Improving Treatment Outcome for Oppositional Defiant Disorder in Young Children

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Abstract

Oppositional Defiant Disorder (ODD) is relatively common among 3-8 year-old children and its presence puts children at risk for more serious and stable behavior problems. Behavioral Parent Training (BPT) as the most empirical support as a treatment for children with ODD as well as for children with clinically significant conduct problems. The purpose of this paper is to review research on modifications to the BPT treatment model that have improved its efficacy as well as its use by a wider range of families.

Keywords: Behavioral Parent Training; Treatment Outcome; Oppositional Defiant Disorder; early childhood; school-aged children; Behavioral Treatments.

Oppositional Defiant Disorder

Oppositional Defiant Disorder (ODD) is characterized by a pattern of noncompliant, argumentative, angry, hostile and defiant behavior, which have persisted for at least six months. These difficulties cause impairments in social relationships with both adults and peers (American Psychiatric Association, 2000). Angry and hostile behavior commonly take both verbally and physically aggressive forms, although the presence of significantly elevated levels of physical aggression is not required for the diagnosis (Loeber, Burke, Lahey, Winters, & Zerba, 2000). The average age of onset for ODD is age 6 years and most children receive the diagnosis prior to adolescence (Hinshaw & Anderson, 1996). The evidence on gender differences in ODD prevalence is somewhat mixed. A review of the literature suggests equivalent rates of ODD in boys and girls prior to age six and equivalent or slightly higher prevalence among males during middle childhood (Loeber et al., 2000).

Two debated issues in the child psychopathology arena are: (a) whether ODD is a developmental precursor to Conduct Disorder and (b) whether conceptualization of ODD as a categorical diagnosis, rather than a pattern of behavioral and emotional adjustment is appropriate. The first issue is beyond the scope of the present article and interested readers are encouraged to read other work such as that by Loeber and colleagues (2000). The taxonomic issue regarding the appropriate conceptualization of ODD is pertinent to this article because effective treatments for ODD are often employed with young children with clinically significant “conduct problems” or “behavior problems”, as assessed with questionnaires with continuous, rather than categorical scaling (e.g., Achenbach & Rescorla, 2000; Eyberg & Pincus, 1999), as well as with behavior observations, rather than with diagnostic interview techniques. The behaviors that comprise ODD are present in most children during development; unlike many other categorical diagnoses. The critical variable is that children with ODD differ from others in the intensity, frequency, and duration of these behaviors. These behaviors are significantly greater than would be expected developmentally. Thus, for the purpose of this article, treatment research that uses either dimensional or categorical assessment in defining a clinical sample is included.
Behavioral Parent Training (BPT)

BPT is a family-based intervention strategy and it is a scientifically validated treatment for Oppositional Defiant Disorder in 3-8 year-old children (Chambless et al., 1998). There are many effective BPT programs (e.g., Eyberg & Boggs, 1998; Forehand & McMahon, 1981; Patterson, Reid, Jones, & Conger, 1975; Webster-Stratton et al., 2001b). Programs differ somewhat in format (e.g., group vs. individually administered), treatment setting (e.g., clinic vs. community), and instructional techniques (e.g. differential emphasis on coaching, modeling, role play, and didactic techniques). BPT programs are also referred to using alternative terms such as “parent management training” (e.g., Kazdin, 1997), “behavioral family therapy” (McMahon & Forehand, 2003), “parent training” (see McMahon & Forehand, 1984), and “parent-child interaction therapy” (Eyberg & Boggs, 1998). Despite these differences, all programs aim to improve child functioning, through changing parenting, in accordance to principles of operant conditioning and social learning theory. Specifically, parents are taught to (a) increase target positive child behaviors with positive reinforcers such as social praise, positive verbal attention, affection, and tangible rewards and (b) respond to serious misbehavior with effective, non-coercive punishment techniques, usually time-out. Furthermore, parents are taught monitoring skills so that they can correctly distinguish between positive and negative behaviors, respond quickly and appropriately to them, and accurately assess changes in child behavioral functioning over time with techniques such as daily behavioral data collection and graphing.

