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Instructing Parents to Use Dialogic Reading Strategies with Preschool Children: Impact of a Video-Based Training Program on Caregiver Reading Behaviors and Children's Related Verbalizations

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ABSTRACT. Caregiver use of dialogic reading (DR) strategies in home, preschool, and daycare settings has been shown to facilitate development of oral language and emergent literacy skills in toddlers and preschool age children. Training in the use of DR strategies may be pro-

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Journal of Applied School Psychology, Vol. 23(1) 2006 Available online at http://japps.haworthpress.com © 2006 by The Haworth Press, Inc. All rights reserved. doi:10.1300/J370v23n01_06 vided "live" or via videotape. Using a randomized, control group, repeated measures design with 18 caregiver-child dyads, we investigated (a) caregivers' ability to learn to use DR strategies with their young children through videotape training in community health centers, and (b) children's verbalizations during shared book reading. Caregivers learned to use DR strategies through the videotape training and maintained their use of DR strategies 12 weeks later. In addition, an intervention effect was observed related to levels of child on-task verbalizations such that children of parents who learned DR strategies talked more about books during shared book reading relative to their baseline and to the control group children, whose parents did not view the DR training video. doi:10.1300/J370v23n01_06 [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: http://www.HaworthPress.com © 2006 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. Dialogic reading, preschool, community health centers, shared book reading, video training

INTRODUCTION

Shared book reading is a way that children can acquire important pre-reading skills, including vocabulary knowledge, awareness of print, and story structures (Snow, Burns, & Griffin, 1998). By engaging children in shared book reading, families can play a critical role in preparing children to learn to read. Dialogic reading (DR) is an evidencebased approach to shared book reading that has been described and extensively documented by Whitehurst and colleagues (e.g., Arnold, Lonigan, Whitehurst, & Epstein, 1994; Lonigan & Whitehurst, 1998; Whitehurst, Arnold et al., 1994a; Whitehurst, Epstein et al., 1994; Whitehurst et al., 1988, 1999). The main goal of dialogic reading is for the child to become the storyteller and for the adult to facilitate, expand and respond to the child's verbalizations. DR involves strategies to engage a child actively during story time so he/she can practice using language and receive adult feedback. Research by Whitehurst and his colleagues clearly demonstrates that these adult-child interactions in the context of picture book reading facilitate young children's language development. For a comprehensive review of the DR literature and a description of the facilitating strategies, readers are directed to Zevenbergen and Whitehurst (2003). Types and definitions of DR strategies are also provided in Appendix.

Video-Based Instruction of DR Strategies

Studies by Whitehurst and colleagues (Whitehurst, 1991; Whitehurst et al., 1994a,b) provide evidence for the benefits of DR on expressive language in preschoolers and emergent literacy skills at the end of kindergarten. Recently, Whitehurst collaborated with Pearson Early Learning publishing company to develop a video-based training program designed to teach adults to use DR strategies. *Read Together, Talk Together (RTTT*; Pearson Early Learning, 2002) is a commercially available, 15-minute video-based instructional program for parents and teachers.

There are several advantages for using a video-based training program to teach parents to use DR strategies. First, the purpose of the video is to teach or encourage skills that the parent may or may not have in his/her repertoire. Based on observational learning theory (Bandura, 1986), parents and teachers may learn DR strategies better if they can view other people similar to themselves modeling the target behavior (Zevenbergen & Whitehurst, 2003). Additional advantages to using a video to train parents in DR procedures include cost efficiency, trainer time efficiency, and consistency in intervention delivery (Blom-Hoffman et al., in press). These key factors are helpful in facilitating the dissemination of DR strategies to families with children at risk for reading difficulties.

