The Impact of Increased Treatment Intensity on a Parent and Child Therapy Program

By

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Chapter 1 - Introduction

Toddlers and preschool children commonly display challenging behaviors including temper tantrums, non-compliance, aggression, destructiveness, and over activity (Roberts, Mazzucchelli, Taylor, & Reid, 2003). Such externalizing behaviors often reflect a child’s normal development; however, some may become more severe and problematic. Estimates are that between 10% and 15% of preschool children (aged 2-6 years) have mild to moderate behavior problems (Campbell, 1995). When these behavior problems become pervasive and persistent, they cause significant distress for caregivers (Baker & Heller, 1996; Eyberg, Boggs, & Rodriguez, 1992) and can adversely affect children’s interpersonal relationships (Greene & Doyle, 1999), development of social skills (Mendez, Fantuzzo & Ciccetti, 2002), and academic achievement (Neilson & McEvoy, 2004). Further, the severity and persistence of externalizing behavior problems lead some children to be diagnosed with psychiatric diagnoses. Diagnoses including oppositional defiant disorder, attention deficit hyperactivity disorder, and conduct disorder are used with very young children (Keenan & Wakschlag, 2002).

The development and maintenance of behavior problems in young children is influenced by many factors including child factors (e.g., temperament, gender, and developmental delays), parental factors (e.g., age, education level, and parenting knowledge and skills) and environmental factors (e.g., socio-economic status, marital discord, and parent-child interactions). It is widely accepted that a myriad of contributing factors can potentially influence the development and maintenance of externalizing behavior problems in young children. For example, the prevalence of behavior problems in young children with developmental delays ranges from 20% to 64% (Roberts et al., 2003) and almost 30% of children from low-income families are reported to have behavior problems (Qi & Kaiser, 2003).
Significant behavior problems in early childhood often do not dissipate over time. Rather, research shows that these difficulties are moderately stable between two and five years of age (Achenbach, Edelbrock, & Howell, 1987; Baker et al., 2003). It has been estimated that approximately half the children identified with disruptive behavior by preschool age will have problems that persist into the elementary school years and even adolescence, thereby continuing on a path of adjustment difficulties and longstanding behavior problems (Campbell, 1995). In fact, developmental theorists have proposed an “early-onset” pathway that begins formally with the emergence of ODD in the early preschool years, progresses to aggressive and non-aggressive (e.g., lying, stealing) symptoms in middle childhood, and then develops into the most serious symptoms by adolescence, including interpersonal violence, substance abuse, and property crimes (Lahey, Loeber, Quay, Frick, & Grimm, 1992).

Given the potentially poor prognosis for young children with serious behavior problems, there has been growing recognition that early intervention could be a critical step in preventing long-term negative outcomes (Innocenti & White, 1993). The toddler and preschool years present a unique window of opportunity for intervention to interrupt the “early-onset” developmental pathway before these challenging behaviors become crystallized and more resistant to change. There is evidence that the earlier the intervention is offered, the more positive the child’s behavioral adjustment at home and school and the greater the chance of reducing further problems such as peer rejection, violence, delinquency, school dropout and substance abuse (Webster-Stratton & Taylor, 2001).

Numerous treatment programs have emerged that focus on preventing or decreasing challenging behaviors while increasing pro-social behavior in young children (Eyberg, Nelson, & Boggs, 2008). The primary treatment approach used in these programs is parent management
training or parent and child therapy (PCT), where parents are taught alternative ways to respond to their children including increasing play interactions and effectively using positive reinforcement and proven limit-setting strategies. PCT programs incorporate applications of social learning theory, principles of operant theory, tenets of developmental psychopathology and the use of cognitive and behavioral procedures; they typically explain the relationship between parenting and problematic child behavior using a transactional model which suggests that the dynamic interactions between a child and parent predict developmental outcomes (Sameroff & Fiese, 2000).

Research shows that participation in PCT programs significantly reduces childhood behavior problems and harsh parenting techniques while increasing positive parent and child behaviors (Eyberg, Boggs & Algina, 1995; Nicholson, Brenner, & Fox, 1999; Sanders, Markie-Dadds, Tully, & Bor, 2000; Webster-Stratton, 2001). However, while the positive results from these programs demonstrate their effectiveness, there is evidence that some children and families do not make expected gains and/or complete treatment (Kazdin, Holland & Crowley, 1997). Research shows that of families who begin treatment for their children, 40% to 60% will terminate prematurely (Kazdin, 1996; Wierzbicki & Pekarik, 1993) and individuals from low-income populations are at an increased risk for dropping-out of therapy (Wierzbicki & Pekarik, 1993).

Statement of the Problem

While the literature suggests that the leading PCT programs effectively change parental behaviors, improve young children’s behavior problems, and stop the cycle of escalation and chronicity, it appears that treatment programs for behavior problems are not universally effective for those seeking treatment and may not meet the individual needs of all children and their
families. Ongoing evaluation and continued development of these treatment programs are necessary in order to improve attrition and increase their benefit. While researchers have begun to explore the impact of participant factors including child gender, maternal depression, parental stress, and communication deficits on PCT treatment completion and outcomes, other participant factors have been minimally examined. Specifically, research on implementing these programs with at-risk preschoolers, i.e., those from low-income families or who have developmental delays, is severely limited. Furthermore, it has been suggested that the research has not attended to the potential impact of critical treatment factors (Kazdin, 2000). Treatment factors such as the setting, format, dose and length of treatment are believed to play an important role in treatment (Webster-Stratton & Hammond, 1997). In particular, the level of treatment intensity (i.e., the number, frequency and regularity of sessions) has been described as a central aspect of treatment (Kordy, Rad, & Senf, 1998) and a positive correlation between the amount of treatment and the amount of therapeutic benefit is highlighted by many in the field of mental health (Bush, Glenwick, & Stephens, 1989; Kordy, von Rad, & Senf, 1988; Sandell, Bloomberg, & Lazar, 2002).

Despite findings that treatment intensity predicts positive treatment outcomes (Medalia & Richardson, 2005), there is dearth of studies that examine treatment intensity in the context of PCT. It has been suggested that parent training programs less than 10 hours in duration are less likely to be effective with parents of children with conduct disorders (Kazdin, 1987) and that families who attend more sessions (greater than 50%) have more successful outcomes than families with poor attendance (Strain, Steele, Ellis, & Timm, 1982). A few studies have examined modified versions of PCT programs where fewer face-to-face treatment sessions are supplemented with telephone consultations (Hoath & Sanders, 2002; Ireland, Sanders, & Markie-
Dadds, 2003; Leung, Sanders, Leung, Mak, & Lau, 2003; Nixon, Sweeney, Erickson, & Touyz, 2003) and improvements on measures of disruptive child behavior and positive parenting have been found. However, these studies have compared different intervention approaches with varying content and only one study compared effects to a treatment-as-usual condition. As a result, little light has been shed on the issue of the impact of the level of treatment intensity on attrition and outcome.

The systematic study of differential treatment intensities may prove particularly critical to improving the efficacy of PCT programs, particularly with more at-risk children and their families. Treatment intensity has been described as “… a dynamic, multifaceted dimension of intervention” (p.76) that is critical to the development of optimal, efficacious interventions for at-risk children (Warren, Fey & Yoder, 2007), but studies have not adequately controlled for treatment intensity (Jensen, Weersing, Hoagwood, & Goldman, 2005). To date, the role of treatment intensity in PCT programs is not known and the question of whether greater doses of treatment are associated with superior response in these programs has yet to be explored.

Purpose of the Study

The purpose of this study is to investigate the impact of treatment intensity on outcomes in a treatment program for low-income children age five years and younger with externalizing behavior problems, the majority of whom have a developmental disability. Specifically, this research will study treatment outcomes for individuals participating in an individualized-format of the Parenting Young Children (PYC) program (Fox & Nicholson, 2003) provided at two different intensity levels. In order to assess whether there are differential outcomes based on the amount of treatment received, participants will be placed in one of two groups: standard
treatment (receiving eight, once-weekly treatment sessions) or intensity treatment (receiving eight, twice-weekly and four, once-weekly treatment sessions).

Research Questions

This study addresses the following research questions:

1. Do scores on the Eyberg Child Behavior Inventory’s intensity or problem scales differ significantly between children in the intensity and the standard treatment conditions when compared at pretest, post-test and follow-up?

2. Do scores on the Parent Behavior Checklist’s discipline and nurturing scales differ significantly between children in the intensity and the standard treatment conditions when compared at post-test and follow-up?

3. Do scores on the Parent Behavior Checklist’s expectations scale differ significantly between children in the intensity and the standard treatment conditions when compared at post-test and follow-up?

4. Do child compliance percentages differ significantly between children in the intensity and the standard treatment conditions when compared at post-test and follow-up?

5. Do directly observed child behaviors during parent-child interactions differ significantly between children in the intensity and the standard treatment conditions when compared at post-test and follow-up?

6. Do directly observed parent behaviors during parent-child interactions differ significantly between parents in the intensity and the standard treatment conditions when compared at post-test and follow-up?