Over 30 years of evidence supports BPT as a preventive intervention for ODD (e.g., Chambless et al., 1998; Serketich & Dumas, 1996). Despite the availability of BPT, the high incidence of externalizing behavior problems, and the increased risk for more serious and persistent psychopathology for young children with behavior disorders (Campbell, 1995; Loeber et al., 2000), BPT, is underused and when it is implemented, it is not consistently effective for all (Kazdin & Wassell, 1998).

In the sections that follow, strategies to improve BPT outcome, as well as, recent innovations are reviewed. The advances described in this paper have developed in tandem with other related research areas, which are beyond the scope of this article such as the use of multi-modal, multiple setting, multi-level models used in prevention science (e.g., Conduct Problems Prevention Research Group, 2004; Feil, Severson, & Walker, 2002; J. Reid, Eddy, Fetrow, & Stoolmiller, 1999; Sanders, Markie-Dadds, Tully, & Bor, 2000).

Improving BPT Outcome

A number of strategies have been employed for improving treatment outcome in BPT. Some of the strategies, such as making treatment more intensive by adding individual child and/or teacher-focused treatment components to BPT, have been directly evaluated within comparative treatment outcome designs (Nock, 2005; Webster-Stratton, 1990; Webster-Stratton, Kolpacoff, & Hollinsworth, 1988). Other strategies, such as adding booster sessions, have been incorporated into treatment protocols based on extant research on factors related to treatment success as well as on behavioral theory (see Eyberg & Boggs, 1998; Fleischman, Horne, & Arthur, 1983, for example programs).

Target Age for Intervention

Some studies suggest that preschool-aged children respond better to treatment (Dishion & Patterson, 1992) than do older children, while others find no differential efficacy within the 3-8 year-old age range (McMahon & Forehand, 2003). There is more common agreement, however, that treatment success is more difficult to attain during middle childhood and adolescence than in the 3-8 year-old age range. Further, developmental psychopathology research suggests that children with early significant conduct problems or ODD are at increased risk for more serious problems later in development (Campbell, 1995; Hinshaw & Anderson, 1996). For example, preschool problem behavior was strongest longitudinal
predictor of delinquent behavior at age 11 (White, Moffit, Earls, Robins, & Silva, 1990). Thus, intervention in the preschool and early elementary years is critical.

Generalization Strategies

Temporal generalization. Many BPT programs recommend the use of less frequent sessions (i.e., fading), once families have acquired the basic parenting skills and need additional time to practice and become more independent in their application of BPT strategies. Similarly, booster sessions are recommended (Chronis, Chacko, Fabiano, Wymb, & Perlham, 2004; Eyberg, Edwards, Boggs, & Foote, 1998). Booster sessions take place after the family has completed the main parenting sessions and has met treatment goals. The purpose of booster sessions is to prevent the deterioration of treatment gains, which may occur because parents have not maintained changes in parenting behaviors or because parents need additional assistance in applying parenting techniques to new child behaviors.

Setting generalization. Although there is evidence that BPT treatment effects generalize from the clinic to home setting, they do not appear to generalize from home to school (Wells, 1995). One simple and commonly used strategy to promote generalization to school is the use of school-home notes (Kelley, 1990), which are also referred to as daily report cards (O'Leary, Pelham, Rosenbaum, & Price, 1976) in the Attention-Deficit/Hyperactivity Disorder literature. School-home notes involve defining a few target behaviors with the teacher, both positive behaviors to increase (e.g., on-task behavior) and negative behaviors to decrease (e.g., hitting other children); the teacher monitors the target behaviors and records them on the note. The note is sent home, on a daily basis so that parents can influence school behavior through the provision of appropriate consequences (e.g., give a sticker for targeted positive behavior or remove a privilege for targeted misbehavior).

