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Parent-Provider Communication and Parental Satisfaction with Care of Children with Psychosocial Problems*,†

Chantelle Nobile Hart[a], **Kelly J. Kelleher**[b], **Dennis Drotar**[c], and **Sarah Hudson Scholle**[d]

a *Department of Psychology, Case Western Reserve University*

b *Pediatrics, The Ohio State University and Columbus Children's Research Institute*

c *Pediatrics, Case Western Reserve University School of Medicine*

d *National Committee on Quality Assurance*

Abstract

Objective: The objective of the present paper was to determine the association between parent-provider communication and parent ratings of satisfaction and quality of care for a group of parents of children identified with a psychosocial problem.

Methods: A sample of 804 parents of children with psychosocial concerns enrolled in the Child Behavior Study (CBS) was used for the present analyses. As part of the CBS, parents of children with psychosocial problems answered questions that assessed parent-provider communication and parent ratings of satisfaction and quality of care.

Results: Overall, parents reported good communication with their child's provider. Eighty-two percent of parents were very satisfied with the care received and 68% reported a very high quality of care. Parent-provider communication (e.g., collaboration and mutual understanding) was strongly related to parental reports of both satisfaction and quality of care.

Conclusions: Parent-provider communication is an important correlate of parental report of satisfaction and quality of care. Involvement of parents in the treatment planning process was particularly important in determining satisfaction and quality ratings within this sample.

Practice Implications: When working with families with identified psychosocial concerns, the use of collaboration and an empathic style by providers may enhance the quality of care parents report receiving from their primary care clinicians.

Keywords

parent-provider communication; psychosocial concerns; satisfaction with care

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Address for correspondence: Chantelle Hart, The Weight Control & Diabetes Research Center, The Miriam Hospital, 196 Richmond Street, Providence, RI 02903; telephone: (401) 793-9727; fax: (401) 793-8944; e-mail: Chantelle_Hart@brown.edu..

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1. Introduction

Psychosocial issues are increasingly identified in primary care settings [1] with up to 22% of children presenting to primary care offices screening positive for psychosocial problems.[2] Most children with psychosocial concerns are seen in primary care settings [3] with only a small percentage being seen by mental health specialists.[4] Primary care is one of the major pathways through which individuals gain access to mental health services[5] with pediatricians playing an important role in the early identification of psychosocial concerns.[6] Such early identification not only has clear implications for treatment in childhood, but also may be critical for the prevention of adult psychopathology.[6] Pediatricians are in a unique position to promote the psychosocial well being of children.

Despite the increasing prevalence of identified psychosocial concerns in primary care and the advantageous position of pediatricians to identify, refer, and/or treat their patients, encounters involving discussion of psychosocial concerns are often frustrating for pediatricians due to a lack of time and insufficient training.[4;7-11] Furthermore, there is some evidence that providers avoid or discourage parental disclosure of psychosocial concerns, [12] which may affect parents' willingness to discuss such concerns in future visits.[13] In fact, parents are often hesitant to discuss psychosocial concerns with their child's pediatrician. [5,9,14] Only half of parents who either have psychosocial concerns or a child with a psychiatric diagnosis disclose these concerns to their child's pediatrician.[9,14] Thus, encounters with families who have psychosocial concerns may be characterized by ineffective communication, family dissatisfaction with care received, and lesser quality of services provided to the child.

In an attempt to enhance management of psychosocial concerns in primary care settings, it has been suggested that pediatricians employ key skills from empirically supported parenting programs.[15] Among those effective strategies are the use of a collaborative approach with families to identify their concerns regarding behavioral and psychosocial issues, providing empathy for the concerns raised, and praising families for accomplishments and efforts towards helping their children.[15] These recommendations are consistent with a patient-centered approach to care, which has been increasingly supported by medical experts as a means to improve the quality of care provided to patients.[16-17] It is also consistent with the American Academy of Pediatrics' promotion of the medical home (i.e., providing family-centered care).[18-20]