7. Do scores on the Parent-Child Relationship Scale differ significantly in the intensity and the standard treatment conditions when compared at post-test and follow-up?
Significance of the Study

Outcomes determined in this study may show that PYC, a program established to be effective at its standard level of intensity, is more effective at a higher intensity level. In addition, this study will extend the current literature on the efficacy of parent and child therapy programs by further exploring the effectiveness of PYC with very young children with behavior problems from low-income backgrounds who have a developmental delay. Not only will the present study help to determine if the PYC program is effective with this at-risk population, but the results will aid in the identification of factors related to how treatment is optimally delivered (i.e., the number and frequency of sessions). If greater doses of treatment are found to be more effective, this information will inform future program changes to maximize outcomes. Knowing how treatment intensity affects outcomes will enable practitioners to determine ways to best help young children with externalizing behavior problems. Providing more effective interventions may further interrupt the negative developmental pathway of young children with behavior problems, potentially leading to fewer long-term problems, higher quality of life and less cost to society at large.
Chapter 2 – Review of the Literature

Overview

The purpose of this study is to investigate the impact of differing levels of treatment intensity on treatment outcome in an individualized-format of the Parenting Young Children program. This chapter will explore the efficacy of the leading parent and child therapy (PCT) programs for young children with behavior problems as well as how the issue of treatment intensity has been studied in psychotherapy research.

In order to gain a thorough understanding of the effectiveness of PCT, the most current, widely-used, and researched programs for young children to date will be highlighted. Specifically, efficacy research for the following treatment programs will be reviewed: Parent-Child Interaction Therapy (Eyberg, Boggs, & Algina, 1995), the Triple P-Positive Parenting Program (Sanders, 1999), the Incredible Years Parent Training Program (Webster-Stratton, 1990), and Parenting Young Children (Fox & Nicholson, 2003). Next, the body of research on dose-effect relationships in psychotherapy will be examined as it is the primary means of systematically exploring the issue of treatment intensity in psychotherapy to date. Finally, the role of treatment intensity in parenting programs will be evaluated.

Parent and Child Therapy Programs

Introduction

Across the leading PCT programs there is an adherence to a foundation in social learning theory and cognitive behavioral treatment approaches. There is also consistent use of multiple strategies to address the myriad of child, family and environmental factors that contribute to the development and maintenance of behavior problems in young children. While the programs may differ in their method of content delivery (i.e., videotapes, discussion, modeling) they teach
parents similar techniques designed to prevent or decrease challenging behaviors while increasing pro-social behaviors. Techniques taught include non-directive play, positive reinforcement for positive behavior (e.g., verbal encouragement and praise, positive physical contact, tangible rewards), increasing child compliance through giving effective requests, setting clear rules and limits, and providing immediate and appropriate consequences for negative behavior (e.g., ignoring, natural consequences, time-out). Most programs also address other general topics like normal child development, parental stress, problem solving and seeking community support.

PCT programs are designed to provide between 8 and 14 once-weekly, treatment sessions where parents meet with a therapist to learn strategies for managing child behavior problems. They are most often provided in a group context with 8 to 12 parents in community or clinic settings however, several programs have individualized formats and include children in treatment. Some versions of PCT programs are further tailored to meet the unique circumstances of each family and are conducted in the home setting. There are also modified versions of PCT programs that utilize phone consultations as a means of individualizing treatment implementation.

Some PCT programs use clinician modeling of strategies with children and parent coaching during treatment. These opportunities for parents to practice new skills and get immediate feedback about their performance are unique to individualized PCT formats. In contrast, group delivery formats do not have provisions for child involvement nor are observations of parents interacting with and managing challenging child behaviors by therapists required, except for assessment purposes. In the group format, parents are encouraged to practice techniques at home and discuss their experiences implementing them with group members and
therapists, but there is no means of providing direct remediation of incorrect parental implementation by therapists.

**Parent-Child Interaction Therapy**

Parent Child Interaction Therapy (PCIT) is a program for children ages 2-7 years that employs a two-stage model of PCT that integrates attachment theory and research indicating that authoritative parenting styles are associated with poorer child outcomes. As outlined by Brinkmeyer and Eyberg (2003), families in PCIT typically receive 12-14 weekly, one-hour treatment sessions in a laboratory or clinic setting where parents learn two interaction patterns: child-directed and parent-directed. In the child-directed interaction (CDI) phase, the emphasis is on increasing positive parenting and warmth in the parent-child interaction through play. Parents learn to follow their child’s lead during play and to refrain from criticizing their child’s behaviors, asking questions and giving commands. Rather, parents are taught to combine the use of positive attention skills with active ignoring skills in order to apply differential social attention to positive and negative child behaviors during play. CDI skills become the foundation for discipline skills that are introduced in the parent-directed interaction (PDI) phase. In PDI, the focus shifts to reducing children’s noncompliance as parents learn and practice giving clear, age-appropriate instructions to their child during play and following through with praise (upon completion) or time-out (upon noncompliance). Parents are coached by therapists behind a one-way mirror during interactions with their child via bug-in-the-ear listening devices until they are ready to use the procedures on their own. Parents are also expected to practice the skills at home and gradually expand PDI skills used during play to times when it is necessary for their child to obey in his/her natural environment.
A number of studies have examined the effectiveness of PCIT. Eisenstadt, Eyberg, McNeil, Newcomb, and Funderburk (1993) randomly assigned 24 families referred to treatment for their children diagnosed with an externalizing behavior disorder to two groups: one receiving CDI first and another receiving PDI first. After completing 14 program sessions, the PDI-first group demonstrated greater reductions in child behavior problems; however families in both groups reported an increase in child compliance and decreases in conduct problems, activity level and maternal stress. Based on these findings, the authors suggested that the discipline component of the PDI phase may increase parental consistency important to creating child behavior change but concluded that the ordering of the phases did not contribute differentially to outcomes. At 6-week follow-up, results indicated continued improvement in conduct problems, activity level and maternal stress. Further, two years after completing the program, mothers continued to report post-treatment levels of improved compliance and decreased conduct problems and activity level (Eyberg et al., 2001).

PCIT has been found superior to waitlist control conditions in reducing disruptive behavior in young children. In one study, 64 families of children diagnosed with ODD were randomly assigned to an immediate treatment or a wait-list control group (Schuhmann, Foote, Eyberg, Boggs, & Algina, 1998). Results indicated that parents who received once weekly, 1-hour treatment interacted more positively with their children and reported significant positive changes in parental locus of control, parenting stress, and child behavior than the waitlist group. McNeil, Capage, Bahl, and Blanc (1999) randomly split 32 families into two groups (treatment and waitlist-control). After participating in approximately 14 sessions of PCIT (mean treatment time = 3.5 months), the treatment group showed significantly greater improvements on all dependent measures than the waitlist control group, with mean assessment scores decreasing
from clinically significant levels to within normal limits. In comparing outcomes for 34 behaviorally-disturbed preschool-aged children (divided into PCIT treatment and waitlist-control groups) with 21 non-disturbed preschoolers, Nixon (2001) found that parents in the PCIT group reported child behaviors in the normal range and significantly fewer hyperactive behavior in their children after treatment. At 6-month follow-up, levels of oppositional and hyperactive behaviors were comparable between those who had received PCIT and the non-disturbed preschoolers.

Meta-analyses of PCIT have also demonstrated positive changes in both child and parent behaviors. In a meta-analysis summarizing the outcomes of 17 PCIT studies, Gallager (2003) found that improvements from pre- to post-treatment were statistically significant across all studies. For example, 94% of the studies reported a reduction of parent-rated intensity/frequency of behavior problems, 53% reported increased in clinic-observed compliance rates, and 82% reported clinically significant improvements. Thomas and Zimmer-Gembeck (2007) found medium to large effect sizes for child behavior change from pre- to post-treatment and follow-up based on both parental report ($d = .83 - 1.31$) and clinician observation ($d = .54 - .94$). Similar effect sizes were found for clinic-observed changes in parenting behaviors pre- to post-treatment and follow-up ($d = .61 – 1.46$). When comparing PCIT outcomes to waitlist, effect sizes ranged from .61 to 1.45, favoring PCIT for parental reports of negative child behavior.

The potential use of PCIT with young children and developmental delays has also been reported. Bahl, Spaulding, and McNeil (1999) described one child who had mild developmental delays and oppositional defiant disorder. The child’s parents participated in PCIT and, after treatment, reported improvements in their ability to manage their child’s behavior and in the intensity of their child’s behavior problems. McDiarmid and Bagner (2005) provided a clinical
case description where PCIT demonstrated significant improvement in compliance and challenging behaviors in a three-year-old boy with moderate mental retardation, language delays and oppositional defiant disorder. In 2007, Bagner and Eyberg randomly assigned 30 children diagnosed with both ODD and either mild (60%) or moderate (40%) mental retardation to a PCIT treatment group or a waitlist control group. After attending 12 weekly, 1-hour treatment sessions, treatment mothers interacted more positively with their children and reported significantly fewer child disruptive behaviors than mothers in the waitlist group. Children’s compliance was also significantly higher in the treatment group and, for children receiving PCIT, more than 50% demonstrated clinically significant change.

