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PSYCHOTHERAPY FOR CHILDREN AND ADOLESCENTS

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■ **Abstract** Child and adolescent therapy has progressed considerably, as reflected in the number of controlled studies, their methodological quality, and identification of evidence-based treatments. Treatments with strong evidence in their behalf are used for several clinical problems. Despite the progress, several key areas have been neglected in research and this has greatly limited what we know about treatment. Prominent among these areas of neglect is research on the mechanisms of change, the moderators of treatment outcome, and the generality of research findings to the conditions of clinical practice. This article highlights progress, characteristics, and limitations of current therapy research. In addition, a research plan is offered to advance research by (*a*) understanding the mechanisms or processes through which therapeutic change occurs, (*b*) drawing on developmental psychopathology research to inform treatment, (*c*) expanding the range of questions that guide treatment research and the range of outcome domains on which treatment conclusions are based, and (*d*) monitoring progress to ensure that critical questions about treatment are addressed.

CONTENTS

The field of child and adolescent psychotherapy has made enormous gains within the past two decades. This progress is especially noteworthy because for many years child therapy research received little attention, in sharp contrast to research on adult psychotherapy. The present article begins with a discussion of the special challenges of psychotherapy with children and adolescents. The empirical basis for current treatments is also discussed, including the current effort to identify evidence-based treatments. Specific techniques are illustrated to convey more concretely the exemplary research that has been completed and the nature of the findings. Also highlighted are the neglect of critical questions about therapy and the very limited progress in understanding how therapy works. A model is offered to direct future research.

TASKS AND CHALLENGES OF PSYCHOTHERAPY FOR CHILDREN AND ADOLESCENTS

Scope of Clinical Problems

The need for interventions stems in part from the wide scope of clinical dysfunctions experienced by children and adolescents.[1] Psychiatric diagnosis is one way of delineating these; diagnoses in general include a few hundred patterns of behaviors that are associated with distress, impairment, and risk of disability (American Psychiatric Association, 1994). Some of these disorders, such as autistic disorder, tics, and attention-deficit/hyperactivity disorder, emerge in infancy, childhood, or adolescence. Many other disorders, such as anxiety, mood, and eating disorders, can arise over the life span. Table 1 describes five categories that represent broad domains of dysfunction. Many diagnosable disorders fall within each of these categories. Of the categories listed in Table 1, externalizing and internalizing disorders constitute the most frequent bases of clinical referrals in children. Clearly, externalizing disorders dominate both therapy research and clinical practice.

Several studies within the United States as well as other studies that span many different countries have yielded rather consistent results on the prevalence of disorders among children and adolescents (4–18 years old). Between 17 and 22%

[1]Throughout the chapter I use the term children to represent children and adolescents. The focus is on youth approximately 18 years of age and under. Where the distinction between children and adolescents is pertinent, this will be noted.

TABLE 1 Broad categories of problem domains/disorders

Externalizing disorders: Disruptive behavioral problems that are directed toward the environment and others. Primary examples include oppositional, hyperactive, aggressive, and antisocial behaviors.
Internalizing disorders: Emotional problems that are directed toward inner experience. Primary examples include anxiety, withdrawal, and depression.
Substance-related disorders: Impairment associated with any of a variety of substances including alcohol, illicit drugs, and tobacco. These disorders, while important in their own right, are also associated with other psychiatric disorders.
Learning and mental disabilities: A range of problems related to intellectual and academic functioning including mental retardation and learning disorders. Such problems are probably underestimated, both in terms of prevalence and impact on behavior, among children and adolescents referred to treatment because of the more salient problems that serve as the basis for referral.
Severe and pervasive psychopathology: These problems include disorders that are recognized to be the more severe forms of psychopathology that have pervasive influences in the areas of functioning they affect and in their long-term course. Examples include schizophrenia and autism.

suffer significant developmental, emotional, or behavioral problems (see, e.g., US Congress 1991, WHO 2001). Approximately 70 million children and adolescents live in the United States. If a prevalence rate of 20% is assumed, then approximately 14 million of our nation's youth have significant impairment caused by an emotional or behavioral problem. This number underestimates the range of mental disorders and impairment. Children who remain below the diagnostic thresholds for severity, number, or duration of symptoms can nonetheless suffer significant impairment (Boyle et al. 1996, Lewinsohn et al. 2000). Clearly, prevalence rates, when based on meeting criteria for psychiatric diagnoses, provide a conservative estimate of child impairment and the need for treatment.