Although research with adults has supported a patient-centered approach to care as being associated with a number of positive treatment outcomes [17,21-24], fewer studies have assessed the use of these skills with pediatric populations. Recent work with children suggests that a patient-centered approach [25], and more specifically, use of interpersonal communication skills such as empathy, praise and collaboration [26-28] are associated with positive outcomes as well. It may be particularly important to assess this communication style with families with psychosocial concerns given that these families represent a growing segment of the patients seen by pediatricians [1], these encounters may be at increased risk for ineffective parent-provider communication [5,9,12-14], and there are new recommendations that pediatricians employ collaboration, empathy, and praise with families when addressing psychosocial concerns.[15]

The present investigation asked: How do parents of children with psychosocial problems perceive their child's provider's interpersonal communication skills? Secondly, are parents' perceptions of providers' communication skills associated with ratings of satisfaction and quality of care? This paper will build upon previous research by assessing the association between communication and parents' perceptions of satisfaction/quality in a national sample of families identified in primary care settings with psychosocial concerns. Given supporting

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theory [29-31] and existing empirical evidence,[25] it was hypothesized that most parents would feel positively about their child's provider, and that practitioners' increased use of empathy, concern, and collaboration would be associated with higher ratings of satisfaction and quality of care.

2. Methods

2.1. Sites and settings

The present investigation is based on the data collected in the Child Behavior Study (CBS), which was conducted in two large primary care research networks, the Pediatric Research in Office Settings (PROS) and the Ambulatory Sentinel Practice Network (ASPN) as well as two regional networks, the Wisconsin Research Network (WReN) and the Minnesota Academy of Family Physicians Network (MAFPN) from 1995 to 1997. The CBS included 401 clinicians in 43 states, Puerto Rico, and 4 Canadian provinces. Participants in the CBS are similar to both national samples of private, office-based practices as well as a random sample of primary care pediatricians from the American Academy of Pediatrics (AAP) on characteristics such as age, gender, routine screenings conducted, services provided, and time spent with patients [32-36]. Recruitment of clinicians into the CBS has been described fully elsewhere.[37]

2.2. Sample

Each participating clinician in the CBS enrolled a consecutive sample of approximately 55 children aged 4 to 15 years presenting for non-emergent care (i.e., No patients in such extremis were reported to the study team.) with a parent or primary caretaker. A total of 24,183 children were eligible for the CBS; 22,059 (91%) children participated. Of the 24,183 children who were eligible for the study, 516 (2.1%) were not enrolled due to staff oversight, 1,243 (5.1%) refused to participate, and 308 (1.3%) dropped out of the study. No differences were found between participating and nonparticipating children by age and gender. Clinician discipline, practice population size, percentage of managed care patients, and clinician attitudes toward mental health treatment did not influence family participation rates. However, geographic region was associated with an increase in enrollment of eligible participants (i.e., those clinicians located in the South and West enrolled more eligible participants). Of the 22,059 children enrolled in the CBS, an additional 994 (4.5%) were excluded due to inadequate or missing data, resulting in a study sample of 21,065 (87.1%) children.

The present investigation focused on a subsample of children within the CBS who were identified by their clinician as having a psychosocial problem. Psychosocial problems were defined as any psychological symptoms, mental health disorders, or social situations warranting attention or intervention.[1] Pediatricians were asked the following question to identify a psychosocial concern: “Is there a new, ongoing, or recurrent psychosocial problem present?” A total of 3,934 children were noted to have psychosocial problems by their primary care clinicians. Because the purpose of the parent study (CBS) was to examine the role of insurance status on pediatric care, especially for minority youth, a stratified sequential sample (N = 1,970) based on insurance status and race was employed to obtain follow-up data. This allowed for an over-sampling of Hispanic, African American and uninsured children. Of the 1,970 families sampled, 1,354 (69%) were successfully contacted and enrolled in the follow-up.

Children were excluded from the present investigation if they were not seen by their primary care clinician and if the same adult respondent did not complete the questionnaires at baseline and follow-up. Thus, 804 families were included in the present analyses.

