

Behavioral and Emotional Outcomes of an In-Home Parent Training Intervention for Young Children

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Abstract: *This study examined the effects of the Boys Town In-Home Family Program on improving child behavior and parenting skills. The three-month parenting intervention was delivered to parents in their homes. All children were referred to the program by school personnel. Of the 107 families that enrolled in the study, 79% completed the intervention. Pre-post assessments of child behavior indicated significant improvements on Internalizing and Externalizing problem behavior as measured by the Child Behavior Checklist. Significant gains were found on all child, family, and school behavior subscales of the parent version of Behavioral Emotional Rating Scale. Service provider ratings of child problems and parental capabilities (as assessed by the North Carolina Family Assessment Scale) also demonstrated significant improvement from intake to discharge. These results indicate that the In-Home Family Program is a promising approach for serving at-risk children and their families.*

Introduction

Many children have difficulties with emotional, mental, or behavioral problems. There are a variety of methods to address child problem behaviors, ranging from individual therapy, to classroom management techniques, to parental training. One successful approach, especially with young children, is parent training interventions that help parents learn skills to improve their child's behavior (Farrington & Welsh, 2003; Maughan, Christiansen, Jenson, Olympia, & Clark, 2005; Piquero, Farrington, Welsh, Tremblay, & Jennings, 2008). Most parenting interventions involve group-based sessions or self-paced books or videos, yet these approaches have significant problems with parents that do not complete the sessions or are not actively engaged in the services (Peters, Calam, & Harrington, 2005). One method for improving parental engagement is to provide services in a more accessible format, such as delivering services to parents in their home addressing their specific parenting problems. This focus on individualized and home-based services may lead to improved child behavior outcomes.

Many children who engage in disruptive problem behavior tend to come from families who demonstrate inconsistent and punitive parenting practices, experience considerable stress, and have frequent changes in family structure (Fergusson & Lynskey, 1998; Short & Brokaw, 1994). The stress of this environment often results in poor parenting practices, which have been associated with children experiencing academic failure, peer rejection, and emotional distress (Pettit, Bates, & Dodge, 1993;

Stormshak, Bierman, McMahon, & Lengua, 2000). Due to the impact a child's parent has on his or her behavior, a large number of programs have been developed to teach parents how to address their child's behavior appropriately.

The common focus of parent training is to teach parents to replace their negative parenting practices with practices that help reduce the likelihood of problem behavior and increase the likelihood of appropriate child behavior. There is a large literature base supporting the effectiveness of these parenting programs in addressing problem behavior from childhood into adolescence (Farrington & Welsh, 2003; Maughan et al., 2005; Piquero et al., 2008). For example, studies have shown that programs training parents in behavior-management and monitoring have reduced conduct and opposition problems in the preschool years (Shaw, Dishion, Supplee, Gardner, & Arnds, 2006; Webster-Stratton, 1984), antisocial behavior during the middle childhood years (Patterson, Dishion, & Chamberlain, 1993), and problem behavior and substance abuse in early adolescence (Dishion, Nelson, & Kavanagh, 2003).

While parenting programs have been successful in reducing children's problem behavior, there are a number of challenges in delivering these services (Powell, Fixsen, Dunlap, Smith, & Fox, 2007; Prinz & Sanders, 2007). One difficulty is getting parents to participate in programs. Despite the clear need for parents who demonstrate poor parenting skills to receive treatment, very few participate in parenting/family interventions (Zubrick et al., 1995). Prinz and Sanders identified some common barriers to participation including a set level of program intensity where parents may spend more time involved

in the intervention than necessary, having to deal with a number of service providers prior to receiving treatment, and possible stigmatization, because many parenting programs are designed and marketed to low-income families. In addition, Prinz and Miller (1994) found that families with greater levels of adversity were more likely to drop out of programs that did not address other areas of their lives (i.e., focused on child behavior only). This research suggests that families are more engaged in programs that offer treatment based on their individual needs, offer a direct connection to treatment providers, and target all parents as opposed to one specific group.

Thus, the purpose of this study was to evaluate the effectiveness of a parent training program that provides in-home individualized services. Specifically, the goals of the study were to examine the pre-post changes in child behavior and parenting skills for families that participated in a home-based parent management program as well as the participation rates in the program.