Webster-Stratton and colleagues (2004) developed a teacher-training module and tested its impact on BPT outcome within six condition controlled comparative treatment outcome study in families of 4-8 year-old children with ODD. The addition of the teacher-training component to the BPT program was associated with reduced classroom behavior problems, whereas BPT-alone did not.

Additional Treatment Components

Another approach to increasing the efficacy of BPT has been through the addition of treatment modules to the basic BPT model.

Child-focused components. Webster-Stratton and colleagues enhanced BPT treatment outcome with the addition of an individual child focused social problem-solving module for 4-8 year-old children with clinically significant conduct problems. Although both treatment groups showed significant improvements at 6-month follow-up as compared to children in the control group, children who had participated in the child-focused module as well as the BPT module showed the most significant improvements (Webster-Stratton & Hammond, 1997).

Parent-focused components. Some programs have components added for the parent to address individual parent factors that may hamper or facilitate skilled use of BPT techniques. For example, a number of programs include a module designed to teach parent self-control techniques, such as self-monitoring, self-positive reinforcement, and emotion management (Fleischman et al., 1983). There is evidence that the incorporation of self-control techniques enhances BPT effects in contrast to families who receive BPT without the self-control component (Wells, Griest, & Forehand, 1980). Similarly, Kazdin and Whitley (2003) added a parent problem-solving module to their BPT model to reduce parenting stress. The families of 6-14 year-olds, who completed the problem-solving module in addition to BPT, showed improved parent and child behavior outcomes and reported fewer barriers to treatment participation than did parents who had only completed the BPT program.
Self-Directed Treatment Formats

Responding to research that suggests that home-based and self-directed mental health program service delivery increases participation (Snell-Johns, Mendez, & Smith, 2004), some researchers have developed home-based on self-directed BPT formats. For example, the Incredible Years Parent Program (Webster-Stratton et al., 2001a) is a 10- to 12-session program designed to reduce behavior problems and promote social competence in 3- to 8-year-old children. Videotaped parent-child interactions are combined with therapist-led discussion. The program was tested as a self-administered program in two small controlled comparative treatment outcome studies (Webster-Stratton, 1990; Webster-Stratton et al., 1988). Results suggested that significant treatment effects for the self-directed group, though effects were not as strong as for comparative conditions, which included face-to-face therapist contact. The second study (Webster-Stratton, 1990) added two hours of therapist consultation and this enhanced the effects on child behavior for the largely self-directed program.

Therapeutic Process

Resistance is often defined as client behavior that is in opposition to either the therapist or to the treatment goals set by the therapist or the treatment protocol (Bischoff & Tracey, 1995). Behavioral models of resistance, such as the OSLC model (see Cautilli, Riley-Tillman, Alexrod, & Hineline, 2005, for a review) also emphasize the contributions of therapist behaviors and therapist-parent interactions to the frequency and resolution of client resistance.

High resistance at the beginning of treatment has been associated with increased frequency of early drop-out and shorter treatment duration (Patterson & Chamberlain, 1994). Particular patterns of resistance displayed over the course of BPT have also been found to relate to outcome. Successful treatment was predicted by a “struggle-and-work-through” pattern, a curvilinear growth process characterized by an increase in resistance that peaked at the midpoint of treatment, then decreased over the second half of treatment (Chamberlain, Patterson, Reid, Kavanagh, & Forgatch, 1984; Stoolmiller, Duncan, Bank, & Patterson, 1993). Stoolmiller and colleagues (1993) also found that poor treatment outcome was predicted by chronically high or accelerating patterns of resistance and chronically low levels of resistance. Further, patterns of resistance that do not follow the “struggle-and-work-through” were predicted by inept discipline strategies, mothers’ antisocial behavior, and mothers’ depressed mood at the beginning of therapy.

