Clinical Case Study: Pediatric Residents’ Discussions of and Interventions for Children’s Behavioral and Emotional Problems

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Objective To examine the effects of a screening instrument and parent handouts on pediatric residents’ discussions of and interventions for children’s behavioral and emotional problems.

Method Four pediatric residents and 52 parent-child dyads attending an ambulatory pediatric primary care clinic participated in the study. We used a multiple baseline design across residents. We assessed the effect of the interventions by measuring nine target behaviors of the pediatric residents.

Results After being trained to use the screening instrument, residents increased the number and variety of questions they asked regarding behavioral and emotional issues. Residents’ attempts at intervention showed small but consistent increases when handouts on behavior management procedures were made available for distribution to parents.

Conclusions The use of a screening instrument in pediatric primary care shows promise for increasing discussions between residents and parents about children’s behavioral and emotional issues. Further research should examine strategies to improve pediatric residents’ attempts at intervention for behavioral and emotional problems in children.

Key words pediatric primary care; child behavior problems; screening.

In November 2001, the American Academy of Pediatrics renewed its commitment to the identification and treatment of children’s behavioral and emotional disorders. Behavioral and emotional disorders, first recognized as the “hidden morbidity” in primary care pediatrics more than 20 years ago (Haggerty, Roghmann, & Bless, 1975; Kelleher & Wolraich, 1995), are now the leading cause of disability in children and adolescents (Costello et al., 1988; Costello, Edelbrock, & Costello, 1988; Kelleher & Wolraich, 1995). Estimates of child behavioral problems in pediatric settings range from 11% to 22% (e.g., Costello et al., 1988), whereas rates of physician recognition of these problems range from 5% to 9% (Costello et al., 1988; Lavigne et al., 1993).

Some researchers have suggested that physicians’ use of a behavioral screening instrument might increase identification of children’s behavioral and emotional problems (Jellinek & Murphy, 1990), partly because, before entering the exam room, the physician would have specific behavioral information that can serve as a starting point for discussion (Stancin & Palermo, 1997). To date, only one study has examined physicians’ use of a behavioral screening instrument on recognition of and intervention for children’s behavioral and emotional problems (i.e., Murphy, Arnett, Bishop, Jellinek, & Reede, 1992). Murphy et al. demonstrated that routine implementation of a behavioral screening instrument increased the rate of mental health referrals from less than 2% to greater than 10%. However, physicians’ verbalizations in the exam room (e.g., asking questions or commenting) and attempts at interventions other than mental health referrals were not examined.

The purpose of this case study was to evaluate the effects of a brief screening instrument (Pediatric Symptom Checklist [PSC]) and parent handouts on pediatric residents’ discussions of and interventions for behavioral/emotional problems in school-age children. We hypothesized that use of the PSC would increase residents’ dis-
discussions of behavioral/emotional problems in children. However, we were uncertain whether the screening instrument would increase residents’ interventions because the instrument itself does not provide recommendations concerning treatment. For this reason, parent handouts addressing specific behavioral and emotional issues were made available to the resident as an adjunct to traditional treatment options (e.g., mental health referral). A second purpose of this case study was to assess parent satisfaction with the clinic visit as it related to the use of the PSC and parent handouts.

Method

Design

A multiple baseline design across subjects (Barlow & Hersen, 1984) was used to examine the effects of a screening instrument (PSC condition) and a screening instrument plus parent handouts (PSC + handouts condition) on residents’ discussions and interventions regarding behavioral and emotional issues.

Participants

Four pediatric residents and 52 parent-child dyads attending an ambulatory pediatric clinic participated. The residents were men in their first year of residency. Three of the residents were in their late twenties and one (G. F.) was in his early forties. All four of the residents were given the first week of the 4-week rotation to acclimate to the clinic routine before they were invited to participate in the study.