Method

Description of In-Home Family Program

The Boys Town In-Home Family Program is an early intervention program designed to focus on youth problem behavior in the school and home. School guidance counselors and teachers referred children who demonstrated problem behavior, such as aggression, noncompliance, and opposition. After enrollment in the program, families received weekly services from a Family Consultant for three to four months. While Family Consultants were available to families' 24-hours per day, they typically met in the home with their families two to four hours per week.

The intervention consisted of two phases, assessment and intervention. In the assessment phase, the Family Consultant worked with the family to identify the most problematic areas of functioning and the areas most in need of change. At the first meeting with families, Family Consultants conducted an informal interview to identify significant issues in the family's environment. Next, Family Consultants and family members developed a Service Plan, which included specific goals for the child and family, intervention strategies, and a plan for progress monitoring. During the intervention phase, Family Consultants taught families the necessary skills to meet their specific goals or areas of need (e.g., addressing a child's oppositional behaviors, improving family roles and relationships). Once the family was able to demonstrate knowledge of a particular skill, Family Consultants monitored and supported the family's progress until they became self-sufficient in that skill area. Finally, Family Consultants promoted mastery and generalization of the skills taught during the intervention. Family Consultants began to reduce their time spent with the family and encourage independent use of the skills in different situations. Throughout their work with families, the Family Consultants provided biweekly updates about the child's progress to school staff.

Boys Town trained Family Consultants during a two-week in-service. In Week One, Family Consultants learned about the Boys Town model, their role with the families, and a detailed description of the In-Home Family Program processes from engagement, assessment, service plan development, and the skills (e.g., active listening, exploration) needed to effectively intervene with families. In the second week, they learned how to teach specific skills (e.g., praising a child, using calming down

strategies) to families along with understanding confidentiality and safety/emergency procedures. Family Consultants demonstrated mastery of the basic behavior skills sets through role-playing and the completion of exams.

Participant Recruitment

Eligibility. Local schools in Palm Beach County referred children to the Boys Town In-Home Family Program. Children were identified by schools based on the following criteria: (a) resided in Palm Beach County; (b) attended a participating public school; and (c) were at risk for school failure or displayed persistent problem behavior (e.g., fighting, tantrums, noncompliant). The child also could not have a history of mental health diagnosis, aside from ADHD, or be currently receiving court-ordered services. Referrals to the program primarily came from the child's classroom teacher or guidance counselor. Families were eligible to participate in the study if they enrolled in services between October 1, 2007, and June 1, 2008, spoke primarily English or Spanish, and had a target child who was between the ages of five and 12 years old who had been living with them for at least four weeks prior to the start of services. Two initial eligibility checks were conducted, one during the intake/enrollment phone call when family meetings were scheduled and another during the consultant's initial interview with the family.

Consent. The families who met eligibility criteria were asked for their consent to participate during their intake interview with the Family Consultant. During this interview, Consultants provided a brief overview of the study, the time requirements, and the rights of participants prior to asking for consent. Those who chose to participate received a \$20.00 gift card at pretesting and another \$20.00 gift card at posttesting for their time.

Participants

One hundred and seven families agreed to participate in the study. The majority of the target children in the families were male (85%). The mean age of the target children at admission was eight years old. The children were in elementary school, with the majority in kindergarten to third grade (71%). Roughly 11% had been retained a grade, 7% had been suspended from school, and 20% had received special education services. The percent of children with prior out-of-home placements was 19%. Fifty-one percent of children had attended more than one elementary school.

Based on parental reports using the Children Health Services Screen (Ascher, Farmer, Burns, & Angold, 1996), most of the children received at least one type of mental health service in their lifetimes (53%). The most commonly reported service used was "Other Professional Help (49%)" which included assistance such as counselors, social services, and school guidance counselors. Twelve percent of children received "Nonprofessional Help" such as hotlines, self-help groups, or friends. A small percentage of the children received "Out-patient Services (8%)," which included mental health services, community mental health centers, and private professional treatment. Few children had received "Inpatient Services (4%)" such as psychiatric hospitals, group homes, or detoxification units.