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2.3. Procedures

Institutional review boards affiliated with PROS, ASPN and the University of Pittsburgh approved procedures and consent forms for the CBS. Consenting parents (or primary caregiver) completed a questionnaire while waiting to see the clinician. The clinician did not see the completed Parent Questionnaire. After the office visit, the clinician completed a survey about the encounter, documenting whether a new, ongoing, or recurrent psychosocial problem was present. Patient insurance, reason for the visit, and information regarding management of psychosocial problems were also collected.

At six months post-enrollment, a follow-up questionnaire was mailed to participating parents of children identified with a psychosocial problem. Parents completed questions regarding their child's grades in school, psychosocial symptoms, physical health and health care utilization during the six months between enrollment and follow-up, as well as questions regarding communication with their child's physician and ratings of satisfaction and quality of care received. Questions regarding communication and satisfaction/quality focused on parents' perceptions of the overall care provided.

2.4. Measures

2.4.1. Demographic information—The following demographic data were collected from parents: patient race, age, and gender, parental education, and marital status. Parental education was defined as the highest level of education of either parent; marital status was dichotomized as married versus all others. Additional demographic data that were collected include whether the child always sees the same doctor, the child's overall health status, the season of the year that the data was collected, and region of country where patient resides.

2.4.2. Parent-provider communication—Communication was assessed with four questions similar to those used in a previous investigation [38]: 1) “Do the doctors/clinicians ask you about your ideas and opinions when they are planning care for this child?”; 2) “Do the doctors/clinicians ever ask if you can manage things when this child is sick?”; 3) “How often do you think the doctor/clinician understands what you say or ask?”; and 4) “How often are your questions to the doctor/clinician answered in ways that you understand?” Participants rated each question on a 5-point Likert-type scale ranging from “never” to “always”. Parents could also indicate “not sure/don't know” in response to these questions.

Communication variables were negatively skewed (i.e., most parents reported that their pediatricians “always” communicated well). Therefore, for analytic purposes, responses to the four communication variables were redefined as “always” versus all other responses.

2.4.3. Ratings of satisfaction and parent-reported quality of care—Parent satisfaction with health care was assessed with the following question, “Overall, how satisfied are you with the care you have received from your child's usual doctor/clinician?” Respondents used a 3-point Likert-type scale ranging from “not very satisfied” to “very satisfied”; parents could also indicate “not sure/don't know”. Quality of care was assessed with the following question, “How would you rate the quality of care you have received from your child's usual clinician?” Respondents used a 4-point Likert-type scale ranging from “very low” to “very high”. Due to skewed response rates (i.e., most parents rated satisfaction and quality as very high) satisfaction and quality of care variables were dichotomized (i.e., “very satisfied” and “very high” versus all other responses) for analyses.

2.5. Data analyses

First, frequency distributions were assessed to determine the relative levels of parent-reported communication, satisfaction, and quality of care. Next, χ^2 tests were used to determine if there

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was an overall relationship between parent-provider communication and satisfaction and quality ratings. Finally, logistic regressions (using the redefined dichotomous satisfaction and quality of care variables) were conducted to examine the relationship between demographic variables, parent-provider communication, and parental satisfaction and perceived quality of care.

3. Results

3.1. Sample characteristics

Table 1 presents the sample characteristics. Children within this sample were predominantly healthy, Caucasian males. Mean age of children within this sample was approximately 8 years. Parents within this sample were predominantly not married and had at least a high school education.

3.2. Parent-reported communication and ratings of satisfaction and quality of care

Parents reported good overall communication with their child's primary care practitioner (PCP). Seventy-one percent of parents always understood their child's PCP, while only 1% reported that they rarely or never understood him or her. Similarly, 61% of parents reported that their child's PCP always understood them, while 44% of parents reported that their child's PCP always asked their opinions regarding care. However, only 20% of parents reported that their child's PCP always asked if they could manage things when their child was sick.

