

Brief Report: The Relationship Between Chronic Illness and Identification and Management of Psychosocial Problems in Pediatric Primary Care

Shana Bilfield, MA, Beth G. Wildman, PhD, and Bryan T. Karazsia, BS
Kent State University

Objective To compare identification, management, and barriers to treatment for psychosocial concerns in children with and without a chronic illness. **Methods** Using data from the Child Behavior Study (CBS), provider rates of identification, treatment, and reports of barriers to treatment were compared in children with and without a chronic illness. Of the 21,065 children ranging in age from 4 to 15 years, 808 children were identified with a chronic illness and were matched on eight demographic variables with 763 healthy children. **Results** Providers identified psychosocial concerns in significantly more children with a chronic illness (36.8%) than healthy children (20.2%). Among children with psychosocial concerns, rates of identification, treatment, and barriers to treatment did not differ across the two groups. **Conclusions** Chronic illness did not present more barriers to the management of psychosocial concerns. Increased rates of identification and treatment of psychosocial concerns require attention to general barriers to treatment and screening.

Key words barriers; chronic illness; mental health treatment; primary care; psychosocial problems.

Chronic illness, a chronic medical condition that interferes with daily life for more than 3 months, affects 6.5–18% of children in the United States (Pless & Pinkerton, 1975; Wallander & Varni, 1998). Children with physical illness have twice the risk for psychosocial problems of healthy children (Cadman, Boyle, & Offord, 1988; Drotar, 1999). Primary care physicians (PCPs) play a central role in assessing and managing their patients' psychosocial needs owing to their ongoing relationships with children and families (Sabbeth & Stein, 1990). However, research suggests that PCPs identify and manage these problems at substantially lower rates than their incidence (e.g., Glazebrook, Hollis, Heussler, Goodman, & Coates, 2003), with as few as one in four receiving mental health services (Cadman et al., 1988). Sabbeth and Stein (1990) suggested that barriers to intervention may be greater for families with children with chronic physical conditions.

This study utilized a large, representative data set from the Child Behavior Study (CBS; Kelleher et al., 1997) to test the hypotheses that physicians identify more psychosocial problems in children with chronic illnesses than in healthy children and that child health status would moderate the relationship between child psychosocial functioning and physician identification. Sabbeth and Stein's (1990) hypotheses that rates of treatment for psychosocial problems should be lower for children with chronic illnesses than for healthy children and PCP perception of barriers to treatment should be greater for children with a chronic illness than for healthy children were also evaluated.

Methods Sample

Children between 4 and 15 years of age presenting for nonemergency care and accompanied by an English- or

All correspondence concerning this article should be addressed to Beth G. Wildman, PhD, Department of Psychology, Kent State University, Kent, Ohio 44242. E-mail: bwildman@kent.edu.

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Spanish-speaking primary caregiver were eligible for the study. A child was considered to have a chronic illness if their caregiver reported them in fair or poor health with any kind of limitation because of health over the previous 6 months (Pless & Pinkerton, 1975). A child was considered healthy if their caregiver described them as in excellent health. Children whose primary purpose for the visit was for mental health purposes were excluded.

Based on these criteria, 808 children were classified as having a chronic illness. A comparative sample of healthy children were matched to the chronically ill children on seven variables [age, gender, reason for visit (sick vs. well child), type of insurance (private, Medicaid, managed care, fee for service), caregiver education, ethnicity (Caucasian, African American, Hispanic, other), and caregiver marital status]. When multiple healthy children matched all of these variables, a child was chosen at random, resulting in 763 healthy children and a total sample of 1571. See Table I for demographic information.

Procedures

Data collection procedures have been described previously by Kelleher et al. (1997).

Measures

Clinician Visit Questionnaire

Physicians reported child demographics, reason for visit, and presence of a psychosocial problem using the Clinician Visit Questionnaire (CVQ). Children were considered to have a psychosocial problem if the PCP answered "yes" to the question: "Is there a new, ongoing, or recurrent psychosocial problem?" Psychosocial problems were defined broadly and included any mental disorder, behavioral, or psychological symptoms. When a problem was identified, physicians provided information about treatment and barriers to treatment. PCPs indicated whether they provided various interventions, such as counseling, prescription of psychotropic medications, or referral for mental health treatment. Most of the barriers to treatment that PCPs could endorse related to lack of availability of appropriate services, paperwork burden, delays in obtaining appointments, and financial obstacles.

