

## **Foster Parent Training: Managing Child Behavior Problems**

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to  
Northwest Media, Inc.  
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## **A. General Scientific and Technological Aims**

The overall goal of this project was to develop a multimedia training program for foster parents on managing noncompliant child behavior. In Phase I of the project, we demonstrated that foster parents could use parenting skills taught in a relatively brief intervention to decrease problem behavior exhibited by children in their care. The intervention consisted of a video-enhanced curriculum unit delivered by a trainer to foster parents in two class sessions. Video materials helped present basic concepts through narration and dramatization. Additional video scenarios were used to give parents the opportunity to practice applying concepts.

In Phase II, the instructional content for the full curriculum was developed to deliver to foster parents at home via a combination book and DVD. The range of topics on behavior management was expanded, and all content was adapted for parents with children in three different age groups: preschool (2-6 years), school-age (7-12 years), and teens (13 years and up). An evaluation study was conducted with 117 foster parents to assess the effectiveness of (and satisfaction with) the parent training. Foster parents for the evaluation study were recruited from throughout the United States with the assistance of the National Foster Parent Association.

## **B. Phase II Research Activities**

### Content Development

Project staff developed the instructional content, including the print book and interactive DVD segments, over a period of approximately 2 years working closely at all stages with project consultants. Prior to final development of the multimedia materials, three focus groups were conducted. Participants were recruited through the Foster Parent Association in Oregon. Both males and females were included, and all three groups were ethnically and racially diverse. One group, composed of five foster parents with children 2-6 years old in their care, met at the Association Center in Salem. They were asked to review preliminary versions of two chapters from the print book and the two related interactive DVD segments, which were demonstrated on a computer projector. One of the chapters and segments was on tracking children=s behavior; the other was on gaining children=s cooperation. After reading the chapters and viewing the demonstration, parents were asked to preliminarily assess the instructional content (story situations and character profiles) in terms of accuracy and relevance.

A second focus group, consisting of six foster parents with teenage children in their care, met at the offices of Northwest Media, Inc. in Eugene, Oregon. (During Phase I development of a prototype video program on managing noncompliant behavior with school-age children, focus groups of foster parents with children ages 6-12 were conducted, so it was not necessary to conduct another focus group of parents with children in this age group for Phase II.) The second focus group carried out the same activities as the first, but on two different book chapters/DVD segments. One was on

encouraging good behavior; the other was on behavior contracts. Each foster parent focus group met for approximately 2 hours, and participants were paid \$50.

A third focus group of eight foster parent trainers was asked to comment on the instructional design and content of the curriculum. They received outlines of the curriculum and were asked to suggest improvements and corrections. This focus group also met at Northwest Media in Eugene for approximately 2 hours, and participants were paid \$100.

A member of the project staff summarized in writing the comments made during the focus group discussions. Feedback from the groups was reviewed by project staff to help determine the final content and format of the instructional book and DVD. For example, as a direct result of a suggestion by foster parents, we decided to produce a Spanish version of the print book in addition to the English version.

Development activity in the final year of the project included production of the video-based segments of the multimedia instructional program. These media elements included video modeling vignettes, group-interactive video sequences, and branching-outcome vignettes, as well as photographs, graphics with composite titles and illustration, and captioning in both English and Spanish. The final complete DVD was also produced, as were the two print versions of the book, titled *Off Road Parenting: Practical Solutions for Difficult Behavior (La Crianza en Todo Terreno: Un Manual para los Padres de Familia en el Arte de Navegar Durante los Tiempos Difíciles)*. The English and Spanish versions of the book and DVD are included in this report as Appendixes A and B, respectively.

The book is organized into the following chapters, each (except chapter 11) with a parallel chapter on the DVD:

- Chapter 1: Stuck
- Chapter 2: Teaching Cooperation
- Chapter 3: Tracking Behavior
- Chapter 4: Encouragement
- Chapter 5: Behavior Contracts
- Chapter 6: Troubleshooting Behavior Contracts
- Chapter 7: Setting Limits
- Chapter 8: Time Out
- Chapter 9: Removing Privileges
- Chapter 10: Extra Chores
- Chapter 11: Getting Help

Scattered throughout the print book are topic-relevant cartoons from the syndicated comic strip, *Stone Soup*, created by Jan Eliot. A distinguishing feature of the DVD is its interactivity. Viewers make choices while watching the DVD, selecting at numerous points the age group vignette and story outcome (positive or negative) that they want to see.