PCIT has been adapted and demonstrated positive effects in treating neglected children, physically abusive families, children at risk for abuse and children with ADHD, language delays, chronic illness, and separation anxiety (Chaffin et al., 2004; Nixon, 2001; Pincus, Eyberg, & Choate, 2005). Abbreviated versions of PCIT have also demonstrated positive effects. In 2003, Nixon, Sweeney, Erickson, and Touyz found that abbreviated PCIT treatment (consisting of 5 face-to-face sessions alternated with 5, 30-minute telephone consultations) had comparable effects to standard PCIT immediately after intervention and at 6-month follow-up. The behaviors of children receiving PCIT have been found to generalize to the school setting as children showed significantly greater improvements than control groups on teacher rating scales and observational measures of classroom behavior after receiving PCIT treatment (McNeil, Eyberg, Eisenstadt, Newcomb, & Funderburk, 1991). Moreover, there is strong evidence of long-term maintenance of PCIT treatment effects. Hood and Eyberg (2003) found that approximately 75% of children who were assessed 4 to 6 years after completing PCIT treatment remained within the normal range of disruptive behavior. One- to 3-year follow-up assessments comparing treatment
completers to dropouts found that children and families who completed treatment maintained
treatment gains whereas the dropouts showed disruptive behavior and parenting stress at
pretreatment levels (Boggs et al., 2004).

**Triple P-Positive Parenting Program**

The Triple P-Positive Parenting Program (Triple P) is a multi-tiered system of treatment
with five levels of intensity designed to match child and family needs based on problem severity.
Triple P is designed to enable parents to access information and support from a variety of sources
(i.e., media and primary health care and mental healthcare providers) with the goals of helping
children self-regulate their emotions and parents build self-confidence in being able to
independently solve problems as they occur (Sanders, Cann, & Markie-Dadds, 2003). Level 4
and Level 5 are more intensive interventions that focus on parent training. Level 4 (Standard
Triple P) is delivered in 10-12 treatment sessions in either individual or group formats.
Treatment sessions are 60-90 minutes long and are typically conducted in local community
health and neighborhood centers, however, 1-4 home observation sessions have been
incorporated when implementing the program in the individual format. In Standard Triple P,
parents are taught 17 core parenting skills (e.g., talking with children, physical affection,
attention, setting limits, and planned ignoring) that are designed to increase positive and decrease
negative child behaviors. The program also includes planned activities training where parents are
taught a routine for managing activities with their child. Level 5 (Enhanced Triple P) implements
Standard Triple P along with three individualized adjunct models (Practice, Coping Skills and
Partner Support) targeting family stressors (e.g., maternal depression, marital problems).

Sanders, Markie-Dadds, Tully and Bor (2000) examined the effectiveness of the Triple P
program by dividing 305 three-year-old children from primarily lower income families at high
risk of developing a behavior problem into four groups: (1) Level 4 Self-Help Triple P where parents independently completed workbook exercises to learn to set and monitor their own goals for child behavior change and to enhance their parenting skills; (2) Level 4 Standard Triple P where parents were taught the same skills as the Self-Help group but through individualized active skills training and support from a trained practitioner in both the clinic/community and home setting; (3) Level 5 Enhanced Triple P where parents learned partner support and coping skills techniques in addition to receiving parent training as in the Standard group; and (4) waitlist control group. Before and after treatment comparisons across the groups indicated significantly fewer child behavior problems based on parental report and clinical observation in the Standard and Enhanced groups than the waitlist group. Parents in the Standard and Enhanced groups also reported significantly lower levels of dysfunctional parenting and greater parental competence, than parents in the Self-Directed group. In addition, the researchers found that there were a significantly greater proportion of children whose behavior had reliably and clinically improved in the Standard and Enhanced treatment groups than the waitlist treatment condition. At follow-up one year later, these two groups (Standard and Enhanced) continued to show greater reliable improvement on parent-observed disruptive child behavior.

Another examination of the difference between Level 4 and Level 5 Triple P treatments involved randomly assigning 87 low-income preschoolers with co-occurring disruptive behavior and attentional/hyperactive difficulties to Standard treatment, Enhanced treatment or a waitlist control group (Bor, Sanders, & Markie-Dadds, 2002). The treatment groups attended individual sessions with a therapist in local community health and neighborhood centers. After completing the intervention, children in both groups showed significantly fewer problematic behaviors than waitlist controls and those in the Standard group demonstrated significantly less intense
disruptive behaviors, according to parent rating scales. Based on clinician observations of problem behavior, the Enhanced group had significantly lower levels than children in the waitlist condition after treatment. Parents from both treatment groups reported significantly lower levels of dysfunctional parenting and competence than waitlist mothers. Further, a significantly greater proportion of children in the two treatment groups demonstrated reliable improvement in behavior when compared to the waitlist condition and, at one-year follow-up, 80% of the treatment children had achieved reliable change in observed child negative behavior.

Researchers have also modified Standard and Enhanced Triple P, providing 4-5 group treatment sessions followed by four, 15-30 minute follow-up phone consultations and no in-home treatment sessions (Hoath & Sanders, 2002; Ireland, Sanders, & Markie-Dadds, 2003; Leung, Sanders, Leung, Mak, & Lau, 2003). Pre- to post-intervention results from these studies indicated significant improvements on measures of disruptive child behavior, dysfunctional parenting styles, and parental sense of competence. Post-intervention assessments showed significantly better improvement by intervention groups than waitlist control groups. Also, two of the studies included a 3 month follow-up assessment and found that the gains in child behavior and parenting practices achieved at post-intervention were maintained.

In a meta-analysis of the Triple P Parenting program, Thomas and Zimmer-Gembeck (2007) examined a total of 11 studies using Triple P. Analyses identified small to medium effect sizes for clinic-observed ($d = .31 - .41$) and parent report ($d = .73$) of child behavior from pre- to post-treatment. Similar effect sizes were found pre-treatment to follow-up for measures of child behavior ($d = .70$, parent report; $d = .36 - .61$, clinic-observed). Effect sizes for changes in parenting behaviors from pre-treatment to follow-up ranged from .28 to .69 as measured by parental report and clinic observation. When comparing Standard and Enhanced Triple P to
waitlist, medium to large effects for child negative behavior as reported by mothers (d = .69 - .96) and negative parenting behaviors based on parent self-report (d = .98 - 1.07) were found in favor of Triple P.

The Triple P-Positive Parenting Program has been adapted to work with families who have children with a disability. Stepping Stones Triple P (SSTP) was specifically designed for parents with young children with developmental disabilities and incorporates traditional Standard Triple P interventions along with strategies drawn from research on disabilities (Sanders, Mazzucchelli, & Studman, 2004). For example, SSTP emphasizes the importance of teaching children new competencies such as communication skills to help reduce the challenging behaviors that stem from the inability to communicate effectively. The program also focuses on connecting parents with community services to increase their resources as they cope with raising a child with a disability. Sanders and Plant (1989) investigated a preliminary version of SSTP with five families of preschool children with developmental disabilities and behavior problems and found that three of the families were able to successfully implement behavior management strategies that resulted in decreased child behavior problems. Roberts, Mazzucchelli, Studman and Sanders (2006) demonstrated the utility of SSTP in reducing behavior problems in children with a disability by comparing 27 children with a disability receiving SSTP to 21 children with a disability in a waitlist control group. Results found that, after treatment, mothers participating in SSTP were less over-reactive and reported significant reductions in child behavior problems at post-test and 6-month follow-up. Observations of children’s oppositional behavior decreased significantly more from pre- to post-treatment and from pre-treatment to follow-up for SSTP participants than waitlist controls.
The Incredible Years Parent Training Program (IY-PT) is a group-training program designed for parents of children ages 2-8 years old with disruptive behavior (Eyberg et al., 2008). In the program, parents meet weekly in groups of 8 to 12 with a therapist for 13-14 sessions (2 hours per session). During treatment, parents view videotaped vignettes demonstrating social learning, child development and behavioral principles such as child-directed play, the strategic use of differential attention (ignoring negative behaviors and praising positive actions), encouragement, praise, and positive and consistent discipline strategies (time-out and natural consequences). By showing parent models in natural situations with their children “doing it right” and “doing it wrong,” the vignettes are used to foster group discussions, problem solving and collaborative learning around important components of effective parenting (Webster-Stratton & Taylor, 2001). Topics also cover effective limit setting, ways to strengthen children’s social skills, teaching children problem solving, strategies for coping with stress, and getting support from family, friends and the community. Parents in the program are also provided with a copy of the parenting book *The Incredible Years: a Trouble Shooting Guide for Parents* (Webster-Stratton, 1992).

The efficacy of IY-PT has been established through a number of randomized trials. Webster-Stratton (1981) examined this program with 35 mothers and their 3-5 year-old children. The mothers were assigned at random to an early treatment group or a wait-list control group and assessed using a parent attitude survey, behavioral observations of mother-child interactions and a consumer satisfaction measure (Time I). The early treatment group was then divided into two groups of eight parents, with each group attending four, weekly 2-hour treatment sessions. After completing the treatment program (Time II), the early treatment group and the wait-list control
group were reassessed. Two weeks later, the wait-list control group began treatment, and upon their completion both groups were tested again (Time III) to determine immediate results for the wait-list group and 6-week follow-up results for the treatment group. When compared with the wait-list group at Time II, the early treatment group displayed significantly fewer lead-taking, dominance, and non-acceptance behaviors as well as significantly more positive affect behaviors. At Time III, the two groups no longer differed statistically and all mothers reported feeling “very positive” about the program and the positive changes in themselves and their children as a result of their participation in the program. Further, at one-year follow-up, significant behavioral changes reported at post-treatment were maintained or improved and the mothers continued to report a significant reduction in the intensity and number of child behavior problems (Webster-Stratton, 1982).