Problems other than psychiatric disorders also warrant intervention. During adolescence there is an increase in a number of activities referred to as "problem" or "at-risk" behaviors (see DiClemente et al. 1996, Ketterlinus & Lamb 1994). Examples include use of illicit substances, truancy, school suspensions, stealing, vandalism, and precocious and unprotected sex. These are referred to as at-risk behaviors because they increase the likelihood of a variety of adverse psychological, social, and health outcomes. For example, alcohol abuse is associated with the three most frequent forms of mortality among adolescents: automobile accidents, homicides, and suicide (Windle et al. 1996); approximately 90% of automobile accidents among adolescents involve the use of alcohol. The prevalence rates of problem behaviors are relatively high. For example, in one survey 50.8% of twelfth-grade students reported some alcohol use in the 30 days prior to the survey; 31.3% reported being drunk at least once; and 4.9% reported using marijuana daily or almost daily (Johnston 1996). Not all problem behavior may warrant, or

serve as an impetus for, psychotherapy. Those that do are usually associated with impairment or conduct problems, whether or not they meet the threshold for a psychiatric disorder.

Psychotherapy is one of many interventions used to address social, emotional, and behavioral problems of children and adolescents. The number of children in need of services such as psychotherapy and the diversity of the problems to which treatment is applied reflect a major challenge. Psychotherapy is not alone in facing this challenge; other interventions, including treatment (e.g., medication, inpatient hospitalization, day-treatment) and prevention (e.g., early intervention programs, school-based programs), are pertinent as well. In this article I focus on psychotherapy.

Special Features of Treatment

Providing psychotherapy raises special challenges. First, many emotional and behavioral problems that are treated in therapy (e.g., aggression, hyperactivity, anxiety) are often evident in less extreme forms as part of normal development. Psychological treatment may be warranted when the symptoms are extreme, form part of a larger constellation of behaviors, interfere with functioning in everyday life, and do not attenuate with maturation. Deciding whether and when to intervene presents special challenges because many of the seemingly problematic behaviors may represent short-lived problems or perturbations in development rather than signs of lasting clinical impairment.

Second, children, unlike adults, rarely refer themselves for treatment or identify themselves as experiencing stress or symptoms. Problems most commonly referred for treatment are disruptive behaviors, such as aggression and hyperactivity, and are disturbing to others (parents, teachers), who initiate the treatment process. Emotional problems that are less disruptive, such as depression, anxiety, and withdrawal, are more likely to be overlooked by parents and teachers. Whether referred for behavioral or emotional problems, children may not see their symptoms as a problem or in need of treatment. The challenge is to involve the child in treatment and to work toward a change that the child may not view as necessary or even potentially useful.

Third, the dependence of children on adults makes them particularly vulnerable to multiple influences over which they have little control. Parent mental health, marital and family functioning, stress in the home, difficult living circumstances, and socioeconomic disadvantage are a few of the factors that can influence the nature and severity of child impairment and the effectiveness of treatment. Psychotherapy for the child is often only a part of the intervention; significant efforts may be required to address parent and family dysfunction that may contribute to or maintain adjustment problems of the child.

Fourth, in the prototypic image of therapy, a client is seen individually in treatment sessions by a mental-health practitioner. Yet, in child therapy, parents, teachers, siblings, and peers—alone and in various combinations—can play an ancillary, supplementary, supportive, or even primary role in administering

treatment. Challenges come from working with others, such as parents, who deliver aspects of treatment to change child behavior. Parent and family problems, such as major depression, substance abuse, or violence in the home, may directly impede delivery of treatment.

Fifth, retaining children and families in treatment is a major challenge. Between 40 and 60% of children, adolescents, and adults who begin treatment drop out early (Wierzbicki & Pekarik 1993). Children are not particularly motivated to come to treatment. In some cases, difficulties in getting the child to treatment (e.g., objections of the child) can contribute directly to dropping out. Parents who stop bringing their child for treatment may simply be choosing a path less strenuous than weekly efforts to persuade the child of the potential value of treatment or to coerce attendance.

Finally, assessing child and adolescent emotional and behavioral problems raises its own set of challenges. Questionnaires and interviews often ask subtle questions about the onset, duration, and intensity of emotional and behavioral problems. Whether young children (e.g., less than six or seven years old) can report on these characteristics is not well established. In most studies, multiple informants (parents, teachers, children) are used to evaluate childrens' emotional and behavioral problems. Measures from different informants often yield different views about the severity and scope of the problems.