Video-Based Parent Training

Video-based instructions have been used to teach a variety of skills to parents. Webster-Stratton conducted a series of studies (1981a,b; 1982) in which she developed and evaluated the use of a group-based parent training program that included videotaped vignettes and a discussion format. These initial studies were conducted with well-educated and nonclinical samples. Subsequently, Webster-Stratton (1984) conducted a study that investigated the short- and long-term effectiveness of this video-based training compared with individualized therapy that used feedback, rehearsal, and live modeling, and an untreated control group with low-income parents of children with clinically significant behavior challenges. At immediate posttest assessment, parents in both treatment groups showed significant improvements in attitudes and behavior when compared with parents in an untreated control group. Children in both treatment groups showed a decrease in deviant and non-compliant behavior; however, such changes did not reach significance. At the 1-year follow-up, attitudinal and behavioral changes in parents and children were maintained in both treatment groups. Moreover, although changes in child's non-compliance and deviant behavior was of border-line significance at immediate posttest, these behaviors showed a continued decline at the 1-year follow-up, Results indicated that a video-based training program with a discussion group was an effective tool in teaching parenting skills. While both training methods were effective, the cost effectiveness of video-based training compared with the expensive individualized one-to-one training allow for cost-effective, large-scale dissemination.

More recently, Bradley et al. (2003) used a randomized control group design to investigate the ability of the 1-2-3 Magic (Phelan, 1990) video to teach parenting skills in a community agency to parents of preschoolers who were experiencing difficulties managing their children's behavior. Parent-child dyads were randomly assigned to an experimental group, which viewed the 1-2-3 Magic video or to a wait-list control group. Child behavior (e.g., aggression, anxiety, hyperactivity), parenting behavior (e.g., anger, irritability, failure to enforce rules), current level of parental stress, and child temperament (e.g., difficultness) were assessed via parent report three months later. Consistent with Webster-Stratton's findings, Bradley et al.'s (2003) study supported video-based instruction as an effective tool to teach parents effective parenting strategies. Parents in the intervention group reported decreases in their child's overall problematic behavior, hyperactivity and distractibility. Furthermore, parents who received intervention reported significant changes to their child's temperament including decreased rates of persistence, negative adaptation and affect, and degree of difficulty. Moreover, parents who received video-based instruction perceived their children as more compliant and happier.

Purpose of This Study

There were two main purposes of this study. First, we were interested in examining the effect of the *RTTT* video on caregivers' use of dialogic reading behaviors when reading with their children. It was hypothesized that caregivers, who viewed the video, would increase their use of DR strategies when reading with their children compared with (1) their use of DR strategies before viewing the video; and (2) caregivers who did not view the video. In addition, it was hypothesized that the increased level of DR strategy use would be maintained at a 12-week follow-up. The second purpose of this study was to examine the effect of the parent training on children's verbalizations during shared book reading. Specifically, we

hypothesized that children whose parent viewed the video would engage in higher levels of verbalizations during shared book reading compared with (1) their verbalizations during shared book reading before their parent viewed the video; and (2) the verbalizations of children whose parents did not view the video. In addition, we hypothesized that the improvements would be maintained at a 12-week follow-up.

From the literature conducted in the area of DR, it is clear that using DR strategies when reading with young children is associated with improved oral language skills. The present study is unique in that it is the first to examine the effects of the commercially available *RTTT* video on parents' reading behaviors. In addition, this study is important because it examined the use of video-based parent training to promote child development in the waiting room of community health centers (CHCs), a venue not previously investigated, yet important given the time that parents spend in this environment with their young children.

METHOD

Participants

Eighteen parent-child dyads, who received their primary health care at CHCs, participated in this study. Due to the relatively small sample size of this study, which would not be able to take into account the effects of account language differences, families were required to speak English as their primary language to be included in this preliminary investigation. Families were recruited for the study through targeted mailings, phone calls, and through fliers posted on the walls of the CHCs. Parent-child dyads were randomly assigned to an experimental (N = 8) and control (N = 10) group. Demographic information describing the families is presented in Table 1.

Setting and Intervention

This study was conducted at two CHCs in an urban setting in the Northeast. Both CHCs provide primary care to large numbers of ethnically and racially diverse families with and without health insurance. Caregivers in the experimental group viewed the 15-minute *RTTT* dialogic training video (Pearson Early Learning, 2002) on a TV/VCR in the waiting room of the CHC. The video included a description of the dialogic reading strategies as well as modeling of the various strategies.