In 1984, Webster-Stratton demonstrated that IY-PT was as effective as individual therapy for children diagnosed with conduct disorder. In this study, 35 children were randomly assigned to individual family therapy, group therapy or a wait-list control group. The group treatment was the IY-PT program while the individual treatment consisted of one-to-one sessions between the therapist, parent and child. The two treatment groups each received a series of 9, weekly therapy sessions. Results showed that mothers in both treatment groups reported significantly lower rates of non-compliance, fewer and less intense behavior problems, and more positive behaviors in their children after completing treatment. They also reported less use of spanking and were more positive and less critical during interactions with their child. One year later, significant behavioral changes in mothers and children were maintained.

To further investigate its effectiveness, group discussion and individually-administered versions of the IY-PT program have been compared. For example, in one study 194 parents with
clinic-referred young children were enrolled in either a wait-list control group or one of three therapy groups participating in 10 to 12, 2-hour intervention sessions: a self-administered videotape-modeling treatment group (IVM), a group discussion videotape modeling treatment group (GDVM), and a group discussion treatment group (GD) (Webster-Stratton, Hollinsworth, & Kolpacoff, 1989). Analyses at pre-test, post-test and 1-year follow-up showed significant improvement in parental report of child behavior problems as well as improvements in parent self-efficacy and decreases in parent distress across all treatment groups. However, GDVM parents reported more consumer satisfaction and perceived their children as significantly more improved at 1-year follow-up than post-test than did IVM parents, suggesting that the group discussion component of the IY-PT program was somewhat superior to just videotape (IVM) or just group discussion (GD).

IY-PT has also been used to address behavior problems in low-income children. Webster-Stratton (1998) examined the effectiveness of IY-PT using pre- and post-test data for 394 Head Start families that were randomly assigned to an intervention condition and a control group. The intervention group received an abbreviated version of IY-PT which included 8-9 weekly, 2-hour sessions in groups of 8-16 parents. At post-test, in contrast to control mothers, intervention mothers significantly increased their discipline competence, positive affect, praise and positive physical behaviors while significantly decreasing their harsh or critical behavior, commands and negative affect. Intervention children significantly decreased their deviant and noncompliant behaviors, negative affect, misbehavior and poor conduct while the control children remained stable over time. These significant parent and child behavior changes were maintained at follow-up, 12-18 months later. Webster-Stratton, Reid, and Hammond (2001) and Gross, et al. (2003) also used randomized clinical trials to test IY-PT with low-income families (n = 328; n = 208,
respectively) enrolled in Head Start programs. In these studies, the previous research was extended as they both included a teacher-training program along with the traditional parent-training program. Using the 12-week program, both teachers and parents met weekly (independent of each other) and were trained in positive management and discipline strategies for the home or classroom. Results demonstrated that intervention parents reported significant improvements in child behavior and management of challenging behaviors and experienced improvements on measures of self-efficacy and parental stress.

Recently, IY-PT was evaluated with children with developmental disabilities (McIntyre, 2008). In the study, 49 families of preschool-aged children with developmental delays were randomly assigned to an experimental or control group. While all of the children were receiving special education/therapy services, the experimental group also received 12-weekly, 2.5 hour group sessions of IY-PT. Results indicated that parents in both groups demonstrated significant improvements on all measures from pre- to post-test including parental use of praise, negative parenting behaviors, child problem behaviors, as well as positive child impact and negative child impact on family functioning. Two significant between-group differences were found: parents in the experimental group demonstrated significantly fewer negative parenting behaviors during interactions with their children and reported significantly fewer child behavior problems than control parents after the intervention.

*Parenting Young Children*

The Parenting Young Children (PYC) Program was specifically developed for parents of 1- to 5-year old children to help them more effectively respond to their child’s challenging behaviors (Fox & Nicholson, 2003). In this program, parents are first taught to attend to their thoughts and feelings about their child’s behaviors and to how these internal events effect their
reactions to their child. In an effort to learn a more thoughtful parenting style, parents are encouraged to apply the STAR cognitive strategy. Using a familiar stop-and-go traffic light, parents are taught to first S-stop (red light) themselves from immediately reacting to their child’s behavior and then T-think (yellow light) about their feelings. The goal of this segment of the program is to provide parents with time to regain emotional control by considering their thoughts and feelings and how they might alter them through various techniques (e.g., breathing exercises, counting to ten). The second segment of the program focuses on parents’ developmental expectations for their children. Parents are provided information about child development which they can apply and A-ask (yellow light) themselves if their expectations for the child are developmentally appropriate. If their expectations are not developmentally appropriate, parents are encouraged to alter their expectations before responding to their child. The final two segments of PYC emphasize new ways to R-respond (green light) through the use of both positive parenting and discipline strategies. Parents are taught strategies to strengthen their children’s pro-social behaviors including positive reinforcement, establishing routines and giving good instructions. They are also taught how to set limits and provide developmentally appropriate consequences for their children’s challenging behaviors through the use of redirection, ignoring, natural consequences, and time-out. PYC was developed to be delivered in different formats (e.g., group, individual) but generally comprises a minimum of 10 to 15 hours of instruction combined with in-home practice.

Initial investigations of the effectiveness of the PYC Program examined the program when implemented in group settings. For one study, five group classes (four, 3-hour sessions each) were conducted in five community settings with 75 parents interested in learning how to more effectively discipline their young children (Fox, Anderson, Fox, & Rodriguez, 1991). On
post-test evaluations, the parents reported being positive, providing consistent consequences for challenging behaviors, and feeling more in control with their kids receiving time-out instead of spankings. Fox, Fox, and Anderson (1991) had 35 parents of young children receive eight hours of instruction in PYC in a group, community setting. The results found that parents reported significant improvements in parental anxiety and confidence, reductions in emotional reacting to children’s challenging behaviors and increased use of positive reinforcement and time-out from pre- to post-test. These results were maintained at a six-week follow-up. When a waitlist control group was compared to a group of parents receiving the PYC program, results indicated that parents receiving treatment significantly improved their parenting attitudes and decreased their preschool children’s behavior problems from pre-test to post-test when compared to the control group (Nicholson, Janz, & Fox, 1998). Further, parents demonstrated a significant decrease in their reported use of verbal and physical punishment while the control group increased their use of these techniques after treatment.

Fox, Duffy and Keller (2006) examined the effectiveness of PYC when provided in an individual format primarily in the home setting. For the study, outcomes for 24 families with children aged 1- to 5-years participating in the program were analyzed. On average, families finished the program in 10, weekly 1-1.5 hour sessions over a 14-week period. The results showed that parents significantly reduced their use of corporal and verbal punishment. Parents reported a significant decrease in the frequency of their children’s challenging behaviors and a significant increase in pro-social behaviors. Moreover, facilitator’s ratings of the overall quality of the parent-child interaction improved significantly from pre- to post-test.

Implementation of PYC with low-income groups has demonstrated positive results. In a diverse sample of 149 parents, Brenner, Nicholson, and Fox (1999) reported significant pre-post
changes with children’s challenging behaviors decreasing and parents using less verbal and corporal punishment and increased nurturing. Upon expanding the program to an additional 143 low-income mothers of young children, the researchers found that parents who completed the program showed reductions in discipline, increased nurturing and reported few child behavior problems. Nicholson, Anderson, Fox, and Brenner (2002) randomly assigned 26 low-income parents of young children to an experimental group receiving 10, 1.5-hour sessions of PYC in groups of four or a waitlist control group. After treatment, the experimental group showed significant reductions when compared to controls in child behavior problems, in parental use of verbal and corporal punishment, and in levels of parent anger and stress. They also demonstrated significant increases in parent and child positive behaviors during play between pre-test and post-test. These positive gains were maintained at one-month follow-up. PYC was extended to parents living in Mexico (Solis-Camara, Fox, & Nicholson, 2000). In comparing 82 Mexican mothers to 63 American mothers, the two groups’ pre- and post-treatment scores on self-report measures demonstrated that all mothers statistically significantly changed in their discipline and expectations after treatment and also reported fewer child behavior problems.

PYC has also been provided to low-income families of children with developmental disabilities. In a recent study, data were collected on 102 low-income, preschool children primarily referred for externalizing behavior problems who received PYC through in-home, weekly 60-90 minute treatment sessions (Fox & Holtz, in press). Criteria for a significant developmental delay in one or more areas of development (e.g., cognition, language, motor) were met by 70% of the sample. After treatment, significant improvements were found in the overall parent-child relationship, the quality of play interactions, child compliance and parent use of praise. Children’s behavior problems decreased significantly in both intensity and frequency
after treatment. In addition, only 21.4% of the children met criteria for a psychiatric diagnosis at post-test, as compared to 82.7% at pre-test. Holtz, Carrasco, Mattek, and Fox (in press) compared outcomes for a group of low-income toddlers with developmental delays (n = 27) and without developmental delays (n = 27), the majority of whom were diagnosed with a psychiatric disorder at intake. It was found that once-weekly PYC treatment in the home setting was equally effective for children with and without developmental delays. Specifically, both groups demonstrated significant reductions in child behavior problems, child negative affect during play, and parent use of verbal and corporal punishment. Overall, parent-child play interactions became more reciprocal from pre- to post-test for both groups with significantly increased parent sensitivity and child positive affect and social responsiveness. In addition, of the 40 children who met the criteria for a psychiatric disorder diagnosis at pre-test, 31 no longer met criteria at post-test.