The research above suggests that resistance may play an adaptive or maladaptive functions during particular stages of treatment. The patterns of resistance that appear most concerning are those that one would expect in a highly conflictual (i.e., chronically high or accelerating levels of resistance) or a disengaged (chronically low resistance) parent-therapist relationships. Strategies to increase parent participation and motivation have been developed to improve the course of treatment by reducing treatment drop out and fostering a more productive therapist-parent working relationship.

Researchers at the Oregon Social Learning Center have added a “Family Check-up” component to their BPT programs. The Family Check-up uses motivational interviewing, a collaborative assessment and goal-setting strategy, which was originally developed for use with adults who abuse alcohol (Miller & Rolnick, 2002). Parents are given a list of common behavior problems for their child’s state of development. Other problems such as parent stress are included on the list. The therapist presents the parents with a menu of treatment options based on the problems identified during assessment. Then the parent and therapist work together to develop a treatment plan. As compared to the control group families, the use of the Family Check-Up was linked to longitudinal reductions in child disruptive behaviors and increases in maternal involvement in families with at-risk toddler sons (Shaw, Dishion, Supplee, Gardner, & Arnds, 2006). Future work with the Family Check Up will be valuable in determining its usefulness with families with young children who have Oppositional Defiant Disorder.
Nock & Kazdin (2005) added a brief (5-45 minute) long intervention to their BPT program used with clinical families of 2-12 year-old children with significant aggression, oppositionality, and other antisocial behaviors. The brief intervention was designed to increase parent motivation and participation in treatment. Parents randomly assigned to receive this additional intervention component were significantly more motivated, attended more sessions, and adhered to the treatment protocol with more fidelity, than did parents who did not receive this component.

**Recent Directions**

A more recent focus in BPT research has been to increase the acceptability of and access to BPT for ethnic and racial minority families, who are less likely to have access to mental health services or to use them when they have access to them (Surgeon General, 2000). Published research has been conducted with universal or high-risk samples rather than clinical samples. Consequently, although these are exciting advances in the field, additional work is needed to assess their efficacy with children with clinically significant conduct problems and/or formally diagnosed ODD.

Factors related to service use include the location of the treatment setting, cost, childcare and transportation needs, and flexibility of program scheduling (Snell-Johns et al., 2004). Cultural differences in language and communication have also been identified as factors that decrease service utilization (Surgeon General, 2000).

**Strategies to Decrease Barriers**

**Recruitment strategies.** A community-based recruitment approach for racial/ethnic minority populations has been linked to increased program participation. Specific strategies include contacting key community members to assist with recruitment and to identify intact social networks as primary recruitment targets (Harachi, Catalano, & Hawkins, 1997; Murray et al., 2004). Reid and her colleagues describe implementation of these strategies (M. J. Reid, Webster-Stratton, & Beauchaine, 2001). This particular study combined samples from two Head Start studies; this program successfully engaged and retained two ethnically diverse research samples and the findings from the study were positive. Results indicated that the program was generally effective and that there were very few differences in treatment response across groups.

**Reduce cultural differences in language and communication.** It is argued that qualitative methods appear particularly well-suited for the identification of culturally-based language and communication differences (Bernal & Scharrón-Del-Río, 2001), and the use of parent focus groups has been specifically recommended as a way to identify appropriate adaptations to BPT (Forehand & Kotchick, 1996) to be later tested using quantitative research methods (Bernal & Scharrón-Del-Río, 2001). In respect to BPT techniques, it is possible that the way techniques and their application are described, lowers the acceptability. For example, the need to assess the cultural appropriateness of the use of parent-child special one-to-one interactions in BPT (e.g., child-directed play) has been questioned (Roosa, Dumka, Gonzales, & Knight, 2002). Gross and her colleagues (2004) used parent input to modify the way in which the application of encouragement and child-directed interaction were taught in her BPT program designed for use with African American parents of 2-5 year-old children. Practicing the same positive reinforcement skills (e.g., praise, verbal description) within daily activities was more acceptable to parents than was using child-directed play.