	Experimental Group (N = 8)	Control Group (N = 10)
Child (age in months)	<i>M</i> = 44.5; <i>SD</i> = 9.2	M = 37.2; $SD = 8.0$
Race/Ethnicity (%)		
Asian or Pacific Islander	12.5	0
Black, not Latino/Latina	37.5	30
White, not Latino/Latina	50	70
Caregiver Education Level (%)		
Some high school (didn't finish)	12.5	0
High school degree	12.5	20
Some college or trade school	37.5	60
4-year college degree	12.5	10
College+	25	10

TABLE 1. Caregiver and Child Descriptive Information

Please refer to Blom-Hoffman et al. (in press) for a more comprehensive description of the *RTTT* video.

Procedures and Materials

Caregiver-child participation in this study involved three visits to the CHC during regular clinic hours. Regardless of group assignment, subjects' baseline assessments during the first visit were the same. All caregiver-child dyads participated in a five-minute, videotaped observation. Caregivers were instructed "to read together with your child as you do at home." Following the observation, the caregivers were asked to report how similar the videotaped observation was to reading together at home.

Following baseline assessment, caregivers in the experimental group viewed the *RTTT* video. In addition, they were provided with a laminated handout and bookmark, developed by the first author that highlighted and summarized key points in the video. Caregivers in the control group did not view the video. Instead, they received a generic bookmark entitled, "7 *Super Things Parents and Caregivers Can Do*" (Early Childhood-Head Start Taskforce & U.S. Department of Education & U.S. Department of Health and Human Services, n.d.). All children, regardless of group assignment, received three books at the end of the first visit.

Immediately after viewing the videotape, caregivers in the experimental group completed a modified version of the Intervention Rating Profile

(IRP; Martens & Witt, 1982). The seven-item, modified IRP was administered to assess caregiver acceptability of the videotape and DR strategies. Caregiver acceptability of the videotaped training program, determined to be high, is described elsewhere (Blom-Hoffman et al., in press).

The second and third visits occurred approximately 6 and 12 weeks, respectively, following the first visit. Five-minute videotaped observations of parent-child reading interactions were conducted using the same procedures as before. At the end of both of these visits, caregivers received a monetary stipend, and children received another book.

Data Coding

Two school psychology graduate students transcribed the videotaped observations. Subsequently, they were trained to observe parent behaviors using a code that included seven DR prompts plus an additional prompt called "attending" statements (see Appendix). Once the observers reached a predetermined 90% level of agreement for each behavior, they independently coded the parent statements from the transcriptions. After coding the caregiver statements, they summed each category to yield a frequency count for each of the eight prompt categories. Finally, the observers summed the frequencies from all the eight DR categories into a general category called "facilitating verbalizations."

To assess child verbalizing behaviors during each reading observation, a third research assistant, who is a school psychologist, used a 10-second partial interval recording procedure to code on- and off-task verbalizations. On-task verbalizations were defined as child comments about something related to the book, including answers to questions posed by the caregiver and questions asked about the book. Off-task verbalizations included comments and questions that were not related to the book (e.g., "I want juice") and responses to caregiver questions that were not related to the book (e.g., "no," when asked if he/she had to go to the bathroom). Once the research assistant reached a predetermined level of inter-observer agreement with the first author (i.e., 90% agreement) the research assistant independently coded the videotapes.

RESULTS

In general, parents reported that the reading observations in the clinic were quite (i.e., 56%) or somewhat (i.e., 33%) similar to when they read with their child at home. Following a minority of the observations (11%),

parents reported that the reading observations were not similar to when they read with their child at home. Reasons for lack of similarity included reading location (i.e., sitting in a chair in the health center as opposed to lying on their child's bed) and distraction from the video camera.

