CHAPTER 9

Parent Management Training and Problem-Solving Skills Training for Child and Adolescent Conduct Problems

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OVERVIEW OF THE CLINICAL PROBLEM

Our intervention work has focused on disruptive behavior disorders among children and adolescents (ages 2-15) who are referred for inpatient or outpatient treatment. Our primary focus has been with children referred for extreme physical aggression and property destruction, but they evince the full range of behaviors include in the diagnosis of conduct disorder (CD; e.g., bullying and threatening others, lying, stealing, cruelty to animals, fire setting; American Psychiatric Association, 2013) We have expanded our more recent work to include children referred for stubbornness, defiance, and unmanageable behaviors encompassed by the diagnosis of oppositional defiant disorder (ODD). Children with either CD or ODD show significant impairment in their functioning at home, at school, and in community settings (e.g., social and athletic events).

A great deal is known about CD in terms of correlates, risk and protective factors, long-term course, genetic influences, and characteristics of brain activity (e.g., Lahey & Waldman, 2012; Moffitt & Scott, 2009). For example for CD, we know that there are untoward long-term deleterious consequences that encompass mental and physical health, substance abuse, criminal behavior, and maladaptive functioning in everyday life (e.g., employment, managing

finances). ODD also has a poo r long term prognosis, even though this disorder has been less well studied than has CD (Nock, Kazdin, H ir ipi, & Kessler, 2007).

For both CD and ODD, fundamental questions related to etiology and processes through which symptoms emerge remain to be resolved. Perhaps all the more encouraging is that at this time, several evidence-based treatments have been devised (Kazdin, 2015). These interventions span the full range of severity from stubbornness and defiance in young children to violence among adjudicated adolescents. This chapter reports on our work on parent management training (PMT) and cognitive problem-solving skills training (PSST).

CONCEPTUAL MODEL GUIDING THE TREATMENT PROGRAM

Our default treatment has been PMT. However, in our early work with inpatient cases, occasionally there was no parent available to participate in treatment (e. g., due to mental illness, substance abuse, serving in prison). For such cases, we developed PSST and met only with the child in treatment.

Our emphasis on PMT stems from two separate bodies of research: (1) the seminal conceptual and empirical work of Patterson and his colleagues that focuses on coercive sequences of parent- child interactions and how they can be altered (e.g., Patterson, 2016; Reid, Patterson, & Snyder, 2002), and (2) advances in applied behavior analysis on how to change behavior (e.g., use of establishing operations, functional analysis, differential reinforcement; Cooper , Heron, & Heward, 2007; Kazdin, 2013). These lines of work can be translated into multiple concrete techniques to alter both parent and child behavior.

PMT emphasizes changing how the child responds in interpersonal situations at home, at school, and in the community and with teachers, parents, peers, siblings, and others. The treatment uses learning -based procedures to develop behav ior and includes modeling, prompting and fading, shaping, positive reinforcement, practice and repeated rehearsal, extinction, and mild punishment. The treatment sessions develop skills that the parents use to implement behavior change programs in the home.

PSST focuses on cognitive processes, a broad class of constructs that pertains to how individuals perceive, code, and experience the world. Individuals who engage in conduct problem behaviors, particularly aggression, show distortions and deficiencies in various cognitive processes (e .g., Lochman, Powell, Whidby, & FitzGerald, 2012). Examples include generating alternative solutions to interpersonal problems (e .g., different ways of handling social situations), identifying the means to obtain particular ends (e.g., making friends) or consequences of one's actions (e.g., what could happen after a particular behavior); making misattributions to

others of the motivation for their actions, perceiving how others feel, and expectations of the effects of one's own actions. Deficits and distortion among these processes relate to teacher ratings of disruptive behavior, peer evaluations, and direct assessment of overt behavior. Our program initially drew heavily on the pioneering work of Shure and Spivack (e. g., Shure, 1992; Spivack & Shure, 1982).

CHARACTERISTICS OF THE TREATMENT PROGRAM

Who Is Seen in Treatment

Our program began with an exclusive focus on CD among children ages 5- 12 referred for inpatient care (Child Psychiatric Intensive Care Service, University of Pittsburgh School of Medicine). The program expanded to outpatient treatment, which has been the focus for approximately 25 years. Our current program, carried out at the Yale Parenting Center, provides services for children and families (see Kazdin, 2011). Younger and younger clinical referrals and pleas from mental health professionals and parents gradually expanded our age range (to ages 2-15). We continue to focus on CD. However, referrals have increased among children (under 5 years of age) who are more likely to be referred for stubbornness, tantrums, and defiance at home and other settings (preschool, day care).