Parent ratings of satisfaction and quality of care were both very high in this sample. Eighty-two percent of parents indicated that they were very satisfied with the care they received from their child's usual PCP and 68% reported that the quality of care received was very high.

3.3 Relationship between communication and satisfaction/quality ratings

When the communication was good between parents and PCPs, parents more often report being “very satisfied” with the care they receive and rated the quality of care as “very high” (see Table 2). This was particularly true when the PCP asked for the parent's ideas when planning care for their child. Parents are very satisfied with care 98% of the time when the PCP asked for their ideas compared to 71% when not asked. They are also more likely to rate the quality of care received as very high when they were asked for their ideas (91% when asked vs. 51% when not asked).

3.4. Multivariate analyses

Due to a restriction of range on one communication variable (i.e., almost none of the parents whose PCPs asked them about planning care were less than “very satisfied” with care), including all of the four communication variables in one logistic regression was not possible. For this reason, analyses to determine satisfaction with care were limited to those parents who reported that the PCP did not ask for their ideas in the planning process. By limiting the sample in this way, the relative impact of the three remaining communication variables could be assessed. Results of this logistic regression are presented in Table 3. Both parents who reported that their PCP always answers in ways they understand and parents who reported their PCP always understands them were three times more likely to report being very satisfied with care (Odds Ratio [OR] = 3.0, $p < .0001$ and OR = 2.7, $p < .001$, respectively). Furthermore, parents who lived in the western region of the U.S. were three times more likely to be satisfied with care (OR = 3.1, $p < .02$). No other variables were significantly related to satisfaction.

Results of the logistic regression predicting very high quality of care ratings are presented in Table 4. Each of the four communication variables was a significant predictor of high quality of care ratings. When the PCP asked parents for their ideas in the planning process, parents

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were nearly 4 times more likely to rate the quality of care as very high (OR = 3.97, $p < .0001$). Similarly, when the PCP always asked parents if they were managing (OR = 2.65, $p < .01$), the doctor always answers in ways parents understand (OR = 2.53, $p < .0001$), and the doctor always understands what the parent is saying (OR = 2.58, $p < .0001$), parents were nearly 3 times more likely to rate the quality of care as very high. No other variable was significantly related to quality ratings.

4. Discussion and Conclusions

4.1. Discussion

Although a number of barriers exist for effective parent-provider communication regarding psychosocial issues,[4-5] the present findings suggest that many parents of children with psychosocial concerns perceive their child's provider as communicating effectively with them. Consistent with previous studies that practitioners' displays of interest and attention when listening to parents are associated with parental disclosure of psychosocial concerns,[8,39] the use of effective communication skills such as collaboration, mutual understanding, and provider concern are associated with additional parental perceptions of positive outcomes of care in the present study. This finding is encouraging given that many pediatricians acknowledge difficulties addressing psychosocial concerns in pediatric practice.[4,7] Thus, even if pediatricians feel less comfortable addressing such concerns with families, parents feel more satisfied with care and rate care more positively when clinicians incorporate these interpersonal communication skills. Active communication skills such as probing about families' coping skills may have a strong impact on parents' perceptions of care.

These findings may provide some insight into potentially effective strategies for working with families seeking help for children with a psychosocial concern. One recent study found that 43% of discussions regarding psychosocial issues between parents and providers contained a discouraging response from the provider.[12] This may be due, at least in part, to pediatrician discomfort with discussing such topics.[12] However, as in general pediatric practice,[25-26] if pediatricians collaborate with families with children with psychosocial concerns, communicate in such a way so that parents can understand them, and convey to families that they understand their concerns, satisfaction with care will be high. Thus training pediatricians in the use of interpersonal communication skills may help to decrease the number of discouraging responses and create an atmosphere where families feel more comfortable disclosing psychosocial concerns.