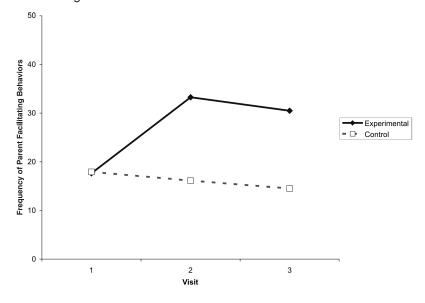
Parent Verbalizations During Shared Book Reading

To assess inter-rater agreement, two trained research assistants independently coded 26% of all transcripts of videotaped reading observations. For each parent statement, each research assistant coded 1 of 8 parent facilitating verbalizations. Total inter-rater agreement [agreements/(agreements + disagreements) * 100] was calculated for each category. Inter-rater agreement was good for all categories ($\chi = 97.8\%$; range between 91.6% and 100%).

Of the 18 cases studied, 4 (i.e., 2 experimental and 2 control dyads) had one missing videotape observation data point due to a missed appointment. In other words, 7% of the videotaped observations were missing from the data set. These data were replaced with group means.

Figure 1 displays combined parent facilitating behaviors for the treatment and control group over the three measurement occasions (pre-

FIGURE 1. Frequency of Caregiver Facilitating Verbalizations During Shared Book Reading.



treatment, 6 weeks post-treatment, and 12 weeks post-treatment). First, we assessed differences between groups at each time point using Cohen's d from t-tests (Thalheimer & Cook, 2002). Magnitudes of effects were assessed using Cohen's (1992) criteria wherein the magnitude of effect sizes (ES) can be categorized as small (between .15 and .40), moderate (between .40 and .75), or large (>.75). Results indicate no difference between the experimental ($\chi = 17.63$; SD = 8.75) and control $(\chi = 17.93; SD = 10.68)$ groups at pre-treatment (ES = .03). However, a large effect (ES = 2.26) as a function of intervention was noted at the 6-week follow-up, where parent facilitating verbalizations in the experimental group demonstrated nearly a twofold increase from pre-treatment ($\chi = 32.27$; SD = 9.4) compared with a small decrease in the control group ($\chi = 16.15$; SD = 6.78). This large effect remained relatively stable at the 12-week follow-up (ES = 1.36). Here parents in the experimental group maintained relatively high levels of facilitating verbalizations ($\chi = 30.51$; SD = 14) compared with low and stable verbalizations for control group parents ($\chi = 14.52$; SD = 11.22).

The effect of the videotape intervention on parents' use of specific DR strategies was also assessed. Results indicated that certain types of prompts were used more frequently by parents who viewed the video, while others were utilized infrequently by parents in both groups. Specifically, at the second visit, parents who viewed the RTTT video used more page prompts (e.g., wh-type questions; $\chi = 18.46$; SD = 8.95) than caregivers who did not received the video-based training ($\chi = 6.75$; SD =5.32). Furthermore, parents who viewed the video showed a greater use of evaluation prompts ($\chi = 6.66$; SD = 3.4) compared with those who did not receive the video training ($\chi = 2.62$; SD = 2.11). Other DR strategies, however, such as expansion, repetition, recall and distancing prompts were used infrequently by caregivers in both groups across sessions. It is important to note that wh-/open-ended questions (i.e., page prompts) and evaluation prompts are interdependent; in other words, if a parent asks more wh-type questions and the child responds, there are more opportunities for the parent to evaluate the child's response.

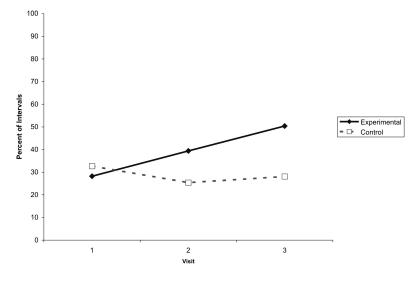
Child Verbalizations During Shared Book Reading

A trained research assistant and the first author independently coded 20% of the videotaped reading observations. Total inter-rater agreement [agreements/(agreements + disagreements) * 100] was calculated for each category. Inter-rater agreement was good for observations of

on-task ($\chi = 95\%$; Range = 87-100%) and off-task behavior ($\chi = 99\%$; Range = 93-100%).