Parent/Caregiver Visit Questionnaire

Caregivers provided demographic information and health information, including the 35-item RAND Questionnaire, which assesses general health status (Hays, Sherbourne, & Mazel, 1993). Specific questions used for

Table I. Demographic Information of Participants in the Child Behavior Study

Demographic	Samples		
	Full sample (<i>N</i> = 1571) [<i>n</i> (%)]	Children with chronic illness (<i>N</i> = 808) [<i>n</i> (%)]	Healthy children (<i>N</i> = 763) [<i>n</i> (%)]
Mean age of child	8.57	8.58	8.56
Child gender			
Male	767 (48.8)	394 (48.8)	373 (48.9)
Female	804 (51.2)	414 (51.2)	390 (51.1)
Child ethnicity			
White	1119 (71.2)	541 (67.0)	578 (75.8)
African American	167 (10.6)	106 (13.1)	61 (8.0)
Native American	17 (1.1)	8 (1.0)	9 (1.2)
Asian American	27 (1.7)	12 (1.5)	15 (2.0)
Hispanic origin	225 (14.3)	130 (16.1)	95 (12.5)
Other	16 (1.02)	11 (1.36)	5 (0.7)
Payor of care			
Managed care	728 (46.3)	354 (43.8)	374 (49.0)
Managed care-HMO ^a	541 (34.4)	256 (31.7)	285 (37.4)
Managed care-PPO/IPA ^b	187 (11.9)	98 (12.1)	89 (11.7)
Medicaid	684 (43.5)	349 (43.2)	322 (42.2)
Fee for service	671 (42.7)	370 (46.0)	314 (41.2)
Parent education			
High school or less	640 (40.7)	332 (41.1)	308 (40.4)
One parent >high school	740 (47.1)	377 (46.7)	363 (47.6)
One parent >college	191 (12.2)	99 (12.3)	92 (12.1)
Type of visit			
Sick visit	972 (61.9)	502 (62.2)	470 (61.6)

^aHealth Maintenance Organization.

^bPreferred Provider Organization/Individual Practice Association

this study were “Does this child’s health limit him/her in any way?” and “Would you say this child’s health is: excellent, good, fair, or poor?”

Pediatric Symptom Checklist (Jellinek, Murphy, & Burns, 1986)

The 35-item parent-completed Pediatric Symptom Checklist (PSC) screens for child psychosocial problems in primary care settings, using a cut-off score of 27 to indicate children at-risk for psychosocial problems.

Results

Physicians identified 297 (36.8%) of the 808 children with a chronic illness and 154 (20.2%) of the 763 healthy children with psychosocial problems, supporting the hypothesis that psychosocial problems would be identified at higher rates in children with a chronic illness than in healthy children, $\chi^2(1, N = 1571) = 52.67$, $p < .001$ (OR = 2.30; 95% CI = 1.82–2.90). A logistic regression indicated that physicians were more likely to identify psychosocial problems in children when they were chronically ill, $B = -0.83$, $\chi^2(1, N = 1571) = 3.43$, $p < .001$.

The chronically ill children had significantly higher scores on the PSC ($M = 23.84$, $SD = 12.49$) than healthy children ($M = 15.47$, $SD = 10.59$), $t(1569) = 14.29$. Of the 808 chronically ill children, 309 (38.2%) had elevated PSC scores and physicians identified 183 (59.2%). Of the 763 healthy children, 109 (14.3%) had elevated PSC scores and physicians identified 60 (55.0%). Among children with elevated PSC scores, illness status

was not related to identification by the PCPs $\chi^2(1, N = 418) = .610$, $p > .1$, nor, based on logistic regression, did it moderate the relationship between PSC scores and physician identification.

Rates for the three forms of treatment (i.e., counseling by physician, psychotropic medications, mental health referral) for children identified with psychosocial problems by PCPs for both groups of children appear in Table II. Chi-square analyses found no differences between groups in management or in physician perceived barriers to treatment.

Discussion

The results of this research indicate that PCPs identify and manage psychosocial problems in chronically ill and healthy children at similar rates. Further, the presence of chronic illness in a child neither sensitized physicians to attend to psychosocial issues nor presented additional barriers to the treatment of these problems. These findings were in contrast to Sabbeth and Stein’s (1990) hypothesis that chronic illness in children presents additional barriers to physicians that interfere with management of psychosocial problems. From a clinical perspective, the results of this study highlight the importance of remaining alert to psychosocial issues in all patients. These results support the view that the process of identification and management of psychosocial problems in children is complex and likely to be determined by a complex array of child, parent, physician, and system variables (Wildman, Stancin, Golden, & Yerkey, 2004). Given the relatively high incidence of

Table II. Rates of Treatment and Physician-Reported Barriers to Treatment for Chronically Ill and Healthy Children Identified with a Psychosocial Problem by Primary Care Physician (PCP)