Of particular importance for high satisfaction is collaborating with families during the treatment planning process. Those parents who were asked for their ideas in the treatment planning process were almost unanimously “very satisfied” with the care received and were 4 times more likely than those parents not involved to rate the quality of care as very high. The importance of effective collaboration or partnership with families was first identified by the pioneering work of Korsch and colleagues [40-41]. The use of collaboration is associated with a number of positive treatment outcomes.[17,42] These include increased satisfaction with care,[21,42-43] increased understanding and recall of information provided,[21] improved emotional health, and decreased utilization of medical care.[22] Collaboration with patients and families can lead to a deeper appreciation of the larger context in which the presenting problem is occurring and may aid in eliciting patients' concerns by helping to establish greater rapport.[43]

In addition to collaboration, clear understanding between parent and practitioner also played a role in determining parental report of satisfaction with care and ratings of high quality care. Interestingly, whether or not parents felt understood by their child's provider was just as predictive of high satisfaction and quality ratings as whether or not parents understood what

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their child's provider was saying to them. This underscores the importance of an empathic approach to care when working with families with a child who has a psychosocial concern. In fact, both research [25-26] and theory [29-31] support the association between empathy and positive treatment outcomes. For example, adult patients' perceptions of physician empathy are associated with greater patient satisfaction, increased self-efficacy, and reduced emotional distress [44] as well as with patient enablement and positive changes in health outcomes (i.e., increased symptom resolution).[45] Expressions of interest and warmth are associated with quality of care ratings in adult primary care settings.[46] Thus, findings from the present study as well as results from previous research suggest that conveying to families a deeper appreciation for the concerns they bring to the primary care encounter may enhance families' perceptions of the quality of care received.

Finally, region of the country influenced parent report of satisfaction with care. Families from the West region of the United States were three times more likely than those from the South to rate their satisfaction as very high. Families in the West are less likely to receive psychotropic medications and more likely to have access to mental health services than those in the South, although the causes of these relationships are beyond the scope of our data.

Results of this study should be understood in light of a few qualifications. First, results are based on parent perception of communication. While parental perceptions of communication are certainly important for understanding the parent-provider relationship and outcomes of care, the addition of objective measures of parent-provider communication would further enhance our understanding of the association between communication and satisfaction ratings. Second, the methods used to obtain communication, satisfaction and quality ratings are limited. Only one item each was used to assess satisfaction and quality ratings while four questions were used to assess parents' perceptions of provider communication. Future investigations would benefit from more comprehensive assessments of communication and ratings of satisfaction and quality of care. Also, ratings of communication, satisfaction, and quality of care were taken at the same time point, which was six months following enrollment into the CBS. Still, this study is important because it focuses on a large sample of families with children with psychosocial problems and the impact of communication items on overall satisfaction and quality ratings is impressive.

4.2. Conclusion

Parents of children with psychosocial concerns who feel that their child's physician asks for their ideas about care, inquires about how families are managing, and communicates clearly are more likely to be satisfied with the overall care received and to rate the quality of care provided as higher. Collaboration, empathy and two-way communication are important behaviors for physicians caring for children with psychosocial problems.

4.3. Practice Implications

Primary care practitioners should be cognizant of the importance of collaborating with parents of children with psychosocial concerns regarding treatment decisions, inquiring about how families are managing, speaking in language that is easily understood by parents, and conveying to parents that they are attentively listening to and understanding what parents are communicating to them. Increased attention to training in and use of interpersonal communication skills when working with such families may lead to improved outcomes of care. Efforts to incentivize primary care practitioners to gain these skills and to demonstrate them should be incorporated into pay-for-performance and other bonus programs.

I confirm all patient/personal identifiers have been removed or disguised so that the patients/persons described are not identifiable and cannot be identified through the details of the story.