The children are referred for oppositional, aggressive, and antisocial behavior, and usually meet criteria for a primary diagnosis (using DSM criteria) of CD or ODD. Approximately 70% of the children meet criteria for two or more disorders (range: zero to five disorders). Most youth fall within the normal range of intelligence (e.g., mean Full-Scale IQ= 100-105; range from 60 to 140 on the Wechsler Intelligence Scale for Children-Revised). The families we see are European American (-60-70% across projects), African American (-10-20%), or Hispanic American (-1-7%), Asian and Native American (-1-2% each), with multiracial families forming the remainder. The sex ratio of boys to girls in our projects is 3-4:1. Approximately 50% of our cases come from two-parent families; the full range of socioeconomic and educational status is represented.

Content of the PMT Sessions

Intervention with the Parent(s)

PMT is conducted primarily with the parent(s) or caregiver (s) . The core treatment currently consists of five to 10 weekly sessions (45-60 minutes each). We have varied the duration of treatment over the course of projects. Our current treatment includes a core set of themes (see Table 9.1), each of which usually is covered in a single session. Optional sessions (usually three or fewer, if needed) can be used to address emergent problems, to refine a

behavior change program, and or review content of a prior session. The individual sessions usually begin with a discussion of the general concept and technique for that session and how it is to be implemented. Most of the treatment session consists of modeling by the therapist and role playing and rehearsal of the parent.

For example, in a session on attending and ignoring, parents engage in several role plays with the therapist. Parent and therapist may alternate the role of the child and the parent. The "child's behavior" is modeled by the therapist, who is demanding something, especially after being told "no." The therapist whines, follows the parent who is walking away, and is demanding to be heard and to have some parental decision overturned; the parent ignores. Once the child calms down or begins to ask something nicely, the parent attends to the child and, depending on the behavior, may even praise the child for calming down quickly. This is rehearsed multiple times to help the parent practice ignoring and walking away, then return calmly to reinforce behavior that is more appropriate on the child's part. The therapist sculpts parental behavior with antecedents (verbally and nonverbally before and during the enactments), feedback and praise (for small or large components of what the parent is doing), shaping, and moving to more complex and unreasonable child behavior that mimic worst-case scenarios of the child.

TABLE 9.1. Parent Management Training Sessions: Overview of the Core Themes and Sessions

1. *Introduction and Overview.* This session provides the parents with an overview of the program and outlines the demands placed upon them and the focus of the intervention.

2. *Defining ana Observing.* This session trains parents to pinpoint, define, and observe behavior. The parents and trainer define specific problems that can be observed, and develop a specific plan to begin observations.

3. *Positive Reinforcement (Point Chart and Praise).* This session focuses on learning the concept of positive reinforcement, factors that contribute to the effective application, and rehearsal of applications in relation to the target child. An incentive (oken/point_) chart is devised , and _the delivery praise of the parent is developed through modeling , prompting, feedback , and praise by the therapist.

4. *Time-Out from Reinforcement.* Parents learn about time out and the factors related to its effective application. Delivery of time out is extensively role-played and practiced.

5. *Attending and Ignoring.* Parents learn about attending and ignoring and choose undesirable behavior that they will ignore and a positive opposite behavior to which they will attend. These procedures are practiced within the session.

6. *Shaping/School Intervention.* Parents are trained to develop behaviors by reinforcement of successive approximations and to use prompts and fading of prompts to develop terminal behaviors. Also, in this session, plans are made to implement a home-based reinforcement program to develop school-related behaviors based on consultation of the therapist with the school.

7. *Review of the Program.* Observations of the previous week , as well as application of the reinforcement program, are reviewed. Details about the administration of praise, points, and backup reinforcers are discussed and enacted so the therapist can identify how to improve parent performance. The parent practices designing programs for a set of hypothetical problems.

8. * *Family Meeting.* At this meeting, the child and parent(s) are brought into the session. The programs are discussed along with any problems. Revisions are made as needed to correct misunderstandings or improve implementation.

9. and 10.* *Negotiating, Contracting, and Compromising.* The child and parent meet together to negotiate new behavioral programs and to place these in contractual form. The therapist shapes negotiating skills in the parent and child, reinforces compromise, and provides less and less guidance as more difficult situations are presented.

11. *Reprimands and Consequences for Low-Rate Behaviors.* Parents are trained in effective use of reprimands and how to deal with low-rate behaviors such as fire setting, stealing, or truancy.