CURRENT PROGRESS IN RESEARCH

Overview

Child and adolescent therapy has advanced considerably and the advances are evident in many ways. First, the sheer quantity of controlled-treatment outcome studies is vast. As a conservative estimate, more than 1500 controlled outcome studies of psychotherapy for children and adolescents have been completed (Kazdin 2000b). Second, the quality of studies continues to improve (Durlak et al. 1995). Excellent methodological practices such as evaluating the fidelity of treatment, using treatment manuals, assessing the clinical significance of therapeutic change, and evaluating follow-up have increased in recent years. Third, treatments are now available for many clinical disorders including anxiety, mood disorders, attention-deficit/hyperactivity disorder, oppositional-defiant and conduct disorders, and eating disorders, to mention a few (Mash & Barkley 1998, Morris & Kratochwill 1998).

Fourth and perhaps most significant, firm evidence now shows that therapy for children and adolescents is effective (for reviews, see Weisz et al. 1998, Weisz et al. 1995). Moreover, the magnitude of this effect, when treatment is compared to no treatment, is rather large (effect sizes $\cong$ 0.70).[2] Thus, children who receive

[2]These comments are based on recommendations of Cohen (1988) to consider 0.2, 0.5, and 0.8 as small, medium, and large effect size (ES), respectively; ES = (mean of the intervention group minus the mean of the control group) divided by the standard deviation (pooled).

therapy are much better off than are those who do not. This conclusion is critically important when placed in historical context. Basic questions were raised years ago about whether therapy effects surpassed the effects of maturation and recovery processes that often occur without treatment (e.g., Levitt 1957, 1963). Evidence from randomized controlled trials and now multiple reviews of this evidence have redressed this particular concern (Kazdin 2000c).

Evidence-Based Treatments

Research has moved beyond resolving the general query of whether evidence supports the efficacy of therapy. A more recent movement has been toward identifying evidence-based treatments.[3] Independent efforts to identify such treatments within the United States, Canada, and England, to mention three of the countries examined (e.g., Chambless et al. 1998, *Evidence-Based Mental Health* 1998, Nathan & Gorman 2002, Roth & Fonagy 1996), have focused on delineating quite specifically which among the many treatments have evidence in their behalf. Typically, the criteria for delineating treatments include evidence from studies that randomly assign subjects to conditions, carefully specify the client population, utilize treatment manuals, and evaluate treatment outcome with multiple measures. Also, replication of treatment effects beyond an initial study is often required, especially replication by an investigator different from the one who originally demonstrated the effects. Several reviews have identified evidence-based treatments for children and adolescents (see Christophersen & Mortweet 2001, Fonagy et al. 2002, Lonigan & Elbert 1998). The treatments listed in Table 2 are those currently recognized as evidence-based.

Perhaps the most conspicuous feature of the list is its brevity, especially when viewed in the context of the hundreds of child and adolescent therapy techniques that are in use. A conservative count has identified more than 550 different such therapies (Kazdin 2000c). The vast majority of treatments in use have not been evaluated empirically. Clearly, the movement toward identifying those treatments with evidence in their behalf is a significant and welcome advance.

Another conspicuous feature of the treatments listed in Table 2 is the preponderance of cognitive-behavioral treatments. This is no coincidence; approximately 50% of child treatment studies investigate cognitive-behavioral techniques (see Durlak et al. 1995, Kazdin et al. 1990a). Also, studies that count toward establishing a treatment as evidence-based must include several methodological features (e.g., random assignment, use of treatment manuals, replication of effects). These characteristics are much more likely among contemporary studies than studies conducted 20 or 30 years ago, and cognitive-behavioral techniques are more popular in contemporary work. In any case, for several disorders, evidence-based treatments

[3]Different terms have been used to delineate evidence-based treatments and include empirically validated treatments, empirically supported treatments, evidence-based practice, and treatments that work (see Kazdin 2000c).

TABLE 2 Treatments for children and adolescents that are evidence-based for key problem domains[a]

Problem domain	Treatment	For reviews, see
Anxiety, fear, phobias	Systematic desensitization Modeling Reinforced practice Cognitive-behavior therapy	Ollendick & King 1998
Depression	Cognitive-behavior therapy "Coping with Depression " course Interpersonal psychotherapy	Asarnow et al. 2001 Cuijpers 1998 Kaslow & Thompson 1998
Oppositional and conduct disorder	Parent management training Problem-solving skills training Multisystemic therapy	Brestan & Eyberg 1998 Kazdin 2002 Sheldrick et al. 2001
Attention-deficit/ hyperactivity	Psychostimulant medication Parent management training Classroom contingency management	Greenhill 1998 Pelham et al. 1998