Limitations

Despite the apparent strength of current PCT programs, significant gaps in the research remain. In particular, PCT research has not attended to the potential impact of various treatment factors on their programs and outcomes. Treatment factors such as the setting, format, and dose and length of treatment are believed to play an important role in treatment (Webster-Stratton & Hammond, 1997); however, they have not been evaluated in the existing literature. For instance, while each of the leading PCT programs has a well-defined delivery format, important details of treatment implementation are rarely considered in the research. One example is the tendency to describe the proposed service model rather than the actual intervention. Specifically, program research will indicate the number and duration of treatment sessions (e.g., eight, 2-hour, weekly sessions) but the length of treatment (e.g., mean treatment length) is rarely reported. So it is not
known if, for example, the 8 sessions were conducted consecutively or over 12, 16, 20 or more weeks. As a result, it is difficult to draw conclusions about the intensity of treatment provided and the level of engagement of families which may relate to treatment outcome.

Treatment Intensity

In the mental health field, there is consensus that psychotherapeutic treatment is generally beneficial to patients and a positive correlation between the amount of treatment and the amount of therapeutic benefit has been found (Bush, Glenwick, & Stephens, 1989; Kordy, von Rad, & Senf, 1988; Sandell, Bloomberg, & Lazar, 2002). Across several disciplines, more intensive treatments are associated with more patient improvement. For example, substance abuse programs with high service intensity have lower attrition rates (Sun, 2006) and demonstrate better outcomes than low-intensity programs (Timko & Sempel, 2004). In the area of eating disorders, treatments involving more hours of therapy per week evidence better outcomes than those involving fewer hours (Fettes & Peters, 1992). High intensity of treatment is one of the key characteristics of successful early intervention programs for children with developmental disabilities including autism (Innocenti & White, 1993; Lovaas, 1987), and some have found that treatment intensity has a predictive relationship to outcome that is not mediated by other psychosocial or cognitive factors (Medalia & Richardson, 2005).

Whether or not more intensive treatments result in better outcomes is a topic of interest to many including clinicians, consumers and those responsible for funding care (Feaster, Newman, & Rice, 2003). However, researchers have been cautious to conclude that “more is better” because reports of the positive relationship between treatment level and outcome have emerged from ancillary evaluations that are not the primary focus of the studies (Howard, Kopta, Krause, & Orlinsky, 1986). As a result, a number of researchers have attempted to explore the issue of
Treatment intensity systematically by looking for possible dose-effect relationships. This body of research attempts to determine how much therapy is needed to achieve positive results and is based on assumptions that a treatment session is quantitative unit of psychotherapy and that patient response to therapy is a function of treatment dosage. Dose-effect research was initiated by a group of researchers in the mid-1980s who identified the dose-effect model in psychotherapy.

*The Dose-Effect Model*

The dose-effect model was introduced by Howard, Koptka, Krause, and Orlinsky (1986) with their meta-analysis on 15 samples of adult patients who received individual outpatient psychotherapy (usually once-weekly), covering a period of more than 30 years. The study examined 2,431 patients (reportedly diverse with regard to age, social class, and primary diagnosis) treated by therapists in range of mental health settings. Based on therapist, patient and researcher ratings of patient improvement at different points in therapy, analyzes showed that 30% of clients were measurably improved after 2 sessions, 41% after 4 sessions, 58% after 8 sessions, 62% after 13 sessions, 75% after 26 sessions (at the end of 6 months of once-weekly treatment), and about 85% by the end of a year of treatment. The researchers concluded that the path of client improvement was a negatively accelerating function of treatment length where the effect of therapy was greater in earlier sessions and increased more slowly at higher dosage levels. In this way, they suggested that the relationship between the number of sessions and patient improvement took a form similar to that evidenced by many medications – a positive relationship with greater probabilities for improvement with more psychotherapy but diminishing returns at higher doses. Based on their findings, it was suggested that patients received effective
exposure to treatment at 6-8 sessions and that about 75% of patients should show improvement by 26 sessions.

Once identified, support for the dose-effect model soon followed. Examinations of a sample of 685 adult outpatients, being provided individual psychotherapy by 141 different psychologists, psychiatrists and social workers at five mental health centers, found that reliable, clinically significant improvement was proportionally greater early in treatment (Kopta, Howard, Lowry, & Beutler, 1994). In this study, 50% of patients recovered by the end of 11 sessions, or approximately 2.5 months of once-weekly treatment, and 75% recovered by the end of 58 sessions, or approximately 1 year of once-weekly treatment. Lambert, Hansen and Finch (2001) reported recovery rates from a national sample of patients \( n = 6,072 \) undergoing treatment in various settings and found that 50% of patients who began treatment in the dysfunctional range achieved clinically significant change following 21 sessions of psychotherapy. However, more than twice this number of treatment sessions was necessary before 75% of patients reached this same criterion. By using a lesser standard of improvement (reliable change) and including patients who began treatment in the functional range, the researchers found that 50% were estimated to improve following 7 sessions and 75% following 14 sessions.

With evidence that the dosage of therapy needed to achieve change depended on the criteria selected (i.e., clinically significant change versus reliable change) and the level of symptoms severity (dysfunctional versus functional) came questions about how much treatment was needed to remedy different symptoms. Researchers began extending dose-effect analyses by exploring potentially differential treatment responses based on different symptoms. For instance, upon grouping patients into three diagnostic categories (depression, anxiety, borderline-psychotic), Howard et al. (1986) analyzed the percentage of patients who improved on the basis
of researchers’ clinical chart ratings and patients’ self-ratings during treatment. They found that 50% of the depressed and anxious patients improved in about 8-13 sessions of treatment on both types of outcome criteria. For borderline cases, this level of improvement occurred later, at 13-26 sessions according to patient self ratings and at 26-52 sessions according to researcher ratings. Kopta et al. (1994) also explored the rates at which different psychological symptoms remitted to normal levels during psychotherapy. Using a well-established symptom checklist, the researchers grouped 64 symptoms into three classes (acute distress, chronic distress, and characterological symptoms) and calculated the median effective dose (ED50, i.e., the dosage at which 50% of patients were estimated to have responded to treatment). For acute distress symptoms, the mean ED50 dosage was 5 sessions. Chronic distress symptoms showed a mean ED50 of 14 sessions, and the mean ED50 dosage was greater than 18 sessions for characterological symptoms. Based on these results, the researchers concluded that the relationship between the amount of therapy and patient improvement was related to the type of psychological symptom.

Despite evidence supporting the dose-effect model, there is research showing that the number of sessions and treatment duration are not significant predictors of patient improvement (Shapiro & Shapiro, 1982; Reardon, Cukrowicz, Reeves, & Joiner, 2002). For example, one study found that, while the percentages of patients who achieved reliably, clinically significant change increased with dose up to session 8, the percentages remained relatively constant after that, suggesting there is no relationship between dose and clinically significant improvement after session 8 (Baldwin, Berkeljon, Atkins, Olsen, & Nielsen, 2009). Another study examined the responses of depressed clients involved in psychodynamic-interpersonal or CBT treatment administered in 8 or 16 sessions. The results showed that more sessions did not necessarily result in better outcomes as clients involved in the 8-session treatment had recovery rates that were
higher than half of the clients involved in the 16-session treatment (Barkham, Stiles, Shapiro, Hardy, & Reynolds, 1996).

Mixed results regarding dose-effect relationships in psychotherapy also exist in the children’s mental health literature. While positive correlations between improvement and greater lengths of psychoanalysis have been found (Fonagy & Target, 1994), other studies have found no relationship between the duration of treatment and clinical outcomes (Casey & Berman, 1985). It has been documented that children who had larger numbers of treatment sessions demonstrate no better outcomes than those who did not. Salzer, Bickman, and Lambert (1999) examined data for 392 children receiving outpatient mental health services and found a non-significant dose effect despite individual indicators of better improvement for cases with more sessions. In response to these findings that the slope of improvement on outcome measures was about the same for high- and low-dose clients, a second study was conducted by Andrade, Lambert, and Bickman (2000) using data for 592 children who had received outpatient mental health services. For this study, the children were divided into two groups based on their exposure to treatment: negligible (receiving less than 8 treatment sessions) and more-than-negligible (receiving more than 8 treatment sessions). Using four assessments of their mental health status taken at intake, 6 months and 12 months, the researchers looked to determine if children with substantial treatment improved more than children with negligible treatment. Their results also failed to identify a significant dose-effect of mental health services.

In contrast, Angold, Costello, Burns, Erkanli, and Farmer (2000) analyzed data from 997 children (9 – 16 years old) that met DSM diagnostic criteria (51%) or had psychiatric symptoms causing significant psychosocial impairment (49%). The sample was divided into treated or untreated groups based on whether or not the children had accessed outpatient mental health
services. Results indicated that children who entered treatment demonstrated substantial deterioration in symptoms, impairment and a negative impact of their disorders on their parents prior to starting treatment. After treatment, this deteriorating trend was either reversed (symptoms) or halted (impairment and parental impact). Moreover, there was a significant dose-effect with higher levels of treatment being associated with lower levels of symptoms at follow-up. Interestingly, these researchers noted that real improvement was not clearly demonstrated until an individual had received more than 8 sessions.