Sixty-five percent of families reported an annual income below \$15,000 and averaged 2.7 members per household, suggesting that

many were below the federal poverty guidelines (U.S. Department of Health and Human Services, 2009). The majority of families were Hispanic (45%), followed by African American (37%), Caucasian (15%), and two or more races (3%).

Data Collection

Family Consultants participated in two days of extensive training prior to initiating interviews for the study. During these sessions, Family Consultants were provided with scripts on how to introduce the study and ask for families' participation and were trained on all aspects of the data collection process. Family Consultants conducted approximately one-hour long interviews with their families at intake and discharge. The interviews consisted of three measures assessing child behavior, child strengths, and services provided to the child for mental health or behavioral reasons. The directions and items for each measure were read aloud for both English and Spanish speaking families. Family Consultants working with Spanish speaking families were fluent in the language.

Measures

Child Behavior Checklist (CBCL). The CBCL (Achenbach & Rescorla, 2001) is a well-known reliable measure of child problem behavior which asks 113 questions. The CBCL provides information on a number of specific subscales. For this study, the Internalizing and Externalizing broadband scales and overall Total Problem Behavior T-scores were used. Normal T-scores for these scales are 59 or below, borderline scores between 60 and 63, and scores 64 and higher are considered clinical. The CBCL test-retest and internal consistency values for the Total Problems, Externalizing, and Internalizing broadband scales ranged from .72 to .95 and .65 to .92, respectively (Achenbach & Rescorla, 2001). The CBCL was administered to the child's guardian at both intake and discharge.

Behavioral and Emotional Rating Scale-Second Edition (BERS-2). The BERS-2 (Epstein, 2004) uses a strength-based approach to describe the behavioral and emotional status of a child. The BERS-2 includes 52 items and provides five subscale scores (i.e., Interpersonal Strength, Family Involvement, Intrapersonal Strength, School Functioning, and Affective Strength) and one composite score (i.e., Strength Index). The BERS subscales are interpreted as below average (1 - 5), average (6 - 12) and above average (13 - 20). The BERS strength index is scored as below average for scores 89 or lower, average for scores 90 - 110, and above average for scores 111 or higher. The BERS test-retest and internal consistency values for the five scales and total strength index ranged from .82 to .95 and .85 to .99, respectively (Epstein, 2004). The BERS Parent Rating Scale was administered to the child's guardian at both intake and discharge.

North Carolina Family Assessment Scale (NCFAS). The NCFAS (Kirk & Reed-Ashcraft, 2001) is a 25-item practice-based measure designed to assess five domains of family functioning (i.e., Environment, Parental Capabilities, Family Interactions, Family Safety, and Child Well-Being). Each item and subscale is scored on a six-point scale from "serious problem" to "clear strength." For this study, results from the Parental Capabilities and Child Well-Being scales are reported. Reliability coefficients for Parental Capabilities were .83 at intake and .91 at discharge and for Child Well-Being were .93 at both intake and

discharge (Reed-Ashcraft, Kirk, & Fraser, 2001). Family Consultants completed this assessment at both intake and discharge.

Treatment Implementation

Treatment integrity was assessed via observations by trained program experts who rated implementation of specific components of the model within four domains: Teaching Components (20 items), Relationship Building (12 items), Professionalism and Safety (4 items), and Natural Therapy Systems (4 items). The items were rated on a five-point scale ranging from incorrect implementation, to adequate implementation, to excellent implementation. Eighty-three treatment integrity observations of Family Consultants were completed with an average observation time of 75 minutes. Eighty-eight percent of staff met competency (an "adequate" rating or higher) within the Teaching Components domain, 76.5% met competency for Relationship Building, 92.6% in Professionalism and Safety, and 93.1% for the Natural Therapy Systems domain.

Data Analysis

Data were analyzed to determine whether there were significant differences for child behavior from pretest to posttest. Paired sample *t*-tests were conducted to establish if mean scores on the dependent measures prior to services were significantly different from mean scores following services. Cohen's *d* effect sizes were calculated to determine the magnitude of the differences. Non-parametric Wilcoxon tests were conducted to evaluate whether there were significant differences between the Parent Capabilities and Child Well-Being domains of the North Carolina Family Assessment Scale from pre- to posttesting.