Parent-child dyads included children ages 6 to 16 attending well-child visits or visits for minor, acute illnesses (e.g., otitis media). Children attending the clinic for evaluation of behavior problems were not included. Of the 56 eligible parent-child dyads, 52 participated (two dyads declined to participate because of the audiotaping and two refused for personal reasons). The mean age of the children was 10.37 (SD = 3.53). Of the 52 children, 18 were boys, and 48 were African Americans (4 Caucasians). The clinic population consists primarily of low-income African American families.

Response Definitions

Nine target behaviors (definitions and examples available from the first author) were identified by a review of the literature. The nine behaviors (in italics) were categorized as either total behavioral discussions (included initial questions about behavioral/emotional issues, follow-up questions about behavioral/emotional issues, and comments about behavioral/emotional issues) or interventions (included offered the parent advice, reassurance, education, behavioral handout, mental health referral, or prescription).

Materials

Pediatric Symptom Checklist. The PSC is a 35-item parent-completed questionnaire that evaluates the behavioral/emotional functioning of children ages 6 to 16 (Jellinek et al., 1988; Murphy & Jellinek, 1983; Murphy, Jellinek, & Milinsky, 1989). A cutoff score of 28 has consistently differentiated between children with behavioral/emotional problems and typically developing children, with a sensitivity of .95, a specificity of .68, and a kappa of .60 (Jellinek et al., 1988; Murphy, Jellinek, Lamb, & Fenton, 1986).

Parent Satisfaction Questionnaire (PSQ). The PSQ is a 20-item measure of parental satisfaction with their child’s health care (Finney et al., 1990), modified from the Medical Interview Satisfaction Scale (MISS; Wolf, Putnam, James, & Stiles, 1978). Items are rated on a Likert-type scale ranging from “strongly disagree” to “strongly agree.” The range of possible scores is 20 (extreme dissatisfaction) to 100 (extreme satisfaction).

Parent Handouts. Five separate handouts were developed describing common behavioral and emotional problems in children and corresponding parental interventions. Handouts were designed to match clusters of symptoms from the PSC as closely as possible.

Procedures

The study was approved by the participating medical center’s institutional review board, and written consent was obtained from the participants. Parents were informed that their children’s visit with the resident would be audiotaped. Parents completed the PSC in the waiting room and the PSQ in the exam room after their child’s visit was complete. Parents and residents were informed that the purpose of the study was to investigate parent-physician communication during pediatric visits.

Baseline

Baseline was in effect for four patient visits (i.e., four audiotaped sessions with each parent-child dyad) for the first resident in each pair (i.e., J. G. and K. E.) and for six patient visits for the second resident in each pair (B. S. and G. F.). The residents did not have access to the parent-completed PSC during the baseline condition.

PSC Condition

After baseline, the residents were trained individually using a standardized protocol developed for the purpose of this study. The residents were taught how to use and
score the PSC, and it was placed on the medical chart before the resident saw the patient. The resident was responsible for scoring the PSC and deciding how to use the information. The PSC condition was in effect for four clinic visits for each resident.

**PSC + Handouts Condition**

After the PSC condition, the residents were trained individually on the importance of intervention, and behavioral handouts were provided that the resident could distribute to parents. The behavioral handouts were stored in slots along a wall in the nurses’ station next to other types of patient brochures. The resident was responsible for deciding how and when to use the handouts. The PSC + handouts condition was in effect for four clinic visits for each resident.

**Data Collection and Interobserver Agreement**

Data were collected using a frequency count of the nine target behaviors. A second rater blind to the residents’ condition independently recorded the target behaviors from 30% ($n = 16$) of the audiotapes. Interobserver agreement, calculated by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100, ranged from 87% to 100%, with a mean score of 94%.

**Results**

The total number of behavioral discussions and interventions is presented in Figure 1. As shown, behavioral discussions increased from baseline to the treatment conditions for each of the residents.

The total number of interventions demonstrated no appreciable difference for any of the residents from baseline to the PSC condition, but showed a small, consistent increase from the PSC condition to the PSC + handouts condition. However, offering the parent a behavioral handout was not available to the residents in the baseline or PSC condition. When excluded from the analysis, there was no appreciable difference across the three conditions for any of the residents.