[a]The techniques noted here draw from different methods of defining and evaluating evidence-based treatments. The techniques are those that would meet criteria for well established or probably efficacious (Lonigan et al. 1998) or those with randomized controlled trials in their behalf (Nathan & Gorman 2002). Evaluation of treatments and identification of those that meet criteria for empirical support are ongoing and hence the above is an illustrative rather than fixed or exhaustive list. Psychostimulant medication is mentioned because this is the standard treatment for attention-deficit/hyperactivity disorder.

have been identified. The compelling evidence that some techniques are clearly the treatment of choice for various child and adolescent problems has entered into clinical practice guidelines (e.g., American Academy of Child and Adolescent Psychiatry 1998).

ILLUSTRATIONS OF TREATMENT RESEARCH

Listing evidence-based treatments does not convey concretely the advances and the high-quality research that has been completed to date. Two treatments are highlighted here to convey the scope of the evidence and progress as well as different foci and models of treatment.

Cognitive-Behavioral Therapy for Child Anxiety

CHARACTERISTICS OF TREATMENT Cognitive-behavioral treatment (CBT) for anxiety in children focuses on dysfunctional cognitions and their implications for the child's subsequent thinking and behavior (for reviews see Kendall et al. 2000, Kendall & Treadwell 1996). Cognitive distortions are considered to play a central role among children with anxiety. These distortions refer to information processes that are misguided and that lead to misperceptions of oneself or the environment.

Treatment develops new skills, provides new experiences in which the child can test dysfunctional as well as adaptive beliefs, and assists the child in processing new experiences. Strategies used in treatment directly focus on learning new behaviors through modeling and direct reinforcement. In addition, cognitive strategies such as the use of self-statements address processes (information processing style, attributions, and self-talk) considered to mediate anxiety.

The CBT program consists of 16–20 sessions administered individually to the child. Approximately the first half of treatment is devoted to teaching the child steps for coping with anxiety and managing distress. These include recognizing the physiological symptoms of anxiety (e.g., internal signals for anxiety such as sensations of tension); challenging and altering anxiety-provoking cognitions and one's internal dialogue (e.g., generating alternatives to an expectation that bad things will happen); problem solving (e.g., devising a plan to cope with the anxiety, generating alternative courses of action and selecting one); evaluating the coping plan and administering consequences (e.g., self-evaluation and self-reinforcement).

The second half of treatment focuses on applying the newly learned skills by exposing children at first to imaginary and low-anxiety-provoking situations and then later to moderate and more highly anxiety-provoking situations. Exposure is also included as homework assignments in which the child rehearses application of the steps at home and at school. Rewards are earned for completion of these assignments. In the final session of treatment, the child makes a videotaped "commercial" describing the steps and their use in mastering anxiety-provoking situations.

OVERVIEW OF THE EVIDENCE Treatment has been evaluated with children 9–13 years of age in both randomized controlled trials and single-case experimental studies [please see reviews noted previously (Kendall 1996, 2000)]. Improvements with treatment are evident on multiple child-, parent-, and teacher-report measures of anxiety as well as in other symptom domains, including aggression, social problems, hyperactivity, and depression, and on behavioral observations of child distress. The effects of treatment have been replicated by investigators other than those who have conducted the original treatment trials. Indeed, multiple replications attest to the effects of treatment and maintenance of treatment effects up to 6 years later (e.g., Barrett et al. 2001, Dadds et al. 1999).

The treatment research is exemplary in a number of ways. First, the studies have included children who meet criteria for a diagnosis of anxiety disorders. Second, the impact of treatment has been strong and consistent across studies. Third, many children fall within the normative range of functioning following treatment. Overall, CBT for anxiety disorders is one of the treatments considered to be evidence-based.

Parent Management Training for Oppositional and Aggressive Children

CHARACTERISTICS OF TREATMENT Parent management training (PMT) refers to procedures in which parents are trained to alter their child's behavior in the home.

Training is based on the general view that oppositional and aggressive behaviors are inadvertently developed and sustained in the home by maladaptive parent-child interactions. Among the many interaction patterns, those involving coercion have received the greatest attention (Patterson 1982, Patterson et al. 1992). Coercion refers to deviant behavior on the part of one person (e.g., the child) that is rewarded by another person (e.g., the parent). Aggressive children are inadvertently rewarded for their aggressive interactions and their escalation of coercive behaviors as part of the discipline practices that sustain aggressive behavior.