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References

1. Kelleher KJ, McInerny TK, Gardner WP, Childs GE, Wasserman RC. Increasing identification of psychosocial problems: 1979-1996. Pediatrics 2000;105:1313–1321. [PubMed: 10835074]
2. Borowsky IW, Mozayeny S, Ireland M. Brief psychosocial screening at health supervision and acute care visits. Pediatrics 2003;112:129–133. [PubMed: 12837878]
3. Bernal P. Hidden morbidity in pediatric primary care. Pediatr Ann 2003;32:413–418. [PubMed: 12846020]
4. Williams J, Klinepeter K, Palmes G, Pulley A, Foy JM. Diagnosis and treatment of behavioral health disorders in pediatric practice. Pediatrics 2004;114:601–606. [PubMed: 15342827]
5. Sayal K. Annotation: Pathways to care for children with mental health problems. J Clin Psychol Psychiatry 2006;47:649–659.
6. Weitzman CC, Leventhal JM. Screening for behavioral health problems in primary care. Curr Opin Pediatr 2006;18:641–648. [PubMed: 17099364]
7. Costello EJ. Primary care pediatrics and child psychotherapy: A review of diagnostic, treatment, and referral practices. Pediatrics 1986;78:1044–1051. [PubMed: 3537949]
8. Hickson GB, Altemeier WA, O'Connor S. Concerns of mothers seeking care in private pediatric offices: Opportunities for expanding services. Pediatrics 1983;72:619–624. [PubMed: 6634264]
9. Horwitz SM, Leaf PJ, Leventhal JM. Identification of psychosocial problems in pediatric primary care: Do family attitudes make a difference? Arch Pediatr Adolesc Med 1998;152:367–371. [PubMed: 9559713]
10. Perrin EC. Commentary: Collaboration in pediatric primary care: A pediatrician's view. J Pediatr Psychol 1999;24:453–458. [PubMed: 10554458]
11. Stancin T, Palermo TM. A review of behavioral screening practices in pediatric settings: Do they pass the test? J Dev Behav Pediatr 1997;18:183–194. [PubMed: 9213238]
12. Wissow LS, Larson S, Anderson J, Hadjiisky E. Pediatric residents' responses that discourage discussion of psychosocial problems in primary care. Pediatrics 2005;115:1569–1578. [PubMed: 15930218]
13. Morrongiello BA, Hillier L, Bass M. ‘What I said’ versus ‘what you heard’: A comparison of physicians' and parents' reporting of anticipatory guidance on child safety issues. Injury Prevention 1995;1:223–227. [PubMed: 9346035]
14. Briggs-Gowan MJ, Horwitz SM, Schwab-Stone ME, Leventhal JM, Leaf PJ. Mental health in pediatric settings: Distribution of disorders and factors related to service use. J Am Acad Child Adolesc Psychiatry 2000;39:841–849. [PubMed: 10892225]
15. Bauer NS, Webster-Stratton C. Prevention of behavioral disorders in primary care. Curr Opin Pediatr 2006;18:654–660. [PubMed: 17099366]
16. Epstein RM, Franks P, Fiscella K, Shileds CG, Meldrum SC, Kravitz RL, Duberstein PR. Measuring patient-centered communication in patient-physician consultations: Theoretical and practical issues. Soc Sci Med 2005;61:1516–1528. [PubMed: 16005784]
17. Roter D. The enduring and evolving nature of patient-physician relationship. Patient Educ Couns 2000;39:5–15. [PubMed: 11013543]
18. Ad hoc task force on definition of the medical home. The Medical Home. Pediatrics 1992;90:774. [PubMed: 1408554]
19. Medical home initiatives for children with special needs project advisory committee. Policy statement: The medical home. Pediatrics 2002;110:184–186. [PubMed: 12093969]