12. *Review, Problem Solving , Practice, Role Reversal.* Parents practice designing new programs, revising ailing programs, and responding to a complex array of situations in which principles and practices discussed in prior sessions are reviewed. Also, parents pretend to be the therapist and "train" the therapist pretending to be a parent.

Note. The complete manual and supporting materials are provided elsewhere (Kazdin, 2005). Our sessions have varied in number in different projects. Rather than number of sessions, the content areas of this table are more critical. Those sessions with an asterisk (*) are the ones we have not included in our recent versions of treatment.

In some of our clinical trials, the child has been brought into the PMT sessions to reenact situations that have occurred in the home and handle new situations. With the child present, one can directly observe parent execution of procedures and child behavior in reenactments of situations that transpired at home. Also, we can ask the child questions that corroborate parental report of the program in the home or suggest inconsistencies. Currently, we do not include the child in the sessions; effective intervention has not required that. Also, scheduling children to be

part of the sessions has raised more challenges in treatment delivery, because sessions can only be conducted after school or by taking the child out of school to attend the session.

Program Components Worth Emphasizing

PMT includes three critical components to effect behavior change in the parent and child, namely, the use of antecedents, behaviors, and consequences (see Kazdin, 2013). *Antecedents* (what comes before the behavior) increase the likelihood of obtaining child behaviors we seek (i.e., prompts, establishing operations) and include instructions, calm or playful tone of voice, supportive gestures and glances, and allowing choices when possible. We also train parents to omit harsh comments, nagging, threats, appeals to authority, and punitive physical contact (e.g., pulling a child) that are likely to decrease compliance or prosocial behavior (i.e., abolishing operations).

Behavior refers to ways of crafting and obtaining the behaviors of interest and includes three strategies. First and most straightforward is "shaping," which refers to developing goal behavior in steps or small increments until the final goal is achieved. Second, we use simulations in which the parent and child enact the desired behaviors under game-like circumstances. For example, the parent and child may play something called the "tantrum game," in which the parent pretends to deny an activity or privilege (e.g., "You cannot use the computer tonight"), the child enacts a controlled tantrum (e .g., no hitting of the parent, breaking things, or shouting), and then is praised for the result. This "game" can be used for many different behaviors when shaping is not likely to be a viable option, because initial small increments of the behavior are not present or evident with enough frequency. The "game" is a superb venue for combining antecedents and consequences, and can readily achieve the main goal of the intervention, repeated practice. As in other "simulations" (e.g., used by commercial airline pilots, by collegiate and professional athletic teams) the practice carries over to everyday circumstances and may then be directly fostered (reinforced) there. Finally, we use the game component to real-life situations that are not quite simulations. For example, to speak nicely or without swearing, we have used a game and challenge at the dinner table in which some contingency is in place for the entire family. It is a game in once sense (playful, artificial, and a challenge) but also part of a genuine everyday situation (eating dinner together). Shaping can be incorporated into the game as needed to develop behavior gradually.

The third component, *consequences,* focuses primarily on praise. We distinguish the praise that parents normally use (and encourage continuation of that) from strategic and special praise designed to alter behavior. With young ch ild ren, usually this is effusive praise, a statement of precisely what is being praised, then some non verbal gesture (e.g., patting the child's back or shoulder). With adolescents, the three components (verbal praise, statement, nonverbal gesture) are all included but are altered to be more "cool" and teen-friendly (e.g., no

effusiveness-maybe praise and a statement that is whispered or privately conveyed, and a high-five hand gesture in the air). Use of other consequences are trained as well, based on extinction (non attending, walking away) and mild punishment (brief time-out, response cost, brief loss of privilege).

Consequences also include a token reinforcement or point system in the home to provide a structured way of implementing the reinforcement contingencies. Our use of tokens is not so much for the child as it is for the parents. Parents are more likely to carry out the praise program when the structure and requirements of a point chart are used (e.g., monitoring delivery, accumulation, and use of points). Also, tokens facilitate tracking of reinforcement exchanges between parent and child (earning and spending the tokens). If behavior changes are needed at school (e.g., deportment, homework completion), we consult with teachers. A home-based token reinforcement system is devised in which child performance at school is monitored (e.g., via e-mail, phone) with consequences provided at home by the parents (see Kazdin, 2013).

Initial Goals of the Program Pertain to Parent Behavior

The overall goal of treatment is to develop prosocial behaviors and eliminate or drastically reduce disruptive behaviors, so the child can function well in the multiple situations and contexts that have been problematic. Yet, at the beginning of **PMT,** the goal is to develop parent competencies in concrete behaviors. Developing parent behavior is greatly facilitated by focusing on simple and arguably clinically irrelevant child behaviors (e.g., child room cleaning, table setting, helping with some task). We begin by ensuring that the parents reliably have the skills (e.g., delivering praise in a way that is qualitatively different from what they usually do) and can apply them. Then we move to changing child behaviors that were the basis for clinical referral.