## Experimental Methods

### *Sample*

Participants were recruited from across the United States with the help of the National Foster Parent Association (NFPA). After parents contacted the NFPA, their names were passed on to this organization where they were screened for acceptability into the study. In order to be eligible, parents must be caring for a foster or adopted child over the age of 3 years throughout the time frame of the study. After the initial eligibility call, parents were assigned randomly (using MS Excel=s random number function) to both a group (either intervention or control) as well as to one of our four trained phone interviewers. Informed consent letters were also mailed to potential participants with a self-addressed, stamped envelope for their return. Participation in the study was voluntary. Foster parents who completed the study received credit for 5 education hours, a copy of the *Off Road Parenting* book and DVD, as well as a DVD player (or \$100 if they owned a player prior to the study).

The final study sample was composed of the 115 eligible foster parents who completed both the pre-intervention and post-intervention assessments. (An additional 9 foster parents began the study but did not complete it, either because the callers were unable to reach them for all of the necessary telephone interviews or because the foster child left their home before the 8-week study ended.) The final sample was also subdivided into three levels of group based on implementation fidelity. Of the 115 completers, 59 remained in the control group, 31 were designated as the *low-fidelity intervention* group, and 25 as the *high fidelity intervention* group.

As expected, the foster parent sample was predominantly female (about 83%). Ethnically, 70% of the overall foster parent sample identified themselves as Caucasian, and 19% identified themselves as African American. The foster children in the sample were more equally distributed by gender. Approximately 44% of all foster children were females. The foster children in the study sample also came from more diverse backgrounds than the foster parents (46% Caucasian, 24% African American, 9% Latino/Hispanic). There were no significant differences between the three levels of group (high-fidelity intervention, low-fidelity intervention, and control samples) with respect to any demographic or background information. (See Appendix E, Tables 1 and 2, for a more complete description of the sample=s demographics.)

### *Data Collection*

At the first interview, callers introduced themselves, ensured that families had returned the consent forms, determined the child=s first name and age for data collection purposes, and set up a time to conduct the next six pre-intervention calls. A standard script was used for this and all subsequent phone calls (see Appendix C). During the six pre-intervention calls, participants were asked questions relating to child behavior, parent stress level, and parenting perceptions within the previous 24 hours (see *Measures* section for a complete description). These calls were 20 to 30 minutes in duration and took place over a 2-week period.

The intervention period began at the conclusion of the sixth pre-intervention call, and the *Off Road Parenting* materials and a DVD player were mailed to each participant in the treatment group. Control group participants received no materials at this time. The intervention period lasted 4 weeks, during which time all subjects received weekly phone calls. For the intervention group, these calls were designed to assess implementation fidelity. The control group was also phoned once a week for 4 weeks; however they were asked only about their involvement, if any, in other foster parent training activities.

The final six phone calls, post-intervention calls, took place again over a 2-week period for both intervention and control groups. Participants again completed the study's three main questionnaires a total of six times. At the sixteenth and final call, participants in the treatment group also completed a user satisfaction questionnaire on the relevance and quality of the materials they had reviewed. All participants were again assured of the confidentiality of their responses, and they were provided access to debriefing upon completion of their participation. Following the completion of the post-intervention calls, control group families were also mailed copies of the *Off Road Parenting* materials and a DVD player, if they did not currently own one. Foster parents from both groups were permitted to keep all of the study materials they had received. In addition, each participant received five education hours toward their organization's annual requirements. If participants in the study already owned DVD players, they were *not* mailed the machine and instead were paid \$100 as compensation.

### *Measures*

Copies of all measures are included in Appendix D.

#### 1) *Background Information (BI)*.

This questionnaire, created for the present study, consisted of demographic questions referring to both the foster parent and the foster child on whom the parent focused when responding to the questions on the Parent Daily Report (described below). Foster parents were asked to report their own age, sex, race, income, level of educational attainment, and number of children in the home, as well as their foster parenting experience. They also were asked to report the foster child's sex, age, and race, as well as the child's experience in the foster care system and any educational, behavioral, or mental health problems.