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20. American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, American Osteopathic Association. Joint principles of the patient-centered medical home. 1997. Retrieved from: http://www.acponline.org/hpp/approve_jp.pdf?hp
21. Hall JA, Roter DL, Katz NR. Meta-analysis of correlates of provider behavior in medical encounters. Med Care 1988;26:657–675. [PubMed: 3292851]
22. Stewart M, Brown JB, Donner A, McWhinney IR, Oates J, Weston WW, Jordan J. The impact of patient-centered care on outcomes. J Fam Pract 2000;9:796–804. [PubMed: 11032203]
23. Aikens JE, Bingham R, Piette JD. Patient-provider communication and self-care behavior among type 2 diabetes patients. Diabetes Educ 2005;31:681–690. [PubMed: 16203852]
24. Suarez-Almazor ME. Patient-physician communication. Curr Opin Rheumatol 2004;16:91–95. [PubMed: 14770091]
25. Nobile C, Drotar D. Research on the quality of parent-provider communication in pediatric care: Implications and recommendations. J Dev Behav Pediatr 2003;24:1–12.
26. Hart CN, Drotar D, Gori A, Lewin L. Enhancing parent-provider communication in ambulatory pediatric practice. Patient Educ Couns 2006;63:38–46. [PubMed: 16242291]
27. Clark NM, Gong M, Schork A, Evans D, Roloff D, Hurwitz M, Maiman L, Mellins RB. Impact of education for physicians on patient outcomes. Pediatrics 1998;101:831–836. [PubMed: 9565410]
28. Clark NM, Gong M, Schork MA, Kaciroti N, Evans D, Roloff D, Hurwitz M, Maiman LA, Mellins RB. Long-term effects of asthma education for physicians on patient satisfaction and use of health services. Eur Respir J 2000;16:15–21. [PubMed: 10933079]
29. Bandura A. Social cognitive theory: An agentic perspective. Annu Rev Psychol 2001;52:1–26. [PubMed: 11148297]
30. Miller WR. Rediscovering fire: Small interventions, large effects. Psychol Addict Behav 2000;14:6–18. [PubMed: 10822741]
31. Rotter, JB. Social learning and clinical psychology. Prentice-Hall; New York: 1954.
32. Bocian AB, Wasserman RC, Slora EJ, Kessel D, Miller R. The size and age-sex composition of pediatric practice: A study from Pediatric Research in Office Settings (PROS). Arch Pediatr Adolesc Med 1999;153:9–14. [PubMed: 9894993]
33. Green LA, Miller RS, Reed FM, Iverson DC, Barley GE. How representative of typical practice are practice-based research networks? A report from the Ambulatory Sentinel Practice Network Inc. (ASPN). Arch Fam Med 1993;2:939–949. [PubMed: 8111525]
34. Wasserman RC, Croft CA, Brotherton SE. Preschool vision screening in pediatric practice: A study from the Pediatric Research in Office Settings (PROS) Network. Pediatrics 1992;89:834–838. [PubMed: 1579390]
35. American Academy of Pediatrics. Periodic Survey of Fellows #32. American Academy of Pediatrics; Elk Grove Village, IL: 1995.
36. Wasserman RC, Slora EJ, Bocian AB, Fleming GV, Baker AE, Pedlow SE, Kessel W. Pediatric research in office settings (PROS): A national practice-based research network to improve children's health care. Pediatrics 1998;102:1350–1357. [PubMed: 9832568]
37. Kelleher KJ, Childs GE, Wasserman RC, McInerny TK, Nutting PA, Gardner WP. Insurance status and recognition of psychosocial problems: A report from PROS & ASPN. Arch Pediatr Adolesc Med 1997;151:1109–1115. [PubMed: 9369872]
38. Bertakis KD, Roter D, Putnam SM. The relationship of physician medical interview style to patient satisfaction. J Fam Pract 1991;32:175–181. [PubMed: 1990046]
39. Wissow LS, Roter DL, Wilson MEH. Pediatrician interview style and mothers' disclosure of psychosocial issues. Pediatrics 1994;93:289–295. [PubMed: 8121743]
40. Freemon B, Negrete VF, Davis M, Korsch BM. Gaps in doctor-patient communication” Doctor-patient interaction analysis. Pediatr Res 1971;5:298–311.
41. Korsch BM. What do patients and parents want to know? What do they need to know? Pediatrics 1984;74(suppl):917–919. [PubMed: 6493893]
42. Wissow LS, Roter D, Bauman LJ, Crain E, Kercsmar C, Weiss K, Mitchell H, Mohr B. Patient-provider communication during the emergency department care of children with asthma. Med Care 1998;36:1439–1450. [PubMed: 9794338]