Content of the PSST Sessions

PSST consists of weekly sessions with the child , with each session usually lasting 30- 50 minutes. The core program (12 sessions; see Table 9.2) may be supplemented with optional sessions, if the child requires additional assistance in grasping the problem-solving steps (early in treatment) or their application in everyday situations (later in treatment).

Central to treatment is developing the use of *problem-solving steps* that serve as verbal prompts the children deliver to themselves to engage in thoughts and actions that guide behavior. The steps or self-statements include (1) "What am I supposed to do?"; (2) and (3) "I need to figure out what to DO and what would HAPPEN"; (4) "I need to make a choice"; and (5) "I need to find out how I did." Combining steps 2 and 3 requires the child to identify a solution (what to DO) and then the consequence (what would HAPPEN), and to do this with three or more

solutions before proceeding to step 4. Using the steps, identifying and selecting prosocial solutions, and enacting these solutions in the sessions, are modeled and practiced extensively. Over the course of treatment, the steps move from overt (made aloud) to covert (silent, internal) statements.

The early sessions use simple tasks and games to teach the problem-solving steps and to help to deter impulsive responding. The content moves to individualized problem domains of the child (e.g., interactions with peers, parents, siblings, teachers, and others), with multiple instances and varied situations to help to promote generalization and maintenance. Throughout, the therapist prompts the child verbally and nonverbally to guide performance, provides a rich schedule of praise, delivers concrete feedback for performance, and models improved ways of performing.

TABLE 9.2. Problem-Solving Skills Training: Overview of the Core Sessions

1. *Introduction and Learning the Steps.* This initial session teaches the problem-solving steps in a game-like fashion in which the therapist and child take turns learning the individual steps and placing them together in a sequence .

2. and 3. *Applying the Steps.* The child applies the steps to simple problem situations presented in a board game in which the therapist and child alternate turns. A series of super solvers (homework assignments) begins at this point, in which the steps are used in increasingly more difficult and clinically relevant situations as treatment continues.

4. *Applying the Steps and Role Playing.* The child applies the steps to identify solutions and consequences in multiple problem situations. Then the preferred solution, based on the likely consequences, is selected and then enacted through repeated role-plays.

5. Parent - Child Contact. The parent(s), therapist, and child are seen in the session. The child enacts the steps to solve problems. The parents learn more about the steps and are trained to provide attention and contingent praise for the child's use of the steps and for selecting and enacting prosocial solutions.

6. through 11. *Continued Applications to Real-Life Situations* . The child uses the problem-solving steps to generate prosocial solutions to provocative interpersonal problems or situations . Each session concentrates on a different category of social interaction that the child might realistically encounter (i.e. , peer s, parents , siblings, teachers). Real-life situations, generated by the child, parent, or from contacts with teachers and others, are enacted; hypothetical situations are also presented to elaborate themes and problem areas of the child (e.g ., responding to provocation, fighting, being

excluded socially, being encouraged by peers to engage in antisocial behavior). The child's super solvers also become a more integral part of each session; they are reenacted with the therapist beginning in session in order to better evaluate how the child is transferring skills to his or her dai ly environment.

12. *Wrap -Up and Role Reversal.* This "wrap-up " session is included (a) to help the therapist generally assess what the child has learned in the session, (b) to clear up any remaining confusions the child may have concerning the use of the steps, and (c) to provide a final summary for the child of what has been covered in the meetings. The final session is based on role reversal in which the child plays the role of the therapist and the therapist plays the role of a child learning and applying the steps.

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As an illustration, a typical situation might occur when a child is teased or threatened by a peer at school. In the session , the therapist presents the problem to the child and the child is asked to use her steps. The child asks step 1, answers it ("I am supposed to solve this problem without hitting or getting into any trouble"), then proceeds to the other steps. At step 2, the child identifies one alternative (e.g., "I could ignore and walk away") and immediately goes to step 3 to note the likely effect of that action ("That might work because the child might stop teasing, and I would not get into a fight"). The child then goes back to steps 2 and 3 for another solution and consequence (e.g., "I could go to the teacher"; "What would happen is that she could help stop it and know that I was being picked on and did not do anything"). This continues for at least three prosocial solutions. The child proceeds to step 4 to make a choice and explains why she selected this. Then the child moves to the final step to say how she did ("I used the steps, I came up with good solutions, the one I chose did not get me into trouble; I did GREAT!"). The therapist too provides effusive praise, noting what components of the process were done well, feedback (if further changes are necessary), then the sequence is enacted in role play in a seamless and uninterrupted way and with the selected prosocial solution.