#### 2) *Parent Daily Report 3-6, 7-11, and 12-18 (PDR)*.

These measures were adapted from the original *Parent Daily Report* (Chamberlain & Reid, 1987) to include separate measures for each of three age groups. The PDR was administered to parents by a trained caller via the telephone. The callers asked parents to report whether or not any of a list of child behavior problems (ranging from 37-40 problems depending on age group) had occurred at home in the previous 24-hour period. If a behavior had occurred, parents were asked how stressed the behavior made them feel. This measure was chosen because it is well suited for repeated daily assessments and because it is especially effective in picking up low-frequency behavior. The administration of the measure requires minimal training (about 1 hour) and is not

perceived to be intrusive by parents. While the psychometric data are limited with respect to the PDR by age group, the singular measure reports high intercaller reliability (.98); moderate interparent reliability (.89) and test-retest reliability (.82). The PDR has moderate to high concurrent validity with other in-home observations of child behavior (Chamberlain & Reid, 1987).

The PDR was administered to parents a total of 12 times throughout the study. The first 6 interviews were conducted pre-intervention and the final 6 interviews were completed in the post-intervention phase. The reasoning for multiple measurements is (a) to establish a stable baseline and (b) to account for "first-day effects", in which parents report higher levels of problem behavior during the first interview call (Chamberlain & Reid, 1987, p.103). While the PDR is shown to have a high degree of temporal stability, Chamberlain and Reid (1987) as well as others who have used similar measurements report significant differences between behavior scores on the first day and those reported throughout data collection. The use of six data points will wash out any effect of the first day of calling.

The current version of the PDR yields two scores – a behavior checklist score and a parent stress rating. The behavior checklist score (BC) is reported as the total percentage of problem behavior in which a child engaged across calls. The ratio score was chosen in order to (a) control for the effect of different numbers and types of questions across age groups and (b) to allow for a more meaningful way of reporting overall levels of problem behavior. The parent stress score (PS) is expressed as a mean stress rating. Parents were asked to report how stressed a given problem behavior made them feel on a 3-point Likert-type scale – ranging from 0, "not at all stressed" to 2, "very stressed". Their level of stress was asked if and only if they reported the occurrence of a problem behavior at the time of the current interview. Scores were computed as the mean response over all calls at pre and post intervention.

### 3) *Parenting Perceptions (PP).*

The second outcome measure asked parents to rate (on a scale of 1-10) how well they parented their foster child in the previous 24 hours. Parents were asked to rate their effectiveness (ranging from 1-10) on 13 questions such as "Using consequences, getting their child to cooperate, and changing their child's behavior. This measure also included three questions related to parental depression with questions asking how energetic, cheerful, or nervous the parent has felt in the previous 24 hours. The *Parenting Perceptions* scale yielded eight scores: a total score and seven subscales – global, cooperation, encouragement, planning, setting limits, using discipline, and parental depression. Scores were computed as the foster parent's mean response over all calls at pre and post intervention.

### 4) *Implementation Fidelity Intervention and Control (Check-in).*

The Check-in measure was used weekly throughout the 4-week intervention period. This measure had two versions, one for the intervention group and one for the control group. The question common to both measures asks if the foster parent has been

involved in any other parent training activity in the past week. For the intervention group, the check-in measure contains three additional questions asking the foster parent if the DVD and DVD player are working correctly and an approximation of the time spent on the materials in the previous week.

#### *5) User Satisfaction (US).*

The US questionnaire (12 questions) was created for the study and was administered only to the treatment group during the final posttest interview. Nine questions asked foster parents to rate, on a 4-point scale, their satisfaction with the training materials. Two questions asked foster parents to rate, on a 10-point scale, their overall perceptions of the quality of both the book and the DVD. The final question for this scale was open-ended and asked parents for additional comments about the study and/or the materials. These comments can be viewed in Table 3.

## Results

### *Research Questions*

We anticipated that the training materials would have an impact on the behavior of both parent *and* child. As a result, our hypotheses and measures were designed to address two main outcomes.

#### *Child behavior.*

Foster parents in the intervention group were expected to report fewer instances of child problem behavior following intervention than foster parents in the control group.

#### *Parent behavior.*

Foster parents in the intervention group were expected to report reduced stress levels following intervention than foster parents in the control group.

Foster parents in the intervention group were also expected to report greater efficacy in their use of consequences and encouragement following intervention than foster parents in the control group.

### *Preliminary Analyses*

#### *Attrition.*

Prior to model selection for our outcome analyses, we conducted preliminary statistical analyses of the information on both the pretest measures and the background questionnaires to detect any systematic group differences between those who completed the study and those who did not. We conducted independent sample *t*-tests on all pretest measures as well as the quantitative variables from the background information questionnaire. Using an alpha level of .05 for all statistical tests, we found no significant differences between completers and non-completers for any pre-intervention variables (BI, PDR, PP), their subscales, or quantitative variables from the background questionnaire.