Results

The primary purpose of this study was to document the changes that occurred in child behavior and parenting skills following participation in the Boys Town In-Home Family Program. Of the 107 families enrolled in the study, 85 (79%) completed the program. The families were enrolled for an average of 80 days, ranging from 21 to 119. The average number of direct contact hours with a Family Consultant was 23 hours, with 7% of families having 12 or less service hours, 21% between 13-19 hours, 48% between 20-30 hours, 15% over 30 hours, and 9% of families had missing data on this variable. Complete sets of both intake and discharge data were collected for 75 families, thus the outcome analyses focus on the results for these 75 families.

Parental Ratings of Child Behavior

Table 1 presents intake and discharge means, *t* values, and effect size (*d*) for the CBCL. Significant differences were found on both broadband and the Total Problems scales of the CBCL from intake to discharge. At intake, 40% (Internalizing), 62% (Externalizing), and 56% (Total Problems) of children presented within the borderline or clinical ranges. At discharge, only 20% (Internalizing), 31% (Externalizing), and 25% (Total Problems) had scores within the borderline or clinical ranges. Based on Cohen's standards of effect size (Cohen, 1988), large effects (over 0.80) were found from intake to discharge for Externalizing and Total Problems scales. Thus, following participation in the program, the children demonstrated fewer internalizing issues

Table 1

CBCL and BERS Ratings From Intake to Discharge

	Intake		Discharge		<i>t</i>	Effect Size <i>d</i>
	N = 73 ¹		N = 73 ¹			
	M	SD	M	SD		
CBCL						
Internalizing	56.59	11.40	49.07	10.80	6.43*	.68
Externalizing	62.59	8.96	53.23	11.82	8.32*	.90
Total Problems	61.29	10.02	50.48	13.18	8.73*	.93
BERS						
Interpersonal Strength	8.42	2.95	10.42	2.94	6.02**	.68
Family Involvement	8.99	2.48	10.32	2.62	4.24**	.52
Intrapersonal Strength	9.95	3.14	11.55	3.45	4.02**	.48
School Functioning	8.18	2.84	10.23	2.79	7.41**	.73
Affective Strength	9.97	2.95	11.38	2.77	4.04**	.40
Strength Index	93.67	15.31	105.11	17.53	6.19**	.70

Note. M = 50, SD = 10. Scores for CBCL Subscales are: Normal T < 60, Borderline T > 60 & < = 63, and Clinical T > 63. Scores for the BERS subscales: Below Average 1 - 5, Average 6 - 12, and Above Average 13 - 20. Scores for the Strength Index: Below Average ≤ 89, Average 90 - 110, and Above Average ≥ 111.

¹Missing data on two families.

*Statistically significant at Bonferroni alpha of .016.

**Statistically significant at Bonferroni alpha of .008.

such as depression, moodiness, and anxiety as well as externalizing issues such as rule-breaking, defiance, and aggression.

For the BERS, significant differences were found on all subscales and the Strength Index from intake to discharge (see Table 1). At intake, 39% (Interpersonal Strength), 26% (Family Involvement), 22% (Intrapersonal Strength), 44% (School Functioning), 27% (Affective Strength), and 42% (Strength Index) of children presented in the below average range. At discharge, 19% (Interpersonal Strength), 14% (Family Involvement), 12% (Intrapersonal Strength), 19% (School Functioning), 12% (Affective Strength), and 25% (Strength Index) had scores in the below average range. Medium effects were found from intake to discharge on the Strength Index and every subscale, with the exception of Affective Strength, which had a small effect.

Family Consultant Ratings of Families

Table 2 presents the findings from the North Carolina Family Assessment Scale (NCFAS). There were statistically significant improvements from intake to discharge for every item in the Child Well-Being domain. The largest gain was for the Child's Behavior item, which had an increase from 11% to 83% of families scoring in the adequate to clear strength range. The item ratings for School Performance and Relationship with Caregivers also had substantial improvements (26% intake to 86% discharge) in the percentage of families demonstrating strengths. Looking at the overall score for the Child Well-Being

domain, 25% of families had adequate or clear strengths at intake which increased to 88% of families at discharge.