Children begin each session with tokens (small plastic chips) that can be exchanged for small prizes at a "store" after each session . During the session, children can lose chips (response cost) for misusing or failing to use the steps or gain a few additional chips, although this rarely occurs. Social reinforcement and extinction are relied on more than token reinforcement to alter child behavior. The chips present opportunities to address special issues or problems with the child, such as encouraging a particular type of prosocial solution that the child might find difficult.

In vivo practice, referred to as "super solvers," consists of systematically programmed assignments designed to extend the child's use and application of problem-solving skills to everyday situations . As available, parents are brought into sessions over the course of treatment

to learn the steps and practice joint super solver assignments that will be carried out at home. Prompting, shaping, and praise are used by the therapist to develop the parent's' behavior. Over time, the super solvers increase in complexity and encompass problem domains that led to the child's referral to treatment. As part of training in the sessions, children practice situations in which prosocial solutions they have selected do not work and they have to move to other alternatives (e.g., seeking the teacher's assistance).

Manual and Supporting Materials

For PMT, we have a treatment manual for professionals, with dialogue and supporting materials for each session (Kazdin, 2005; *www.ou p.com/ us/ pmt).* The underpinnings of the treatment procedures are elaborated in a textbook (Kazdin, 2013) used as part of therapist rather than parent training. We also have several materials available for parents including trade books (Kazdin & Rotella, 2008, 2013), videos of specific techniques *(y aleparentingcenter.yale.edu / kazdin -method-sessions),* and a set of pa rent-friendly articles on specific procedures to promote behavior change (use of reinforcement schedules to eliminate behavior, shaping, time-out from reinforcement) and to caution against the use of other procedures (e .g., spanking, repri mands) that can impede prosocial functioning, if not actually do harm (see www.slate.com/authors.alan_kazdin.html*).*

For PSST, we have provided a summary of the treatment sessions and key steps in developing use of the problem-solving skills steps, how these are applied and enacted within the sessions, how they are faded over time, and homework assignments as children apply the skills in everyday life *(http:// yalepa ren tingcenter.yale.edu/ store).* We have not published a detailed, session-by-session manual or supporting materials beyond what is conveyed in the overview. Among the reasons has been our emphasis on PMT within our clinical service.

EVIDENCE ON THE EFFECTS OF TREATMENT

Research from Our Program

We have evaluated both PMT and PSST in randomized controlled trials (RCTs; see Table 9.3). Our key findings may be highlighted by noting four interrelated domains.

TABLE 9.3. Main Studies to Evaluate Treatment Outcome and Therapeutic Change

Investigation	Sample	Design and objective	Main Findings
Kazdin et al. (1987a)	Inpatient children (ages 7- 13, $N = 56$)	Randomized controlled trial (RCT}: PSST, relationship therapy, and treatment contact control	PSST led to significantly greater decreases than did the other treatment and control conditions in externalizing and other behavioral problems at home and at school, and greater increases in prosocial behavior ; the effects remained at a 1-year follow-up assessment.
Kazdin et al. (1987b)	Inpatient children (ages 7- 12, $N = 40$)	RCT: PSST+PMT combined and treatment contact control (where both parents and child were seen as in the combined treatment}	Combined treatment showed significantly greater changes in externalizing and prosocial behaviors, and as in the prior study, the effects were maintained at a 1-year follow-up .
Kazdin et al. (1989)	Inpatient and outpatient children (ages 7- 13, $N = 112$)	RCT: Compared PSST, PSST with *in vivo* practice, and relationship therapy	Both PSST conditions showed significant changes on measures of problem and prosocial behavior compared to relationship therapy; PSST with *in vivo* practice led to greater improvements in behaviors at school than did PSST alone, but these differences were no longer evident at 1-year follow-up.