*Parent and Child Therapy*

Only two studies in the PCT literature have attended directly to dose-effect relationships. Both of these studies were examining the efficacy of the Incredible Years Parent Training Program when assessing for the maintenance of treatment gains at 1-year follow-up. In the first study, the sample was 23 families of 2-year-old children with mild behavioral difficulties who successfully completed a 10-week intervention consisting of once-weekly sessions (Tucker, Gross, Fogg, Delany, & Lapporte, 1998). The researchers examined intervention dosage effects on two dimensions, the number of treatment sessions attended and the amount of weekly homework assignments turned in, and found two significant positive correlations. The more groups attended and the more homework completed, the greater the decreases in mothers’ negative physical behaviors and critical statements from pre-intervention to 1-year post-intervention. These findings suggested that the amount of treatment families received/participated-in was related to more positive outcomes at follow-up. The second study examined data for 59 families of children aged 3-8 years (referred with antisocial behaviors) that received the IY-PT program once-weekly over 13-16 weeks along with weekly support telephone calls (Scott, 2005). In exploring for a possible dose-effect relationship, there was no
significant correlation between the number of sessions and the amount of each child’s change. When the sample was divided into those who received eight or fewer sessions and those who received nine or more sessions, the effect size more than doubled but still missed statistical significance. Based on this change, the author suggested that the effect might hold-up in a larger sample.

Limitations

The systematic examination of the role of treatment intensity in therapeutic outcomes has been focused on exploring dose-effect relationships. Yet explorations of the therapeutic effects of different doses of therapy have produced mixed results. Some studies have established a dose-effect relationship in therapy, documenting that higher levels of treatment are associated with better improvement. Other studies have found no such relationship, and some show that fewer sessions are better than more. Researchers have suggested that the amount of therapy needed to achieve change for 50% of patients is between 8 and 11 once-weekly sessions. However, there are discrepancies in how change is defined and there is evidence that patient response to treatment is related to symptom type and severity.

Overall, the positive relationship between amount of treatment and amount of patient benefit has been loosely documented in the research to date and many have concluded that there is no systematic way to specify dose-effect relationships or determine their accuracy (Baldwin, Berkeljon, Atkins, Olsen, & Nielson, 2000; Feaster, Newman, & Rice, 2003; Jensen, Weersing, Hoagwood, & Goldman, 2005). This may be a result of the fact that examinations of dose-effect relationships have been based on data from studies that were designed for different purposes. Not only have studies examining dose-effect relationships included an array of psychotherapies, treatment modalities, and techniques for treating a wide-range of psychiatric problems,
researchers did not standardize treatments to diagnoses or even know whether or not efficacious therapies were being delivered to the patients (Hoagwood, 2000). There also is no standard or widely accepted definition of treatment intensity across studies. For example, dose has been defined as the length of treatment and as the number of mental health visits over a 1-year period. Further, in studies examining the impact of different treatment intensity, the dose varied considerably because it was determined by the patient and therapist, i.e., by when termination occurred (which could have occurred for a variety of therapy and non-therapy reasons). As discussed by Feaster, Newman, and Rice (2003), with treatment dosage being an uncontrolled variable, the dose of therapy that patients received in existing dose-effect research was systematically related to treatment response as opposed to being independent of treatment response. As a result, outcomes may have been measured at a bias point since termination is most likely to occur when the patient is doing better, which may result in overstatements of pre-post change.

Inconsistencies in the definition, measurement and analysis of “dose” in therapy make it difficult to estimate the expected benefits for selected doses of psychotherapy and draw conclusions about the presence or absence of dose effects for mental health services. Unfortunately, direct comparison studies in which treatment intensity is treated as the independent variable, with all other intervention variables kept constant, have not been reported (Warren, Fey & Yoder, 2007). Research on the dose-effect of therapy needs to be extended to include studies that vary doses of the same psychotherapy treatment (Feaster, Newman, & Rice, 2003). Without studies that clearly define the construct of intensity, control treatment dosage, utilize efficacious treatments, measure change on non-ambiguous and homogeneous criteria, establish assessment schedules prior to the initiation of treatment, and incorporate follow-up
assessments to determine long-term outcomes of variable lengths of treatment, questions about whether or not more intensive interventions are more effective will remain unresolved.

Conclusion

Behavior problems in young children may reach clinical severity levels that negatively impact their development and often persist into their formal school years. The literature suggests that the leading PCT programs effectively change parental behaviors and improve young children’s behavior problems. However, ongoing evaluation and development of these treatments is necessary in order to increase their benefit. In particular, treatment programs need to attend to key treatment factors (i.e., the length and dosage of the intervention) as they are likely relevant to interpreting program impact. Questions regarding the role of treatment intensity or the existence of a dose-effect relationship in PCT programs will be best answered by comparing a single treatment at different intensity levels.

The purpose of this study is to explore the effect of increased treatment intensity on outcomes for an established PCT program. This study will apply the examination of treatment intensity to the Parenting Young Children program and extend the focus of intensity research in general to include an analysis of varying doses of the same psychotherapy treatment. Through a controlled comparison of a standard versus intensive treatment program, this study is likely to provide useful information about how PYC may be optimally delivered to maximize outcomes, thereby further interrupting the negative developmental pathway of young children with behavior problems.
Chapter 3 - Methodology

The current study is part of a larger ongoing research project examining the effectiveness of a parent and child therapy program in reducing young children’s challenging behaviors; therefore, the data used in this study will consist of archival data. This chapter will describe the participants, treatment procedures, measures, and data analyses that will be used to determine the impact of differential treatment intensity on outcomes.

Participants

The participants in this study will be young children from a large, urban Midwestern city referred to a mental health clinic due to their externalizing behavior problems. There will be a minimum of 60 participants who will be randomly assigned to one of two treatment levels: a standard treatment group or an intensity treatment group. Group assignment will be randomized using a random number table once participants meet the following inclusion criteria: (1) the child is between the ages of one and four years, eleven months at the time of intake; (2) the child has a T-score greater than or equal to 60 on the Intensity Scale of the Eyberg Childhood Behavior Inventory; (3) the child does not meet diagnostic criteria for Pervasive Development Disorder; and (4) the family receives public assistance (i.e., food stamps, WIC, SSI, or W2) or meets the criteria for poverty (i.e., family income is at or below 125% of the poverty level based on the Health and Human Services Poverty Guidelines, 2008). Additional demographic data will also be collected including child gender, presence of a developmental delay, ethnicity, parent age, marital status, and parent level of education.

Research Design

Children will be assigned randomly to standard and intensive treatment conditions in a two-by-three experimental design with one between-subjects factor (treatment level; standard
versus intensity) and one within-subjects factor (time; pre-test, post-test and follow-up). The standard treatment program includes eight, once-weekly treatment sessions that are scheduled to be provided over 8 consecutive weeks. The intensive treatment program includes eight, twice-weekly and four once-weekly treatment sessions that are scheduled to be provided over 8 consecutive weeks. In addition to the schedule treatment sessions, all subjects will participate in separate intake, post-test, and follow-up assessment sessions. Group comparisons will be based on assessments including parental self-report instruments and direct observation measures administered at pre-test, post-test, and follow-up.

A priori sample size estimations were conducted using statistical power analysis based on significance criterion, population effect size and statistical power (Cohen, 1992). The minimum acceptable sample size for a 2x3 repeated measures MANOVA was calculated with the G*Power 3.1.0 computer software program, utilizing effect sizes established in the PCT literature (ranging from moderate to large) and the conventional estimates of alpha (.05) and beta (.80) (Faul, 2008).

Procedures

The sample will consist of children who were referred to the Behavior Clinic for treatment for externalizing behavior problems that successfully completed either the standard or intensity treatment program, based on their group assignment.

Behavior Clinic

The Behavior Clinic provides home-based, mental health services for children (age 0-5 years old) with significant behavior problems (Fox, Keller, Grede, & Bartosz, 2007). It is housed within a community-based agency, located in a large, urban city in the Midwest. The agency annually serves over 1,100 children with developmental disabilities, 95% who come from a diverse population of families that live below the poverty level based on guidelines established
by the U.S. Department of Health and Human Services (HHS, 2005). The average age of children served by the clinic is 2.57 years ($SD = 0.66$), over 70% of who meet the criteria for a developmental delay; the primary caretakers for these children are usually their biological mothers (84.8%), most of whom are unmarried (64.4%), have less than a high school education ($M$ years in school = 11.67, $SD = 2.86$), and are receiving one or more sources of public assistance (84.4%) (Fox, Holtz & Barber, 2008).

Treatment Program

The Behavior Clinic utilizes an individualized format of the PYC program for young children (Fox & Nicholson, 2003), implemented in its entirety in the home with the children and their caregivers. PYC treatment includes four main elements: (a) enriching the parent/child relationship through non-directive play; (b) helping the parents maintain appropriate developmental expectations for their child and learn to thoughtfully interact with their child rather than emotionally overreact to their child’s behavior; (c) using techniques such as positive reinforcement, establishing home routines, and giving good instructions to strengthen the child’s pro-social behaviors; and (d) employing limit-setting strategies such as redirection, ignoring, response cost, and time-out to reduce the child’s challenging behaviors. During treatment sessions, which are approximately 2-hours in length, each treatment strategy is explained to the caregiver and directly modeled by the clinician; parents also practice each strategy with their children and receive immediate feedback from the clinician. Handouts are provided to explain treatment strategies in more detail as are all materials needed to implement the treatment (e.g., edible reinforcers, stickers, door gates for time-out). Individualized treatment plans are written that tailor the procedures to each individual child and parent, and treatment strategies are fine-tuned as necessary to meet the unique needs of each child, their caregivers, and the home setting.
Treatment also includes a parent coaching component where clinicians observe parents during their natural day-to-day interactions with their child and provide immediate feedback to parents as they implement treatment strategies.