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43. Mallinger JB, Griggs JJ, Shields CG. Patient-centered care and breast cancer survivors' satisfaction with information. Patient Educ Couns 2005;57:342–349. [PubMed: 15893218]

44. Zachaiae R, Pedersen CG, Jensen AB, Ehrnrooth E, Rossen PB, von der Maase H. Association of perceived physician communication style with patient satisfaction, distress, cancer-related self-efficacy, and perceived control over disease. Br J Cancer 2003;88:658–665. [PubMed: 12618870]

45. Price S, Mercer SW, MacPherson H. Practitioner empathy, patient enablement and health outcomes: A prospective study of acupuncture patients. Patient Educ Couns. in press. Online publication: 02/07/06; doi,10.1016/j.pec.2005.11.006

46. Bensing JM, Donkers J. Instrumental and affective aspects of physician behavior. Med Care 1992;30:283–298. [PubMed: 1556878]

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Table 1

Description of the sample of children with psychosocial problems (N=804)

Characteristic	N (%) / Mean (SD)
Average age	8.8 (3.2)
Child is male	528 (65.7%)
Child is white	674 (83.8%)
Child's health is fair or poor	54 (6.7%)
Parents are married and living together	306 (38.1%)
Highest level of parent education	
High school diploma or less	195 (24.3%)
Some college or college/technical degree	455 (56.6%)
Graduate/professional degree	154 (19.1%)

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Table 2

Relationship Between Parent-Perceived Communication and Parent-Reported Satisfaction and Quality of Care (N=804)

	Parent is very satisfied with care from usual doctor[*]	**Parent rates quality of care from usual doctor very high**[*]
Doctor always asks for parent's ideas when planning care		
Yes	97.7%	90.8%
No	70.8%	51.4%
Doctor always asks if parent can manage when child is sick		
Yes	96.8%	94.2%
No	78.6%	62.0%
Doctor always understands what parent says		
Yes	93.6%	84.1%
No	64.8%	43.6%
Doctor always answers in ways parent understands		
Yes	91.8%	81.1%
No	59.3%	36.4%

[*] All p-values < .0001

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Table 3

Logistic Regression Predicting Satisfaction with Care Among Parents Who were not Asked for Ideas when Planning Care (N=433)

Variable	**Odds Ratio**	**p-value**
Doctor always asks if parent can manage when child is sick	0.7	.6
Doctor always understands what parent says	2.7	.0007
Doctor always answers in ways parent understands	3.0	<.0001
Child's age	1.0	.7
Child is male	1.2	.5
Child is white	1.2	.5
Parental education *(referent: graduate/professional degree)*		
High school or less	0.9	.8
Some college or college degree	1.0	.1
Child's overall health is fair or poor	0.7	.4
Child always sees same doctor	1.1	.6
Season *(referent: Summer)*		
Winter	1.4	.3
Autumn	0.8	.5
Spring	0.9	.7
Region *(referent: South)*		
Midwest	1.5	.2
West	3.1	.02
Northeast	1.6	.1
Early patient	0.9	.7

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Table 4

Logistic Regression Predicting Quality of Care (N=772[*])

Variable	Odds Ratio	p-value
Doctor always asks for parent's ideas when planning care	3.97	<.0001
Doctor always asks if parent is managing	2.65	.01
Doctor always understands what parent says	2.58	<.0001
Doctor always answers in ways parent understands	2.53	<.0001
Child's age	1.02	.5
Child is male	1.06	.8
Child is white	1.13	.6
Parental education *(referent: graduate/professional degree)*		
High school or less	1.18	.5
Some college or college degree	1.46	.2
Child's overall health is fair or poor	0.91	.8
Child always sees same doctor	1.20	.4
Season *(referent: Summer)*		
Winter	1.04	.9
Autumn	1.18	.5
Spring	0.79	.4
Region *(referent: South)*		
Midwest	1.03	.9
West	1.32	.4
Northeast	1.24	.4
Early patient	0.93	.7

[*] N=772 owing to missing values