The Parental Capabilities domain of the NCFAS also demonstrated statistically significant improvements from intake to discharge for every item (see Table 2). The largest improvements were found for Disciplinary Practices, which increased from 36% of families having an adequate or clear strength score at intake to 86% at discharge. There was a similar increase in the Provision of Development/Enrichment Opportunities, from 49% at intake to 91% at discharge. Examining the overall Parental Capabilities domain score, 57% of families had an adequate or clear strength score at intake, compared to 95% of families at discharge.

Discussion

Changes in Children's Problem Behavior

The primary goals of this study were to document the changes that occurred in child behavior and parenting skills following family participation in Boys Town In-Home Family Program. While only children without a history of mental health diagnoses (aside from ADHD) were served by this program, over half of the children were identified with borderline or clinical levels of child problem behavior. Despite the elevated emotional and behavioral risks for the children, there were significant improvements at posttest, with large to medium effect sizes across almost all subscales and total scores for all of the

Table 2

NCFAS Consultant Ratings at Intake and Discharge

	n	Intake		Discharge		Wilcoxon Signed Ranks Z-score
		M	SD	M	SD	
NCFAS Child Well-Being Domain						
Children's Mental Health	57	2.91	1.11	3.89	0.98	5.10**
Children's Behavior	57	1.67	0.89	3.35	0.99	6.08**
School Performance	57	2.26	1.11	3.63	1.03	5.70**
Relationship with Caregiver	57	2.04	1.00	3.58	0.92	5.80**
Relationship with Sibling(s)	45	2.27	0.96	4.09	1.04	5.23**
Relationship with Peer(s)	55	2.31	0.98	3.71	1.13	5.43**
Motivation to Maintain the Family	56	3.13	1.11	3.88	0.88	4.09**
Overall	56	2.07	0.83	3.59	0.93	6.00**
NCFAS Parental Capabilities Domain						
Supervision of Children	56	3.43	1.19	4.38	0.78	4.83**
Disciplinary Practices	50	2.22	1.00	3.68	1.00	5.85**
Provision of Development/Enrichment Opportunities	57	2.75	1.09	3.68	0.93	5.29**
Caregiver Mental Health	56	3.36	1.17	4.00	0.89	3.94**
Caregiver Physical Health	56	3.45	1.02	3.91	0.88	3.23**
Caregiver Use of Drugs/Alcohol	56	3.95	1.07	4.43	0.78	2.49*
Overall	57	3.12	1.23	3.98	0.88	4.69**

Note. The NCFAS was scored on a six-point scale, ranging from zero (serious problem) to five (clear strength).

* $p < .01$.

** $p < .001$.

child and parent report outcome measures. The number of youth with clinical or borderline total CBCL scores declined from 56% at intake to only 25% at discharge. Significant improvements were also found for the BERS, with the largest effect in the school functioning domain. These findings were also replicated in the NCFAS Family Consultant's rating of the Child's Well-Being, with significant improvements from intake to discharge across the domain, with the largest gains in Child Behavior, Relationship with Caregiver, and School Performance. Also according to the NCFAS ratings, significant gains were found for every item of the Parental Capabilities domain, with the greatest gains in Disciplinary Practices and Provision of Enrichment Opportunities.

The gains of our sample across all behavioral and emotional domains were also significant when compared to the literature on parent-training interventions. A recent meta-analysis of behavioral parent training found the average effect size for within-subjects designs using individual consultation as the primary type of intervention was .43 (Maughan et al., 2005). The average effect size in the current study was .67, suggesting a substantial effect in comparison to other parenting programs. Therefore, the results provide a strong rationale

that the Boys Town In-Home Family Program potentially contributed to positive changes in children's problem behavior.