The model underlying PMT extends beyond the treatment of antisocial youth or indeed any particular population. PMT draws from basic and applied operant conditioning research. The main focus of operant conditioning is on the contingencies of reinforcement, defined as the relationships between behaviors and the environmental events that influence behavior. Three components are included in a contingency: antecedents (e.g., prompts, setting events); behaviors (e.g., approximations of the desired goal, actions incompatible with those to be decreased); and consequences (e.g., reinforcing prosocial behavior). Enormous progress has been made in understanding how to alter the contingencies of reinforcement to change behavior (see Kazdin 2001, Luiselli & Cameron 1998).

The primary goal of PMT is to alter the pattern of interchanges between parent and child so that prosocial, rather than coercive, behavior is directly reinforced and supported within the family. Treatment is conducted primarily with the parent(s), who implement several procedures at home. The parents meet with a therapist, who teaches them to use specific parenting behaviors, such as establishing the rules for the child to follow, providing positive reinforcement for appropriate behavior, delivering mild forms of punishment to suppress behavior, and negotiating compromises. These parenting behaviors are systematically and progressively developed within the sessions in which the therapist shapes (develops through successive approximations) parenting skills. The treatment sessions provide concrete opportunities for parents to see how the techniques are implemented, to practice and refine use of the techniques (e.g., through extensive role-playing), and to review the behavior-change programs implemented at home. Parent-managed reinforcement programs for child deportment and performance at school, completion of homework, and activities on the playground are routinely included with the assistance of teachers, as available. Over the course of treatment the child may be brought into the sessions to review programs, to learn negotiation skills with the parent, or to help practice how the procedures are implemented in the home. Duration of treatment varies depending on the severity of child dysfunction. Programs for young, mildly oppositional children usually last 4–8 weeks. With clinically referred conduct-disordered children, the programs usually last 12–25 weeks.

OVERVIEW OF THE EVIDENCE PMT is probably the most well-investigated therapy technique for children and adolescents. Treatment has been evaluated in scores of randomized controlled outcome trials with children and adolescents varying in age (2–17 years) and severity of oppositional and conduct problems (see Brestan & Eyberg 1998, Kazdin 1997). PMT has led to marked improvements in child

behavior, as reflected in parent and teacher reports of deviant behavior, direct observational measures of behavior at home and at school, and institutional records (e.g., school truancy, police contacts, arrest rates, institutionalization). The magnitude of change has placed conduct problem behaviors within normative levels of functioning at home and at school. Treatment gains have been maintained in several studies 13 years after treatment; one program reported maintenance of gains 10–14 years later (Long et al. 1994).

In much of the outcome research, PMT has been administered to families individually in clinic settings. Group administration has been facilitated greatly by the development of videotaped materials that present themes, principles, and procedures to the parents. The use of these tapes has been rigorously evaluated and shown to be effective with parents of conduct-problem children (see Webster-Stratton 1996). PMT has been extended to community settings to bring treatment to those persons least likely to come to or remain in treatment (e.g., Cunningham et al. 1995, Thompson et al. 1996) and to early school intervention programs (Webster-Stratton 1998). Apart from direct extensions of PMT to diverse contexts, the evidence in support of this intervention is bolstered by research in related areas. The principles and techniques used in PMT have been used to alter a wide range of clinic and community samples, in diverse settings (home, school, community, institutions), and among virtually all age groups (infants, geriatric patients) (see Kazdin 2001). Thus, the techniques used in PMT have been effectively applied in many different contexts.

ISSUES AND LIMITATIONS OF CURRENT RESEARCH

CBT for anxiety and PMT for oppositional and conduct problems illustrate different clinical problems, orientations (cognitively and noncognitively oriented treatments), and emphases within treatment (focus on child cognitions, parent-child interactions). Other treatments with strong evidence could serve as equally compelling illustrations. For example, among those listed in Table 2, repeated high-quality evaluations of the effectiveness of the "Coping with Depression" course for adolescents (Lewinsohn et al. 1996) and multisystemic therapy for antisocial and delinquent adolescents (Henggeler et al. 1998) also convey exemplary research and progress. Despite the exemplary research that can be readily identified, pervasive problems in child psychotherapy research raise fundamental questions. Two central issues pertain to the relation of research to clinical practice and the limited facets of treatment that are studied.