Treatment type	Children with chronic illness ($N = 297$) [n (%)]	Healthy children ($N = 154$) [n (%)]	χ^2
Counseling			
Offered	127 (42.8)	80 (51.9)	3.45
Not offered	170 (57.2)	74 (48.1)	
Barriers indicated	34 (11.5)	13 (8.4)	0.98
Not indicated	263 (88.5)	141 (91.6)	
Referral to outside agency			
Referred	152 (51.2)	74 (48.1)	0.397
Not referred	145 (48.8)	80 (51.9)	
Barriers indicated	18 (6.1)	11 (7.1)	0.197
Not indicated	179 (60.3)	143 (92.8)	
Psychotropic medication			
Prescribed	125 (42.1)	73 (47.4)	1.16
Not prescribed	172 (57.9)	81 (52.6)	
Barriers indicated	22 (7.4)	13 (8.4)	0.15
Not indicated	275 (92.6)	141 (91.6)	

None of the chi-square analyses comparing rates of treatment or barriers to treatment were significant.

psychosocial problems in children with chronic illness and the association between psychosocial problems and adherence to medical regimens (Abbott & Gee, 1998), all children with a chronic illness should be screened for psychosocial problems.

A unique aspect of this study was its ability to learn about the barriers to treatment perceived by PCPs in relation to the treatment prescribed. The findings from this study, in conjunction with data that suggest that PCPs are more likely to diagnose psychosocial problems for which they have an available, practice-compatible treatment, underscore the importance of disseminating information about the availability of practice-compatible evidence-based treatments for psychosocial problems to PCPs (Glied & Neufeld, 2004). Further research is needed to identify barriers to treatment and potential remedies to these barriers.

In spite of the results of this study that PCPs did not report more or different barriers for children with chronic illness than for healthy children, more research is needed to explore whether there are disease-specific barriers. This research used a global evaluation of disease status and analyzed data for a heterogeneous sample of chronically ill children. These findings do not preclude the possibility that certain illnesses may present specific barriers to identification and treatment of psychosocial problems.

Although the data set used in this study was large, the data were originally collected for an epidemiological study, which limited questions that could be addressed. Relationship between specific chronic illness and identification and management of psychosocial problems could not be evaluated. A specific limitation of this study was that the health status of children was derived from a questionnaire designed to assess general health status and did not allow for the assessment of direct information regarding health status and the nature of chronic illnesses. The health status of each child was assigned based on parental reports of the child's functioning using criteria matching definitions of chronic illness found in the literature (Pless & Pinkerton, 1975; Wallander & Varni, 1998). The definition of chronic illness used in this study was very general. It did not assess specific illness status, or different areas of the child's functioning, nor did it include information sufficient to fulfill descriptive definitions of ongoing health conditions (Stein, Bauman, Westbrook, Coupey, & Ireys, 1993). Another caveat to the findings of this research was the use of the PSC as the criteria for positive screens for psychosocial problems given Canning and Kelleher's (1994) findings that the PSC lacks sensitivity for children

with chronic illness. However, all analyses of treatment rates and barriers to treatment were based on physician identification of psychosocial problems, not a positive screen on the PSC.

Based on these findings, future research is needed to further explore whether children with chronic illness are receiving treatment for psychosocial problems from sources other than their PCPs. In addition, future research needs to explore barriers to treatment for both chronically ill and healthy children. Although PCPs may offer services for psychosocial problems in children with a chronic illness and healthy children in similar ways, the actual treatment received by these children from outside agencies may differ (Drotar, 1999; Sabbeth & Stein, 1990). Further, research is needed to determine the impact of specific illnesses on physician identification and treatment received. More generally, the low rates of identification and treatment of psychosocial problems in all children, even with the availability of reliable and valid screening measures appropriate for use in primary care, allude to the need to design and implement interventions to increase physician use of these measures (Stancin & Palermo, 1997). This research must account for reasons why PCPs are not using the resources available.

The findings of this study support previous research indicating that the incidence of psychosocial problems is approximately twice as high in children with chronic illness than in their healthy peers and that PCPs identify psychosocial problems approximately twice as often in children with chronic illness as in healthy children. However, once the presence of psychosocial problems was controlled, the results of this study found no differences in the rates with which PCPs identified and managed these problems or identified barriers to their identification and management. Given the potential negative health outcomes of failing to address psychosocial problems in children with chronic illness and the high incidence of psychosocial problems, PCPs could increase their identification of children with these problems if they specifically assess psychosocial functioning in all children with chronic illness. Future research is needed to identify any disease-specific factors related to the identification and treatment of psychosocial problems in children with chronic illnesses. The findings that identification, treatment, and perception of barriers to treatment rates were similar for healthy children and those with chronic illnesses support the need for further research on the factors associated with PCP management of psychosocial problems. Based on previous research, PCPs would be likely to profit from more

information about and access to practice-compatible evidence-based interventions for psychosocial problems.

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