Moreover, the fact that school functioning and performance improved for both the BERS and the NCFAS suggests that these improvements were seen outside of the family sphere and carried over successfully into the school domain. One possible explanation for this improvement in school functioning is that the program focuses on a parent training component which raises parent's expectations for their child's behavior at home and in other social situations. Likewise, there is a school component encouraging parental involvement in homework and school activities. Finally, Family Consultants modeled for parents a biweekly contact with their child's teacher, which likely improved school-to-home communication. Research on school-based interventions for parents has suggested those elements as simple as enhancing communication and collaboration between parents and school staff can increase parental monitoring and at-risk children's academic and social success (Heller & Fantuzzo, 1993). Thus, the modeled school and home communication, involvement in their child's homework, and focus on improved parenting skills may explain the effects found both at home and in school-based settings.

One of the key difficulties of any prevention or intervention program is getting involvement to participate in the program. In many intervention programs, clients discontinue services before completing them. This is especially true for parent training programs, which find that about 40 - 60% of parents who enroll in services fail to complete them (Peters et al., 2005). In contrast, the Boys Town In-Home Family Program had high participation in services, with 79% of families enrolled in the study completing the program. This high participation rate suggests that an individualized and in-home approach to providing services may increase family investment, and as a result, participation in services.

Limitations

There are several limitations to this study that should be noted. As is the case in much of applied research, this study did not have the resources for a comparison group. Future research would benefit from the use of clients in comparison or wait-list groups to determine the benefits of this program over wait list or services as usual conditions. The large pre-post effect sizes found in this study certainly suggest that there is likely some benefit to children and families from the intervention, but additional experimental research is necessary. Second, standardized follow-up data were not collected on the families to determine whether the children maintained their behavioral gains following discharge. Third, this study was conducted in a single county in Florida, which may affect the generalizability of these results to children in other geographic regions. Fourth, it was beyond the scope of this study to examine if the behaviors observed by parents and Family Consultants could also be observed by other respondents in the school (e.g., teachers). Future research would benefit from collecting pre, post, and follow-up information from teachers regarding the youth's behavioral and emotional functioning. Finally, due to cost restraints, the treatment providers assisted in the data collection, which has the potential to influence data responses of guardians.

Future Research

Based on the findings from the current study and limitations mentioned above, there are several areas to investigate in future studies. First, changes in child behavior after family participation in the Boys Town In-Home Family Program should be evaluated with a more rigorous experimental design, include multiple informants, and collect follow-up data using standardized instruments. It is essential that a comparison group be included, to examine the degree of change without the In-Home Family Program intervention. It is useful to have multiple informants for the measures to help eliminate potential response bias, such as assessing both parents and teachers on the outcome measures. Follow-up data collection would examine if the changes endure over time.

Second, it is essential that future studies examine the degree of family participation in the intervention and the factors that influence their level of engagement in the program (Nix, Bierman, & McMahon, 2009). This program had an impressive 79% completion rate for families enrolled in the study. It is uncertain what components of the program are related to this high participation rate, but future studies should focus on what aspects of the program and characteristics of participants predict parental attendance and engagement. Likewise,

it would be helpful to assess the acceptability of the intervention to the parents, the degree to which they can implement the skills they have been taught, and assess how much of the intervention parents continue to use after completing services. All of these issues would help further the understanding of how to improve services for parent training programs. This line of research would also begin to provide information on the key ingredients of parent training interventions that contribute to client engagement and improved youth and family outcomes.

Implications for Practice

This study has several implications for mental health professionals, including service delivery approaches for parenting programs and potential impacts of a home-based program on a child's behavior at school. The first important implication of this research is the finding that working one-on-one with families in their home for a few hours a week on basic parent behavior management skills may have substantial impacts on parenting methods and child behavior. It may be that this in-home delivery method helps to encourage parent engagement in the program and the subsequent large gains in outcomes. Perhaps this is due to the convenience of the sessions for the parents, or possibly it is the ability to practice the material on their own children with a parenting "coach" present. Nonetheless, future research is needed to determine the role of method of delivery (e.g., parent classes, in-home services, telephone coaching) has on parent engagement and subsequent family outcomes. Finally, the results of this study imply that a parent-based intervention could have effects on child behavior outside of the home, such as at school. This suggests that interventions that address child behavior in the home and target the parent may also have effects on child behavior in the classroom, expanding the potential impact of the brief parenting interventions.

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