Kazdin, Siegel, & Bass (1992)	Outpatient children (ages 7-13, $N=$ 97)	RCT: Evaluated effects of PSST, PMT, and PSST+PMT combined	All treatments improved child functioning on measures of externalizing symptoms and prosocial behavior; the combined treatment led to significantly greater changes immediately after treatment and at 1-year follow-up, and placed more children within the nonclinical (normative range) in levels of functioning.
Kazdin, Mazutick, & Siegel (1994)	Outpatient children (ages 4- 13, $N =$ 75)	Evaluated therapeutic change of completers and dropouts and factors that account for their different outcomes	At the end of treatment, children who terminated prematurely showed greater impairment at home, at school, and in the community compared to children who completed treatment. However, these differences were accounted for primarily by severity of impairment at pretreatment rather than by receiving less treatment.
Kazdin (1995)	Outpatient children (ages 7- 13, $N =$ 105)	Evaluated of moderators of change among families that received PMT or PSST+PMT combined	Child severity and scope of dysfunction, parent stress, an<l family dysfunction predicted symptoms and prosocial functioning at the end of treatment, but the effects varied by outcome (at home or at school). The proposed moderators, even when significant, were not stro ng ly 1·related to outcome.
Kazdin & Crowley (1997)	Outpatient children (ages 7- 13, $N=$ 120)	Examined relation of intellectual functioning and severity of symptoms on responsiveness to PSST	Children more deficient in cognitive/ academic skills and more severely impaired improved significantly with treatment but less than their less impaired counterparts.
Kazdin & Wassell (1998)	Outpatient children (ages 3-13, $N =$ 304)	Examined the relation of treatment completion and therapeutic change among children who received PSST, PMT, or PSST+PMT combined	Treatment completion was strongly related to therapeutic change, with greater change among those who completed treatment. However, 34% of those who dropped out early made significant improvement compared to those who remained in treatment (78%). Predictors for improvement did not vary as a function of whether individuals dropped out or completed treatment.

Kazdin & Wassell (1999)	Outpatient children (ages 3-13, $N=$ 200)	Examined predictors of therapeutic change	Perceived barriers to participation in treatment were related to therapeutic changes in the children. Greater barriers were associated with less change; the findings could not be explained by several child, parent, and family variables.
Kazdin & Wassell (2000a)	Outpatient children (ages 2-14, $N=$ 169)	Examined relation of parent psychopathology and quality of life as moderators of therapeutic change in children who received PSST, PMT, or PSST+PMT combined	Greater parent psychopathology and lower quality of life at pretreatment predicted therapeutic changes, controlling for socioeconomic status (SES) and child severity of dysfunction . Greater perceived barriers to treatment by parents were associated with less therapeutic change on the part of the children.
Kazdin & Wassell (2000b)	Outpatient children (ages 2-14, $N=$ 250)	Examined therapeutic changes in children, parents, and families and the predictors of these change among children who received PSST, PMT, or PSST+PMT combined	Child, parent, and family functioning improved over the course of treatment. Moderators of treatment varied as a function of child, parent, and family outcomes.
Kazdin & Whitley (2003)	Outpatient children (ages 6-14, $N=$ 127)	RCT: All families received PSST+PMT; half were assigned to receive a supplementary component to address parental stress	Treatment with the component to address parental stress was associated with greater therapeutic change among the children and reduced barriers to treatment perceived by the parents.
Kazdin, Marciano, & Whitley (2005)	Outpatient children (ages 3-14, $N=$ 138)	Evaluated child-therapist and parent therapist alliance as a predictor of therapeutic change among families that received	A more positive therapeutic alliance (for either child or parent) was associated with greater therapeutic change, fewer experienced barriers to treatment, and greater acceptability of treatment. SES, parent dysfunction and stress, and pretreatment child dysfunction did not account for the findings.

		PMT alone or PSST+PMT combined	
Kazdin, Whitley, & Marciano (2006)	Outpatient children (ages 6- 14, $N=$ 77)	Evaluated child-therapist and parent therapist alliance as a predictor of therapeutic change among families that received PSST+PMT combined	Both alliances predicted therapeutic changes of the children. The parent- therapist alliance predicted improvements in parenting practices in the home; effects were not explained by SES, parent and child dysfunction, and or parental stress.
Kazdin & Whitley (2006a)	Outpatient children (ages 2- 14, $N =$ 218)	Evaluated parent-therapist alliance, pretreatment parent social relations, and parenting practices developed with PMT among families that received PMT alone or PSST+PMT.	Alliance predicted parent improvements over the course of treatment; alliance was partially mediated by pretreatment parent social relations.
Kazdin & Whitley (2006b)	Outpatient children (ages 3-14, who met criteria for ODD or CD; N = 315)	Evaluated comorbidity (0, 1, or more comorbid disorders separately for ODD and CD cases and case complexity (SES, scope of child dysfunction, parent and family stress and dysfunction, barriers to treatment).Children received PSST, PMT, or PSST-PMT	Children's outcomes did not differ as a function of comorbidity or case complexity; greater change (pre- to posttreatment) was associated with more dysfunction (multiple comorbidities and greater family complexity) but the end points (post treatment) were not different. Barriers to treatment moderated treatment outcome; greater barriers were associated with less change in the children
Kazdin & Durbin (2012)	Outpatient children (ages 6- 13, referred for oppositional, aggressive, or antisocial behavior; $N = 97$)	Evaluated predictors of alliance and whether they could account for the relation of alliance to	Child-therapist alliance contributed to therapeutic change. The stronger the alliance, the greater the change. Pretreatment social competence of the child and level of intellectual functioning predicted