Figure 2 displays experimental and control group children's on-task verbalizations at three points in time (i.e., pre-treatment, 6 weeks posttreatment, and 12 weeks post-treatment). Differences between groups at each time point were assessed using Cohen's d from t-tests (Thalheimer & Cook, 2002). At pre-treatment, there was no difference between the experimental ($\chi = 28.24$; SD = 22.86) and control ($\chi = 32.7$; SD = 22.61) groups with regard to child on-task verbalizations (ES = -.021). However, at the 6-week follow-up, a large effect (ES = .78) as a function of intervention was noted. Experimental group children's on-task verbalizations increased ($\chi = 39.42$; SD = 20.67) and control group children's on-task verbalizations remained at a level similar to that observed during the first visit ($\chi = 25.4$; SD = 17.96). At the 12-week follow-up, a very large effect as a result of the intervention was noted (ES = 1.26). Here children in the experimental group showed nearly a twofold increase relative to pre-treatment in their levels of on-task verbalizations ($\chi =$ 50.36; SD = 18.39) compared with much lower levels of on-task verbalizations from children in the control group ($\chi = 28.11$; SD = 19.02). Levels of off-task verbalizations during shared book reading were low in both groups and during each of the three visits (e.g., 3-15%).

FIGURE 2. Percentage of Child On-Task Verbalizations During Shared Book Reading.



DISCUSSION

Summary of Findings

Dialogic reading (DR) strategies have been found to facilitate the development of oral language and emergent literacy skills in toddlers and preschool age children at home, school, and daycare settings (e.g., Arnold, Lonigan, Whitehurst, & Epstein, 1994; Lonigan & Whitehurst, 1998; Whitehurst, Arnold, Epstein, Angell, Smith, & Fischel, 1994; Whitehurst, Epstein, Angell, Payne, Crone, & Fischel, 1994; Whitehurst, Zevenbergen, Crone, Schultz, Velting, & Fischel, 1999; Whitehurst et al., 1988). In these settings, caregiver training to use DR strategies with young children has been successfully provided "live" and via videotape (Arnold et al., 1994; Whitehurst et al., 1988, 1994a,b, 1999). In the current study, caregivers in CHCs learned to use DR strategies through videotape training, and they maintained their use of DR strategies when reading with their preschool children 12 weeks later. Also, children's levels of on-task verbalizations increased when their parents engaged them using DR strategies during shared book reading. These results reinforce the use of videotape-based DR training to caregivers, and they promote such caregiver training in CHCs.

Parents spend a great deal of time in CHCs with their young children. For example, parents bring their preschool-aged children to CHCs for wellness visits and for visits related to illness (e.g., of the parent, the preschool child, and/or a younger or older sibling). Often families arrive for appointments at CHCs early; sometimes health care professionals are unavoidably running late. In both cases, families pass time in health care center waiting areas, creating a valuable opportunity for them to learn strategies they can use to facilitate their children's language development when reading to their children.

In addition to being an ideal environment for training parents to use strategies to facilitate aspects of their children's language development, CHCs are also a highly acceptable environment for the provision of this training. As described elsewhere, provision of a videotape-based DR training program to parents in the waiting areas of the two CHCs where this study was conducted was judged as being highly acceptable to the caregivers who participated in this study and to the staff at the two centers (Blom-Hoffman et al., in press).

Use of video-based training in general has definite advantages. These include standardization of the targeted intervention (i.e., information is provided consistently) and cost effectiveness from personnel and time

perspectives (i.e., staff do not have to be physically present to provide training). An advantage of the DR videotape in particular is that it provides multiple examples of parents reading to their children using the DR strategies being taught (Arnold et al., 1994). From a learning theory perspective, such observational methods are highly effective in teaching target behaviors (Bandura, 1986).

Limitations

The findings of this study are best viewed as preliminary due to the limited sample size in terms of parent-child dyads and CHCs. Future studies with larger samples of diverse parents, children and CHCs will elucidate the degree to which these findings generalize to other populations and settings.