Exploratory analysis of the relationship between the PSC score and the combined number of behavioral discussions and interventions was examined. This analysis was conducted by excluding parent-child dyads in the baseline condition and collapsing the data across residents ($n = 32$). A partial correlation coefficient controlling for child age failed to yield a significant relationship between the PSC score and the number of behavioral discussions and interventions ($r = .21, ns$). Also, of the 13 children in the PSC or PSC + handouts condition with PSC scores greater than the clinical cutoff of 28, only two (15%) patients received referrals for follow-up evaluations.

Parent satisfaction was also examined. Figure 2 presents PSQ scores for each condition. Visual analysis indicates that PSQ scores for two residents (K. E. and J. G.) were slightly lower during the PSC + handouts condition when compared to baseline and the PSC condition, whereas the other two residents (G. F. and B. S.) showed more stability of PSQ scores by condition.

An exploratory analysis was conducted to examine PSQ scores by condition collapsing across residents. The mean PSQ score was 87.75 ($SD = 6.89$) for the baseline condition, 91.13 ($SD = 6.58$) for the PSC condition, and 84.13 ($SD = 8.82$) for the PSC + handouts condition. A one-way analysis of variance (ANOVA) revealed a significant difference between groups, $F(2, 51) = 3.73, p < .05$. Post-hoc analysis using the Student-Newman-Kuels procedure revealed that PSQ scores for the PSC + handouts condition were significantly lower than those for the PSC condition.

**Discussion**

This case study provides preliminary evidence that use of a screening instrument in pediatric ambulatory clinics may increase discussions about behavioral/emotional issues between residents and parents. These results are important in light of the American Academy of Pediatrics’ (2001) renewed commitment to psychosocial aspects of pediatric care. As mentioned previously, increasing discussions about behavioral and emotional issues is a necessary first step in building effective strategies for identifying psychologically distressed children.

Our results suggest that use of a screening instrument may increase both the number and variety of behavioral discussions. For example, although G. F. consistently initiated behavioral discussions during baseline, his variety of questions was limited. For five of the six patients in his baseline phase, he limited his behavioral questions to “How’s school going?” and “How are things at home?” During the experimental conditions, he continued to ask questions about school and home but also inquired about a variety of other behaviors endorsed by the parent on the PSC.

This case study also demonstrated a small but consistent increase in interventions during the PSC + handouts condition, although this trend disappeared when the specific intervention of offered the parent a behavioral handout was removed from the analysis. Several possible explanations may explain this finding. First, none of the
Figure 1  Total number of behavioral discussions and interventions by residents.
Figure 2  Parent satisfaction scores by condition.
children in this study attended the clinic for evaluation of behavioral problems; therefore, the residents may have decided that intervention was not warranted for some of these children and deliberately chose not to intervene. Second, the intervention may not have been effective because the training was not as intensive as needed in order to effect a change in resident behavior. Third, the study included first-year residents with limited experience working with children and families, which may have affected their ability or willingness to attempt behavioral interventions with parents and children.

One potentially troubling finding of this case study was the failure to obtain an association between the PSC score and the total number of behavioral discussions or interventions, suggesting that the residents may not have used the PSC for its intended purpose of identifying children in need of more intensive screening or intervention (Murphy et al., 1989). Research examining physicians’ ability to use a screening instrument to accurately identify and intervene with children in psychological distress will clarify this issue.

Another issue that must be explored is parent satisfaction. In this study, two of the residents (K. E. and J. G.) showed decreases in parent satisfaction during the PSC + handouts condition. Because of the small sample size, these findings are not indicative of behavioral screening/intervention decreasing parent satisfaction, but they are nonetheless troubling. Ideally, parent satisfaction would be high when the provider screens for behavioral problems and provides intervention as necessary. Future studies examining behavioral screening by pediatric providers should carefully evaluate the effects of the intervention on parent satisfaction.

References


**Notes**

1. All training materials are available upon request from the first author. Training materials included written tests given to the residents after each intervention to increase treatment integrity. All residents scored 92% or higher on the written tests.