		therapeutic change. All cases received PSST + PMT.	the quality of alliance but did not account for or explain the alliance-outcome connection.
Rabbitt e t al. (2016)	Outpatient children (ages 6- 13, referred for oppositional, aggressive, or antisocial behavior; $N = 60$)	RCT: Evaluated two variations of computer delivered treatment of PMT that varied in the amount of contact and guidance with the therapist. A third group of participants, $n = 60$) was matched to the children in the other two groups $(n = 60)$ and drawn from the clinic database involving in-person treatment and used to benchmark the changes with the computer -delivered treatment.	The two treatments were equally effective in the degree of therapeutic change among the children. The changes of the two groups were at the level of in-person treatment using the benchmark group for comparison. The two computer-delivered treatments were no different in the parent-therapist alliance, despite greatly reduced contact with the therapist in one of the group. On the other hand, parents in the group with the therapist present and helping with each session evaluated their treatment as more acceptable than did parents in the reduced contact group.

Note. The table includes studies that had treatment outcome as the major focus. Many of our other studies are cited in the text on related topics (e.g., participation in treatment) and are not included here.

Outcome Effects

PMT and PSST alone or in combination produce reliable and significant reductions in oppositional, aggressive, and antisocial behavior, and increases in prosocial behavior among children. Parent dysfunction (depression, multiple symptom domains) and stress decline and family relations improve (Kazdin, Bass, Siegel, & Thomas, 1989; Kazdin, Esveldt-Dawson, French, & Unis, 1987a, 1987b; Kazdin, Siegel, & Bass, 1992). The effects of PMT can be enhanced by providing supplementary sessions that focus on parent sources of stress (Kazdin & Whitley, 2003). Also, a motivational enhancement intervention can improve parent motivation for, adherence to, and attendance of treatment (Nock & Kazdin, 2005). Computer based delivery of PMT and reduced contact with a therapist have been as effective as PMT delivered in person (Rabbitt et al., 2016).

The Therapeutic Alliance

Child-therapist (in PSST) and parent-therapist (in PMT and PSST) alliances relate to several outcomes. The more positive the child-therapist and parent-therapist alliance during treatment, the greater the therapeutic change of the child and improvements of the parents in parenting practices, the fewer barriers parents experience during the course of treatment, and the more favorably parents rate the acceptability of the treatment (Kazdin & Durbin, 2012; Kazdin, Marciano, & Whitley, 2005; Kazdin & Whitley, 2006b; Kazdin, Whitley, & Marciano, 2006),

Moderators of Treatment

Several characteristics of parents and children, beyond alliance, moderate therapeutic change, including severity of child dysfunction, child IQ, parent stress, parent psychopathology, and others. The most robust moderator of our treatment has been parental report of barriers to participation in treatment. These barriers reflect four areas: stressors that compete with participating in treatment, perceived treatment demands, perceived relevance of treatment, and obstacles in relation to the therapist. The higher the perceived barriers, whether evaluated by parents or therapists, the less the therapeutic change among the children, a relation not accounted for by other factors, such as severity of parent or child dysfunction, stress in the home, or parent attendance to treatment (Kazdin, 1995; Kazdin & Crowley, 1997; Kazdin, Holland, & Crowley, 1997; Kazdin, Holland, Crowley, & Breton, 1997; Kazdin & Wassell, 1999, 2000a, 2000b; Kazdin & Whitley, 2006a).

Parent dysfunction, family stress, and the experience of barriers to participation in treatment are among the more robust predictors of canceling and not showing up for sessions, and dropping out early. Dropping out early does not necessarily mean failure in treatment. Among those who drop out of treatment very early, 34% report large improvements in the behavior of their children (Kazdin, 1990; Kazdin & Mazurick, 1994; Kazdin, Mazurick, & Bass, 1993; Kazdin, Mazurick, & Siegel, 1994; Kazdin, Stolar, & Marciano, 1995; Kazdin & Wassell, 1998). Indeed , in many instances, individuals convey that they are dropping out because they perceive no need to continue and complete our planned regimen.