For the qualitative information from the background information questionnaire (e.g. ethnicity, race, sex), a Pearson Chi-Square analysis was conducted to examine the different proportions of completers and non-completers in these groups. No significant

results were found, however these results should be interpreted with caution given the small number of non-completers relative to the entire sample.

#### *Implementation Fidelity.*

Using our final sample of 115, we conducted further analyses of implementation fidelity in order to refine our definition of group. The data from the check-in measures were used to subdivide the intervention group into those who used the intervention with high fidelity and those who used the intervention with low fidelity. The total time parents spent on the DVD was calculated as well as the total time they spent reading the book over the entire 4-week intervention period. Those who were in the top 25% for either time spent with DVD or time spent with book were included in the *high fidelity* group (at least 1 hour and 45 minutes total spent with the DVD or 2 hours and 15 minutes total spent with the book). Those in the lower 75% of the sample were placed in the *low fidelity* group. The number of participants in the control group remained the same.

#### *Demographic Information.*

With our final sample of 115 and three levels of the group variable, we looked at differences between these three groups on background information measures. The purpose of this analysis was to gain a demographic picture of our overall sample. Independent samples t-tests again revealed no significant differences in means for the three groups. Pearson chi-square analyses found only one significant difference for the wave variable,  $\chi^2(2, N = 115) = 7.124, p = .03$ , where there were more intervention group participants in the first wave and more control group participants in the second wave.

#### *Reliability.*

As shown in Table 3, both subscales of the PDR (behavior checklist and parenting stress) as well as the *Parenting Perceptions* questionnaire demonstrated low to moderate Cronbach's alphas for test-retest reliabilities between Times 3 through 6 of the pretest calls, ranging from .68 to .88. The highest reliability coefficients were based on those measures with the largest numbers of items per scale. Consequently, the main outcome measures for the study (behavior checklist and parent stress scales of the PDR) had alpha coefficients of .84 and .80, respectively. Convinced that the measures were not unfairly biased by either attrition or unreliability, the researchers proceeded to test for differences between the control and intervention phases on the outcome measures.

#### *Overview of Analyses*

This study was organized with a pretest-posttest control group design, using non-equivalent groups. When group differences are small at pretest, even without random assignment, this experimental design can adequately control for all main threats to internal validity (Campbell & Stanley, 1963; Shadish, Cook, & Campbell, 2001) and allow for the use of more powerful statistical analyses through the use of covariates. The reasoning for abandoning random assignment resulted from our preliminary analysis of implementation fidelity from the check-in measure. Following the analysis of fidelity, it was clear that the independent variable, group, was best conceptualized with three levels: intervention (with high fidelity), intervention (with low fidelity), and control (wait-list).



In order to address the research questions for our study, a Multivariate Analysis of Covariance (MANCOVA) was conducted. A MANCOVA was chosen given its superior power for detecting differences on multiple dependent variables within a single study. For the purposes of this analysis, group served as the fixed factor and posttest scores, for the behavior checklist portion of the PDR, the parent stress scale of the PDR, and the parent rating scale with its component subscales, were all used as dependent variables. The pretest scores for these same measures were standardized and used to create a composite covariate.

Given that our design no longer utilized random assignment to groups, the first MANCOVA assumption to evaluate is that the groups are equal on the covariate (i.e., there is no interaction between the group and covariate). Using a one-way multivariate analysis of covariance with group and the composite covariate as independent variables and the aforementioned outcome measures as dependent variables, we found no significant interaction effect between group and the composite covariate,  $F_{2,112} = 2.58$ ,  $p = .08$ , for any of the dependent variables. Given small group differences on the covariate, we were comfortable moving on to finding the best Analysis of Covariance (ANCOVA) model to fit the existing data. SPSS Version 11.0 for Windows was used for these and all subsequent data analysis procedures.

Once we determined that there was no significant group by covariate interaction, and that interaction also explained a small portion of the variance in the model (less than 7%), we moved on to evaluate Model 2, otherwise known as an equal slopes MANCOVA. The key piece of information used to evaluate the appropriateness of a model using equal slopes is the difference of those slopes from zero. Using paired t-tests for all dependent measures and a .05 alpha level for all statistical tests, we found that all slopes in the model were significantly different from zero with the exception of the slope for parenting stress,  $t_{114} = -0.472$ ,  $p = .638$ . Based on this information, we chose to use a Model 2 MANCOVA to evaluate the other 7 dependent variables (behavior checklist, global, cooperation, setting limits, planning, encouragement, and depression). We chose to use a Model 3 ANCOVA (essentially a one-way analysis of variance) to evaluate the effect of the intervention on the parent stress variable.

