being blamed for their child's behavior, or skepticism about the value and willingness of providers to treat such problems effectively.25

When parental characteristics associated with worry were examined, we found that disruption of family routines and low social competence were the most robust predictors of worry in adjusted models. However, only social competence also predicted seeking services, suggesting that if parents had better norms for judging age-appropriate social skills, they might be more likely to initiate discussions about problematic behaviors with their pediatricians. Thus, social-emotional competence may be one avenue through which to begin a dialogue about behavioral health concerns. In addition, this finding emphasizes the importance of educating parents so that they become better able to distinguish normative infant-toddler behavior from atypical behavior, a task that is particularly challenging in early childhood because many symptomatic behaviors have normative correlates. Atypical behaviors are often distinguishable from normal behaviors because of heightened frequency or intensity.26

Continued research efforts to clarify the boundaries between normal and atypical behaviors in early childhood and parent education about development and psychopathologic features are central to the goal of promoting service use for mental health problems in young children. Despite the fact that the sample was drawn from a representative birth cohort, the size of the sample of children with high levels of behavioral difficulties limited our ability to evaluate a large number of variables and to detect interactions. Additionally, the cross-sectional nature of the data does not permit the establishment of causality. Continuing this line of research with longitudinal data is an important future contribution.

Table 5. Multivariate Logistic Regression Analyses Modeling Parental Worry About a Child’s Behavior*

<table>
<thead>
<tr>
<th>Characteristic Type</th>
<th>Variable</th>
<th>OR (95% CI)</th>
</tr>
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<tbody>
<tr>
<td>Child characteristic</td>
<td>Sex, male</td>
<td>1.87 (1.10-3.19)</td>
</tr>
<tr>
<td>Child characteristic</td>
<td>Low social-emotional competence (bottom 10% on ITSEA28)</td>
<td>2.18 (1.07-4.22)</td>
</tr>
<tr>
<td>Parental factor</td>
<td>Parental depression/anxiety (CES-D27; BAI27)</td>
<td>1.81 (1.03-3.17)</td>
</tr>
<tr>
<td>Parent-child stress</td>
<td>Behavior causes disruption in family routines (FLIS26)</td>
<td>2.38 (1.31-4.33)</td>
</tr>
</tbody>
</table>

Abbreviations: BAI, Beck Anxiety Inventory; CES-D, Center for Epidemiological Studies Depression Scale; CI, confidence interval; FLIS, Family Life Impairment Scale; ITSEA, Infant-Toddler Social Emotional Assessment; OR, odds ratio.

*The final model (shown) was generated using backward stepwise regression modeling.

CONCLUSIONS

Given the discrepancy that currently exists between the need for and use of services for children’s behavioral health problems, our findings suggest that systematically soliciting, through interviewing or screening, parental concerns about their children’s behavioral health problems may be a promising strategy to increase access to services. This study underscores the important role of parental worry in help seeking for behavioral services and the continuing importance of future research exploring parental attitudes as key determinants of service use. Educating pediatricians and other providers who come into contact with young children to elicit parental concerns may be an efficient way to identify early behavioral health needs. Additionally, encouraging parents to act on concerns about their children’s social-emotional and behavioral health has the potential to promote appropriate service use for young children with early behavioral problems.

However, given the complex interplay between child difficulties and parental concern in the help-seeking process, it may be beneficial to also use screening measures that rely on parental reports. For young children, screening tools such as the Ages & Stages Questionnaires: Social-Emotional27 and the Brief Infant-Toddler Social and Emotional Assessment,28 both of which address behavioral health problems and social-emotional competencies, can be administered in a health care setting. Such screening strategies have proved to be accurate and cost-effective for several reasons.29 First, these screens eliminate the need for obtaining children’s cooperation, provide a more thorough and extensive sampling of behaviors than is typically obtained with direct observation of the child, and usually have flexible administration methods (in-person interviews, telephone interviews, take-home questionnaires, completed in preparation for a second ap-
Behavioral health problems in young children may persist into later childhood, adolescence, and adulthood, exacting a great toll on individuals and society. Despite the existence of effective early interventions and expressed concern from both the medical community and policy makers, recognition and treatment of young children with behavioral problems continue to occur at very low rates. This study attempts to better understand the predictors of parental discussions with pediatric health care providers regarding early emerging behavioral problems, and in particular the influence of parental worry. Understanding the role of parental worry in help seeking has the potential to guide providers in their systematic inquiry of parents about behavioral concerns.

Accepted for publication April 7, 2004.

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REFERENCES