Clinicians are master’s level therapists and graduate students in counseling and psychology programs who receive practicum and internship course credit for their work at the Behavior Clinic. All clinicians receive extensive training and supervision in four modules: (a) working with diverse families of young children with developmental delays and who live in poverty; (b) clinical skills needed for interacting with children less than five years of age and their caregivers; (c) treatment theory, program content and procedures; and d) assessment administration and data collection. Training includes didactic instruction, watching treatment implementation videotapes, rating parent-child interactions to ensure inter-rater reliability, reading articles, shadowing treatment sessions, and a gradual assumption of the role of a clinician in the field under close supervision. Specific treatment adherence criteria to ensure proper administration of the treatment program is met by all therapists and students prior to their functioning independently as a clinician. Each clinician participates in ongoing supervision (group and individual) to receive assistance on specific issues that arise with families and for feedback on clinician performance as they implement the treatment program. In general, clinicians complete training in a period of three to fourth months, at which time they typically carry a caseload of five to eight families independently.

Measures

Eyberg Child Behavior Inventory (ECBI).

The ECBI (Eyberg & Pincus, 1999) is a 36-item inventory that measures common behavior problems in children between the ages of 2-16 years. Parents rate the frequency of each
behavior (e.g., has temper tantrums, cries easily, physically fights with friends own age) on a scale from 1 (never) to 7 (always), resulting in an Intensity Score (range=36-252). Parents also are asked to identify if each behavior is a current problem (yes or no) resulting in a total problem score (range=0-36). The ECBI has been shown to discriminate between problem and non-problem children, and a T-score of 60 has been established the cut-off score for clinical significance (Weis, Lovejoy, & Lundahl, 2004). Evidence of reliability of the scale includes coefficient alphas of .95 for the intensity scale and .93 for the problem scale, test-retest correlation coefficients of .80 for the intensity scale and .85 for the problem scale at 12-week testing intervals, and inter-rater reliabilities of .86 for the intensity scale and .79 for the problem scale. The ECBI has been shown to have good concurrent validity with the Child Behavior Checklist (CBCL; Achenbach, 1991) as the ECBI scales were correlated more significantly with the CBCL’s Externalizing scale (problem scale = .85, intensity scale = .86) for preschool-aged children than the Internalizing scale (Boggs, Eyberg, & Reynolds, 1990). It also has been found to be free of social desirability (Robinson & Anderson, 1983).

*Parent Behavior Checklist (PBC) - Short Form.*

The PBC (Fox, 1994) is a 32-item rating scale that was designed to measure the behaviors and expectations of parents of young children between the ages of 1 year and 4 years, 11 months. The PBC consists of three scales that were empirically derived through factor analyses: Expectations – 12 items that measure parents’ developmental expectations (“My child should be quiet while I’m on the phone”); Discipline – 10 items that assess parental responses to children’s problem behaviors (“I yell at my child for whining”); and Nurturing – 10 items that measure specific parent behaviors that promote a child’s psychological growth (“My child and I play together on the floor”). Items are rated using a 4-point frequency scale (4 = almost
always/always, 3 = frequently, 2 = sometimes, and 1 = almost never/never). The range of total scores for each subscale are: Expectations (12-48) with higher scores indicating higher parental expectations; Discipline (10-40) with higher scores indicating more frequent use of verbal and corporal punishment (e.g., yelling, spanking); and Nurturing (10-40) with higher scores suggesting more frequent use of positive nurturing activities. All scores are converted into uniform T-scores to allow for comparison across parents of differently aged children. From a representative sample of 1,140 mothers, the following internal consistencies using coefficient alphas were reported: Expectations = .97, Discipline = .91, and Nurturing = .82. Test-retest reliabilities for each of the three subscales were: Expectations = .98, Discipline = .87, and Nurturing = .81. Responses on the PBC were shown not to be influenced by social desirability (Peters & Fox, 1993).

Parent-Child Interaction Assessment

Parents are instructed to play with their child while the clinician rates the quality of the parent and child interaction. Based on the work of Crawley and Spiker (1983), five dimensions of the child’s behavior (positive affect, negative affect, interest in play, initiates interactions, socially responsive), and six dimensions of the parent’s behavior (parent directs play, parent lets child direct play, sensitivity to child, expectations for child, discipline – sets appropriate limits, and reciprocity) are rated using a five point frequency scale (1 = never, 2 = seldom, 3 = average, 4 = usually, 5 = always). Separate total scores are computed for the five dimensions of the child’s behaviors (the negative affect item scores were reversed for this computation) and the six dimensions of the parent’s behaviors (the parent leads item scores were reversed for this computation). Fox et al. (2007) reported alphas of .85 for the total child scores and .83 for the total parent scores. For approximately 20% of the observations, two clinicians will independently
complete the play assessment and correlations will be computed between the total scores obtained by each clinician to determine inter-rater reliability for child and parent ratings. Past inter-rater reliability computations have yielded significant correlations for child (.76) and parent (.75) scores (Fox & Holtz, in press).

Child Compliance

Following the parent-child interaction assessment, parents are told to give their child five simple requests so the clinician can assess how well their children listen to them (e.g., pick up the toy, come here). After recording the number of parental requests and the child’s compliance (yes or no), a compliance percentage score is computed. For approximately 20% of the observations, two clinicians will independently complete the compliance assessment. Correlations will be computed between the total number of parental requests and the total number of times the child complied with parent requests, as recorded independently by each clinician, to yield inter-rater reliability coefficients for parent requests and child compliance. Correlations between observers of .94 for the total number of parental requests and .96 for the total number of times the child complied with parent requests have been previously reported (Fox & Holtz, in press).

Parent-Child Relationship Scale

This scale provides a global assessment of the quality of the parent and child relationship on a scale of 0-100 with five behavioral anchors at 20-point intervals (Fox & Nicholson, 2003). It will be completed by clinicians at intake and again following the post-treatment evaluation. This global score was determined after a careful review of all of the assessment findings based on direct observation and the scores from parent self-report measures.

Copies of all measures are available for review in the Appendix.
Data Analyses

The Statistical Package for the Social Sciences (SPSS 17.0 for Windows) program will be used to conduct the statistical analyses for this study. Preliminary analyses will include descriptive data about each group. Descriptive statistics will be computed for all study measures. Independent-group t-Tests will be used to identify any statistically significant differences at pre-test between the standard and intensity treatment groups on the continuous demographic variables (e.g., child age, parent education) and chi square tests will be used for the categorical variables (e.g., child gender, diagnosis).

Each research hypothesis will be examined using repeated measures, multivariate analyses of variance (MANOVA) to assess for changes in the dependent measures (ECBI intensity and problem score; PBC nurturing, discipline and expectations scores; play interactions; child compliance; parent-child relationship) across time (pre-test, post-test, follow-up) based on group assignment (standard, intensity). If statistically significant main or interaction effects are found, post hoc univariate F tests will follow to determine the source of the significance.

Limitations

One of the major challenges present in this study is that all of the participants will come from low-income families where there are multiple barriers to treatment that can make treatment completion difficult. Based on the Behavior Clinic’s documented 72% average attendance rate and a 57% attrition rate (Fox & Holtz, in press), families will likely struggle to adhere to a regular, structured treatment schedule and, in particular, to an intensive treatment schedule that requires more attendance. Not only may this present challenges in the ability to control the independent variable, but it could result in biased results as only those families who are able to complete treatment will be analyzed. A related challenge is that it may be difficult to re-establish
contact with families for follow-up, considering low-income families often move frequently and/or loose phone service for financial reasons. Another limitation of the study is its inclusion of self-report measures, which lend themselves to social desirability and bias effects. Also there is the possibility that treatment may be delivered differently due to the unique circumstances of providing services in the home environment as well as personality and experience differences among clinicians.
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Fox, R. A. (1994). *Parent behavior checklist*. Austin, TX: ProEd (Currently available from the author, Marquette University, School of Education, P.O. Box 1881, Milwaukee, WI 53201-1881; Email:robert.fox@marquette.edu).


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Sage.


ECBI  Eyberg Child Behavior Inventory™
Parent Rating Form by Sheila Eyberg, PhD

Your Name __________________________ Relationship to Child ____________ Today’s Date ____________
Child’s Name __________________________ Child’s Gender ____________ Child’s Date of Birth ____________

Directions: Below are a series of phrases that describe children’s behavior. Please (1) circle the number describing how often the behavior currently occurs with your child, and (2) circle either “yes” or “no” to indicate whether the behavior is currently a problem for you.

For example, if seldom you would circle the 2 in response to the following statement:

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Refuses to eat vegetables</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Circle only one response for each statement, and respond to all statements. DO NOT ERASE! If you need to change an answer, make an “X” through the incorrect answer and circle the correct response. For example:

1. Refuses to eat vegetables
   - 1 [X] 2 3 4 5 6 7
   - YES | NO

How often does this occur with your child?