### *Outcome Analyses*

Results for seven of the outcome measures (behavior checklist, global, cooperation, encouragement, planning, setting limits, and parental depression) were analyzed using an equal slopes MANCOVA design. For the purposes of analysis and interpretation, scores for all seven measures of the first six pretest calls were standardized and used as a composite covariate. Scores for the same seven measures were then averaged across the six posttest calls and considered as a unique dependent variable.

Scores on the parenting stress variable were analyzed using a one-way, between subjects analysis of variance. For this procedure, group served as the categorical independent variable with three levels (intervention with high fidelity, intervention with low fidelity, and wait-list control). Scores for the parenting stress measure were then

averaged across the six posttest calls and used as the continuous, quantitative dependent variable.

### *Intervention Effectiveness.*

The multivariate  $F$  statistic in the equal slopes MANCOVA model approached significance  $F(14, 212) = 1.44, p = .14$ . Further comparisons of means revealed that all differences between the intervention and control samples on these seven measures were in the anticipated directions (see Tables 5 and 6).

The univariate  $F$  statistic in the one-way, between subjects analysis of variance model was not significant  $F(2, 110) = 1.45, p = .24$ . However, further comparisons of these means also indicated differences in expected directions for the intervention and control samples (see Table 6).

With respect to the behavior checklist, the overall percentage of child problem behavior decreased from pre to post after controlling for variability on the pretest measures. In addition, all subscales within the *Parenting Perceptions* measure showed an expected *increase* in the positive direction to indicate greater confidence with the use of the parenting techniques described on the DVD and in the training program. For the measure of parent stress, ratings of stress were reported as lower from pre to post.

### *User Satisfaction.*

User satisfaction data were also analyzed preliminarily to see, on the whole, how foster parents perceived the intervention. Results indicate that parents reacted very positively to the training materials. Over half of the sample responded to eight out of nine questions with a rating of 1 or *very much*. When asked to rate the overall quality of the DVD, 41% of the sample responded with a perfect 10; 30% of the sample rated the book as a 10. Mean ratings of overall quality were 8.83 for the DVD and 8.70 for the book (on a scale of 1 to 10 with 10 being the *highest quality*). Further reports of parent comments can be found in Table 3.

## Discussion

Although the results did not achieve statistical significance, we were encouraged by the consistent trends found in the data.

There are several possible explanations for the apparent absence of significant change in children's problem behavior, parent stress, and parent perceptions. One plausible explanation for the apparent lack of statistically significant results is low treatment fidelity. A second possible explanation for the failure to find statistically significant results is that the PDR is not a sufficiently sensitive measure to change over a brief period of time with a low-intensity intervention. A third possible explanation for the study's findings is that the period of time between the pre- and post-intervention assessments (4 weeks) was inappropriate for measurable changes to occur and sustain on the checklists.

Based on the clear trends in the data, as well as the results of the User Satisfaction survey and anecdotal comments from many subjects, we believe the instructional materials produced in both print and DVD are excellent and of potentially great benefit to

many foster and adoptive parents who are dealing with their children=s problem behavior and searching for positive solutions.

### References

- Campbell, D.T., & Stanley, J.C. (1963). *Experimental and quasi-experimental designs for research*. Boston: Houghton Mifflin.
- Chamberlain, P., & Reid, J. (1987). Parent observation and report of child symptoms. *Behavioral Assessment, 9*, 97-109.
- Shadish, W.R., Cook, T.D., & Campbell, D.T. (2001). *Experimental and quasi-experimental designs for generalized causal inference*. Boston: Houghton-Mifflin.

APPENDIX A

BOOK AND DVD, ENGLISH VERSION

*OFF ROAD PARENTING: PRACTICAL SOLUTIONS FOR DIFFICULT BEHAVIOR*

APPENDIX B

BOOK AND DVD, SPANISH VERSION

*LA CRIANZA EN TODO TERRENO: UN MANUAL PARA LOS PADRES  
DE FAMILIA EN EL ARTE DE NAVEGAR DURANTE LOS TIEMPOS DIFÍCILES*

## APPENDIX C

### SCRIPTS USED BY TELEPHONE INTERVIEWERS



## APPENDIX D

### MEASURES

## APPENDIX E

### TABLES