On the advice of the parent focus groups, Gross and her colleagues also used naturalistic videos of African American parents effectively using the techniques, instead of verbal descriptions of techniques or videos with professional actors. The resulting program has been evaluated within a controlled comparative treatment outcome trial with ethnic/racial minority low-income families with 2-5 year-old
children. Families who completed the culturally adapted BPT program showed improvements in parenting skills as well as child behavior as compared to the families in the control group (Gross et al., 2003).

Modifying Service delivery. As noted earlier, making the effort to reduce logistical barriers to participation by providing home-based and self-directed programs is also supported in the literature (Snell-Johns et al., 2004). However, recent evidence suggests that self-directed programs may not only be useful increasing the general reach of BPT, but in serving hard-to-reach-populations such as ethnic/racial minority families and families with other socio-demographic factors associated with lower treatment participation, engagement, and less favorable treatment outcome such as parental depression, single parent status, and low SES (see Haggerty, MacKenzie, Skinner, Harachi, & Catalano, 2006, for a review).

In one of the very few studies of its kind, socio-demographic predictors of program participation were compared across two program delivery formats for families with adolescent children, a home-based self-directed format, and a group format implemented in community settings (Haggerty, MacKenzie, Skinner, Harachi, & Catalano, 2006). Being African American (one half of the sample was African American and the other half was European American) and having lower per capita income predicted lower program participation in the group format. This finding replicates those in other studies of parenting program participation. However, these factors were not related to program participation in the home-based self-directed program, where initiation was higher overall. Furthermore, subsequent analyses have demonstrated that although both program formats were beneficial to African American and European American youth, a Race X Format interaction was revealed that showed that the sub-sample with the best treatment response were the African American youth who had completed the home-based video program (Haggerty, Skinner, MacKenzie, Harachi, & Catalano, under review).

Another effort to serve hard-to-reach populations has been led by Sanders and his colleagues in Australia. The self-administered component of the Positive Parenting Program (Sanders, Turner, & Markie-Dadds, 2002) has been evaluated in 305 families with 3 year-old children, with demographic risk factors associated with attrition and less favorable treatment outcome such as maternal depression, marital conflict, low SES, and single parent headed household (Sanders, Markie-Dadds, Tully, & Bor, 2000). The self-administered format of PPP was combined with telephone consultation and was compared with a wait-list control group and 2 clinic-based treatment formats, both of which involved face-to-face contact with a therapist. At posttest, parents who completed the self-administered program reported higher perceived parenting competence and less child behavior problems than did parents in the wait-list control group. Although there were no significant between group differences in child behavior problems at immediate follow-up, the children whose parents completed the self-administered program showed a significant within-group reduction in observed behavior problems from immediate post-test to one-year follow-up.

More work is needed to address whether home-based service delivery reduces participation barriers, and possibly improves treatment efficacy, for parents of younger children with clinically significant conduct problems.

Summary

Young children with clinically significant behavior problems and/or ODD are at-risk for the development of more serious and stable problems. Furthermore, in addition to placing children at risk for the future, ODD impacts children’s current functioning as well as serve as a significant stressor to parents, teachers, siblings, and peers. Fortunately, BPT is an extremely well researched treatment and is consistently judged to be the best treatment for ODD.
Nearly 40 years of published research on manualized BPT programs reveals that little has changed in respect to the fundamental structure of BPT. One set of changes has focused on supplementing the basic BPT model with components designed to strengthen the model by making effects more durable or to address other areas of functioning such as reducing parenting stress or increasing child social cognitive skills. Another set of changes has focused on making the delivery of the program more practical for families such as the use of self-directed programs. Recent research has focused on making programs more appealing, relevant, and accessible to ethnic/racial minority families who are less likely to have access to quality services and are less likely to use traditional programs, even when they have access. In sum, much progress has been made in the treatment of ODD for young children and the field continues to work to improve the overall efficacy of treatments as well as the ability to reach more children and families.

References


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