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Sometimes</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Dawdles in getting dressed</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Dawdles or fidgets at mealtime</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Has poor table manners</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Refuses to eat food presented</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Refuses to do chores when asked</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Slow in getting ready for bed</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Refuses to go to bed on time</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Does not obey house rules on own</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Refuses to obey until threatened with punishment</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Acts defiant when told to do something</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Argues with parents about rules</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Gets angry when doesn’t get own way</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Has temper tantrums</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Sasses adults</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Whines</td>
<td>1 2 3 4 5 6 7</td>
<td>YES</td>
<td>NO</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Page 1

OVER →

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<table>
<thead>
<tr>
<th>How often does this occur with your child?</th>
<th>Is this a problem for you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Seldom</td>
</tr>
<tr>
<td>16. Cries easily</td>
<td>1</td>
</tr>
<tr>
<td>17. Yells or screams</td>
<td>1</td>
</tr>
<tr>
<td>18. Hits parents</td>
<td>1</td>
</tr>
<tr>
<td>19. Destroys toys and other objects</td>
<td>1</td>
</tr>
<tr>
<td>20. Is careless with toys and other objects</td>
<td>1</td>
</tr>
<tr>
<td>21. Steals</td>
<td>1</td>
</tr>
<tr>
<td>22. Lies</td>
<td>1</td>
</tr>
<tr>
<td>23. Teases or provokes other children</td>
<td>1</td>
</tr>
<tr>
<td>24. Verbally fights with friends own age</td>
<td>1</td>
</tr>
<tr>
<td>25. Verbally fights with sisters and brothers</td>
<td>1</td>
</tr>
<tr>
<td>26. Physically fights with friends own age</td>
<td>1</td>
</tr>
<tr>
<td>27. Physically fights with sisters and brothers</td>
<td>1</td>
</tr>
<tr>
<td>28. Constantly seeks attention</td>
<td>1</td>
</tr>
<tr>
<td>29. Interrupts</td>
<td>1</td>
</tr>
<tr>
<td>30. Is easily distracted</td>
<td>1</td>
</tr>
<tr>
<td>31. Has short attention span</td>
<td>1</td>
</tr>
<tr>
<td>32. Fails to finish tasks or projects</td>
<td>1</td>
</tr>
<tr>
<td>33. Has difficulty entertaining self alone</td>
<td>1</td>
</tr>
<tr>
<td>34. Has difficulty concentrating on one thing</td>
<td>1</td>
</tr>
<tr>
<td>35. Is overactive or restless</td>
<td>1</td>
</tr>
<tr>
<td>36. Wets the bed</td>
<td>1</td>
</tr>
</tbody>
</table>

**Scores**

<table>
<thead>
<tr>
<th>Intensity</th>
<th>Problem</th>
</tr>
</thead>
</table>

**Comments:**
### Parent Behavior Checklist - Short Form

**Instructions:** The Parent Behavior Checklist includes statements about how parents raise young children. For each statement, circle the letter A if the statement ALMOST ALWAYS OR ALWAYS applies to how you raise your child. Circle the letter F if the statement FREQUENTLY applies. Circle the letter S if the statement SOMETIMES applies. Circle the letter N if the statement ALMOST NEVER OR NEVER applies. Mark only one letter for each statement. If you feel a statement does not apply, mark N (Never). **Do not skip any item.** Please begin with the first item.

<table>
<thead>
<tr>
<th></th>
<th>A = Almost Always/Always</th>
<th>F = Frequently</th>
<th>S = Sometimes</th>
<th>N = Almost Never/Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I praise my child for learning new things.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>2.</td>
<td>My child and I play together on the floor.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>3.</td>
<td>If my child would hit, kick, bite, or scratch someone, I would spank him/her.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>4.</td>
<td>I get books for my child (from the library or store) at least once a month.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>5.</td>
<td>When my child doesn't do what I tell him/her to do I spank him/her.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>6.</td>
<td>If my child is overactive, I involve him/her in activities.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>7.</td>
<td>I yell at my child for whining.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>8.</td>
<td>My child should be able to understand taking turns during games.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>9.</td>
<td>I tell my child that he/she is bad.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>10.</td>
<td>I send my child to a room or corner in the house as punishment.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>11.</td>
<td>I would spank my child in public for bad behavior.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>12.</td>
<td>My child should be able to ride a tricycle.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>13.</td>
<td>My child should be quiet when I'm on the phone.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>14.</td>
<td>I spend at least one hour a day playing with or reading to my child.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>15.</td>
<td>I yell at my child for being too noisy at home.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>16.</td>
<td>I scold my child for soiling his/her pants.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>17.</td>
<td>My child should be old enough to share toys.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>18.</td>
<td>I allow messy play.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>19.</td>
<td>My child should be able to draw a circle.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>20.</td>
<td>I take walks with my child once a week.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td></td>
<td>A = Almost Always/Always</td>
<td>F = Frequently</td>
<td>S = Sometimes</td>
<td>N = Almost Never/Never</td>
</tr>
<tr>
<td>---</td>
<td>------------------------</td>
<td>---------------</td>
<td>--------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>21.</td>
<td>My child should be able to say his/her first name when asked.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>22.</td>
<td>I get so angry with my child I spank him/her on the bottom.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>23.</td>
<td>My child should be able to understand what I tell him/her to do.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>24.</td>
<td>I arrange activities for my child to play such as coloring, painting, or toy play.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>25.</td>
<td>My child should put away his/her toys.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>26.</td>
<td>I spank my child at least once a week.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>27.</td>
<td>My child should be old enough to speak in clear sentences.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>28.</td>
<td>My child has a regular bedtime routine (such as wash up, put on pajamas, read a story, say prayers).</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>29.</td>
<td>I take my child to the park, playground, movies library, or ball games.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>30.</td>
<td>My child should be able to wash and dry his/her own hands.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>31.</td>
<td>When my child has a temper tantrum, I spank him/her.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
<tr>
<td>32.</td>
<td>My child should be able to stay dry during the day.</td>
<td>A</td>
<td>F</td>
<td>S</td>
</tr>
</tbody>
</table>

**Subscale Raw Scores:**
Appendix C

Parent-Child Interaction Assessment

I. Initial Play with Clinician

Date: ________________

Instructions: *Invite the child to join you in nondirective play.*

Child’s Name: ______________________

Child Approach to Clinician:  ___ Yes, right away  ___ Yes, with delay  ____ No

II. Parent and Child Interaction

<table>
<thead>
<tr>
<th>Child Ratings</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Check</strong></td>
<td></td>
</tr>
<tr>
<td>1. Positive Affect</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>2. Negative Affect</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>3. Interest in Play</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>4. Initiates Interactions</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>5. Socially Responsive</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parent Ratings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Parent Leads</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>7. Child Leads</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>8. Sensitivity</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>9. Expectations</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>10. Limit Setting</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Child and Parent Ratings</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11. Reciprocity</td>
<td>1 2 3 4 5</td>
</tr>
</tbody>
</table>
III. Child Compliance

**Instructions:** "Now we want to see how well your child listens. I am going to tell you something to have your child do for you. After he/she does what you want, I will give you some more things to ask him/her to do (Note: Do not record a comply if the parent used a physical prompt).

<table>
<thead>
<tr>
<th>Requests</th>
<th>Complies</th>
<th>Requests</th>
<th>Complies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Come here</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Pick up the toy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Give me the toy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Sit in the chair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Stand up</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

% complies: ______ (# complies/# requests X 100)

6. Parent got child’s attention (used name): ______ seldom/never ______ sometimes ______ frequently/always
7. Parent praised child’s compliance: ______ seldom/never ______ sometimes ______ frequently/always
Parent-Child Relationship Scale

Circle the number that best applies to this parent’s current relationship with the Focus Child.

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
</table>
| 100   | Exceptional Relationship  
Parent is consistently thoughtful when interacting with child. Parental expectations are appropriate. Parent is responsive to child’s needs and sets appropriate limits on child’s behavior. Minimal or no evidence of verbal or corporal punishment. The parent-child relationship is excellent. |
| 95    |            |
| 90    |            |
| 85    |            |
| 80    | Good Relationship  
Parent is often thoughtful when interacting with child. Parental expectations are usually appropriate. Parent normally is responsive to child’s needs and usually sets appropriate limits on child’s behavior. Minimal evidence of verbal or corporal punishment. The parent-child relationship is very good. |
| 75    |            |
| 70    |            |
| 65    |            |
| 60    | Average Relationship  
Parent is thoughtful at times when interacting with child. Parental expectations are appropriate at certain times but not others. Parent can be responsive to child’s needs and set appropriate limits on child’s behavior but not consistently. Some evidence of verbal or corporal punishment. The parent-child relationship is good. |
| 55    |            |
| 50    |            |
| 45    |            |
| 40    | Below Average Relationship  
Parent is less thoughtful when interacting with child. Parental expectations are often too high or too low. Parent is less responsive to child’s needs and sets inconsistent limits on child’s behavior. Consistent evidence of verbal or corporal punishment. The parent-child relationship is fair. |
| 35    |            |
| 30    |            |
| 25    |            |
| 20    | Poor Relationship  
Parent is usually not thoughtful when interacting with child. Parental expectations are often inappropriate. Parent often is not responsive to child’s needs and usually does not set appropriate limits on child’s behavior. Ample evidence of verbal or corporal punishment. The parent-child relationship is weak. |
| 15    |            |
| 10    |            |
| 5     |            |
| 0     |            |