Overall, our work has shown that **PSST** and PMT can effect significant change in severely disturbed children referred for inpatient or outpatient treatment. Effects of treatment are evident in performance at home, at school , and in the com mu nit y, both immediately after treatment and up to a I-year follow-up assessment. Symptoms levels at the end of treatment often fall within a sex- and age-based normative range.

Evidence Beyond Our Program: Briefly Noted

The evidence base for PMT is remarkable in scope and strength. First, there are several variations of PMT and programs of research, many of which are included in this book (e.g., The Incredible Years, Parent-child interaction therapy, Parent Management Training- Oregon Model , and Triple P-Positive Parenting Program). These programs have included multiple RCTs, tests in different venues (home , school), and in the context of treatment and prevention.

Second, core procedures that are used in PMT have been applied widely to other domains of clinical dysfunction in children and adults (e.g., autism spectrum disorders, anxiety disorders, addictive behaviors, psychoses) and well beyond clinical work. For example, the procedures have been effectively applied to diverse domains of functioning (e.g., classroom behavior, reading and writing , athletic performance, recycling and energy conservation, basic training in the military, gambling, engaging in social activities, adhering to medical regimens, engaging in exercise), to a wide age range (from toddlers through older adults), and in multiple contexts (the home, schools, colleges, business and industry, hospitals, the community) (Cooper et al., 2007; Kazdin, 1977, 2013).

Finally, basic human and nonhuman animal research spanning decades has elaborated operant conditioning principles and techniques from which PMT procedures draw. Seminal nonhuman animal research has provided extensive data on core facets of learning and performance (e.g., schedules of reinforcement, extinction , punishment) that are central to PMT (e.g., Azrin & Holz, 1966; Ferster & Skinner, 1957). With only broad brush strokes here, it is

might be reasonable to claim that PMT and the techniques on which it is based are without peer in the supportive evidence from which they can draw.

FUTURE DIRECTIONS

There is an enormous treatment gap (i.e., the gap between how many people are in need of treatment [prevalence] and those who actually receive treatment). This applies to not only disruptive behavior disorders, which has been the focus of this chapter, but also to psychiatric disorders more generally. The vast majority of individuals (children, adolescents, and adults) who are in need of services receive no services at all. Consequently, a high priority for future research is to extend treatments to reach more people in need of services. One area worth special research emphasis in **PMT** might be greater use of technology and social media (apps, the Web, texting, Facebook) to extend the intervention on a much larger scale than what is being accomplished now. The use of the Web, as one option, provides huge potential in extending the reach of evidence-based psychotherapies. An exemplary illustration was a large-scale Web-based intervention for smoking cessation that reached over 290,000 individuals from 168 countries (Munoz et al., 2016). A research priority would be to extend **PMT** to more people in need and to evaluate whether favorable outcomes can be achieved at that scale.

Another priority area would be to deliver and evaluate PMT as a tool for parenting in general rather than, or at least in addition to, a clinical intervention. "Normal" parenting often is a challenge , and PMT provides tools that can help with these challenges (e.g ., children eating vegetables, practicing a musical instrument, doing homework, or teens communicating without sarcasm, eye rolling, and visible disgust because they are in the presence of a parent). Broad application may prevent or reduce deleterious parenting practices (e.g., use of corporal punishment). Making PMT more widely available to all parents in a user-friendly fashion would be a major contribution to treatment, prevention, and family harmony.

CONCLUDING COMMENTS

We have evaluated PMT and PSST with a range of child samples, including inpatient and outpatient cases. Among all of our samples, children show multiple disorders and usually multiple risk factors for continued dysfunction. As might be expected , the child problems often are embedded in contexts that include parent sources of dysfunction, stress, and family issues (e.g., domestic violence, socioeconomic disadvantage). Our interventions have produced reliable changes in child behavior at home, at school, and in the community, even among the most severely impaired cases and in complex family situations. In addition, we find decreases in parent depression and stress, and improvements in family relations. Making concrete changes in

how the children function in everyday life appears to have positive collateral effects on the parents and family.

Our most recent work has focused on making PMT more accessible and applicable clinically by reducing the amount of professional therapist time that is required and delivering treatment online. Our initial evidence suggests no loss of treatment efficacy with these changes. These findings are in keeping with those of others who have extended PMT in ways that go beyond individual, in-person treatment. From the work of many researchers, including those with chapters in this book, PMT is one of the more well-studied interventions with a strong experimental and applied research base. The challenges are extending this on a scale that makes a difference in society, in addition to the lives of individual children and their families.

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