An additional limitation involves the potential for parent and child reactivity to being videotaped. Parents and children knew that they were being observed while reading together; therefore, the improvements in parents' use of the reading strategies may have been limited to the videotaped clinic session. We attempted to measure this by asking the parents to report how similar the observation was to their typical reading at home. Most of the time (i.e., 89%) parents reported that the observations were quite or somewhat similar to their typical reading interactions at home. However, it is unclear to what degree the behavior changes observed in the experimental group generalized to interactions at home.

Directions for Future Research

Determining that caregivers in CHCs can learn and maintain their use of DR strategies from a commercially available training video is an important step. Despite the fact that the parents' overall use of DR strategies increased, the increase was related to their use of two of the strategies in particular (i.e., page prompts and evaluation prompts). The next step is to determine how to encourage parents to learn to use some of the DR strategies which our data indicate they did not use before or after viewing the video. Some of these strategies, such as expansion, recall, and repetition, may have been less familiar to the parents, and they may need additional instruction and feedback beyond that provided in the video to use them. In addition, it will be important to examine the viability of this intervention with other groups, such as families who do not speak English as their primary language, and with children with lan-

guage delays. The ability of this video when shown in other settings where parents spend time (e.g., at home, in homeless shelters, during parent nights at preschool) to alter parent reading behaviors should be examined as well.

This study contributes to the DR literature by providing initial support for the use of the *RTTT* video in helping parents learn DR strategies. It is impressive that a short video shown only at one time and without discussion or feedback has the ability to change parent reading behaviors and rates of task-specific child verbalizations during shared book reading and that these changes are maintained over time. In addition, this study demonstrated the delivery of this type instruction to parents in a novel setting where parents bring their children.

Directions for Practice

It is important for school psychologists to be familiar with DR, as an evidence-based literacy promotion practice. Given their roles as consultants and trainers it is important to be aware of materials available to disseminate these strategies to preschool teachers and to parents of young children. The results of this pilot study investigating the effects of RTTT on parent and child behaviors during shared book reading indicate that this video is associated with increases in some parent facilitating strategies and child task related verbalizations. Using information from this study and other sources of information about DR (e.g., Zevenbergen & Whitehurst, 2003) school psychologists and their educator colleagues can facilitate a training program for family members with young children regarding the importance of shared book reading and the use of DR strategies. This type of training program can be conducted in preschools, libraries, churches, and other community centers where parents spend time. The RTTT video can be shown to parents, followed by opportunities for parents to practice the strategies and to receive feedback from facilitators. In addition, families can be given a bookmark or handout of helpful hints to take home as a reminder of important DR strategies. To reach parents whose schedules do not permit them to attend this type of training program, school psychologists and teachers can prepare reader-friendly information that can be sent home to families about DR and can make available the RTTT videotape for families to borrow to view at home. DR is an evidence-based approach to engage young children in shared book reading. School psychologists and our educator colleagues can play an important role in disseminating information about DR to caregivers.

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APPENDIX Types and Definitions of DR Behaviors

DR Prompt	Definition
Page Prompts	Parent prompts the child to talk about something on the page. For example the parent asks an open-ended question that requires a multiple word answer (examples include why and how questions), or asks a closed-ended question that requires a one-word answer (examples include who, what, and where questions).
Attending Statement	Parent makes a statement that facilitates the child's attention toward the book. This type of statement does not require a verbal response from the child. (e.g., "look at the").
Evaluating Prompt	Parent evaluates what the child says by praising the child, re- peating what the child says, or gently correcting the child's answer.
Expanding Prompt	Parent expands on the child's response by giving more information.
Repeat Prompt	Parent has the child repeat the correct response.
Completion Prompt	Parent begins a sentence and pauses, intonates or explicitly requests that the child will fill in the words. This is typically used with repetitive text and highly probable phrases.
Recall Prompt	Parent asks the child to remember a detail from the story that is not on the current page.
Distancing Prompt	Parent asks questions or offers statements that encourage the child to connect something in the book to his/her life.

Note: The code was developed based on the operational definitions of DR strategies in Zevenbergen and Whitehurst (2003).