Departures of Research from Clinical Practice

The ways in which psychotherapy is studied depart considerably from how treatment is implemented in clinical practice. Consequently, the extent to which findings can be applied to work in clinical settings can be challenged. Consider

some of the key differences. First, children in most therapy studies are recruited rather than clinically referred. They tend to have less severe, less chronic, and fewer comorbid conditions. Also, recruited children are less likely to have impairment in domains often associated with psychiatric dysfunction (e.g., academic dysfunction, poor peer relations). Second, nonreferred children are more likely to have parents with less psychiatric dysfunction, stress, and impairment; families with less dysfunction and disruption; and environments that are less disadvantaged.

Third, the treatments studied in research depart from treatments used in clinical practice. Many approaches commonly practiced in clinical work (psychodynamic therapy, relationship-based treatment, generic counseling) have very sparse empirical literatures. Indeed, many controlled studies question their efficacy altogether (see Kazdin 2000c). When reviews, such as the present one, note that evidence supports the effects of psychotherapy, it is important to bear in mind that this applies to a minute fraction of the treatments in use and probably not those treatments most commonly used in clinical work.

Fourth, the way in which treatment is administered in research also departs from the way it is administered in practice. In most research, therapy is of a fixed duration (8–10 sessions); it is administered in the schools, to groups of children, and without the direct involvement of the parents (Kazdin et al. 1990a). Moreover the treatments are administered in "pure" form (e.g., one treatment type only, such as cognitive behavior therapy or family therapy) rather than as the eclectic or combined treatments commonly used in clinical practice (Kazdin et al. 1990b). Also, in research, treatments are closely monitored and supervised to ensure they are administered correctly. The use of treatment manuals, observation of treatment sessions, review of sessions with therapists, and ensuring therapist adherence to treatment can, and indeed does, increase effectiveness (e.g., Henggeler et al. 1997; Huey et al. 2000). Such monitoring and quality control of treatment delivery are often absent in clinical practice.

Fifth, the therapists who provide treatment in the context of research are often graduate students or trainees. Providing training, developing mastery of the intervention, and minimizing heterogeneity of delivering treatment may be less difficult in the context of academic settings than in clinical settings. Therapists in clinical practice are usually licensed professionals with years of experience, but these attributes may not translate into mastery of rather specific, manualized treatment. Therapists in clinical practice have fewer opportunities to obtain training and levels of mastery than therapists in the academic environment. The implications of therapist differences and training experiences for generalizing results from research to practice remain to be seen.

The findings from therapy research may pertain to therapy executed in a very special way and have little or no relation to the effects achieved in clinical practice. The extent to which results from research extend to clinical work is very much an open question with sparse evidence on the matter and different conclusions by different reviewers (Shadish et al. 1997, 2000; Weisz et al. 1995).

Restricted Focus of Psychotherapy Research

Research has had a very restricted focus. First, the range of questions evaluated in treatment research is narrow. Most studies focus on questions about the treatment technique (e.g., treatment vs. control or another treatment) without attention to the many conditions (e.g., child, parent, and family characteristics) on which outcomes are likely to depend. Second, studies typically restrict evaluation of treatment outcome to the reduction of symptoms. Symptom change is an important outcome. However, many other domains are likely to be relevant (e.g., impairment, school functioning, peer relations) to current functioning and long-term prognosis.

Third, child therapy research has neglected attempts to understand how treatment works and the processes or characteristics within the child, parent, or family that can be mobilized to foster therapeutic change. If we understood the bases of therapeutic change, we might readily optimize the effectiveness of treatment. Of the hundreds of available treatments, there are likely to be a few common bases or mechanisms of therapeutic change. Perhaps learning through rehearsal and practice, catharsis (alleviation of the symptoms through expression and release), or the mobilization of hope are some of the key or common factors that explain how all or most therapies work. Much more research is needed to explain how and why therapy achieves and induces change.

Overall there are major gaps in knowledge about psychotherapy and its effects. Essentially, we do not understand why treatment works, for whom treatment works, and key conditions that optimize therapeutic change. No detectable movement has been made toward rectifying these gaps. Indeed, third-party payers as well as some research funding agencies emphasize determining whether treatment established in controlled settings can be carried out in practice. Extending treatments to patients is obviously important. The benefits of treatment will be greatly enhanced if the bases of therapeutic change are identified.

DEVELOPING EFFECTIVE TREATMENTS: DIRECTIONS FOR RESEARCH

Steps to Develop Effective Treatments

We need to understand a great deal in order to make treatment effective and to ensure it is applied optimally. Table 3 delineates several steps or areas of research to evaluate different facets of treatment, how treatment relates to what is known about clinical disorders, and how and to whom treatment can be applied to achieve optimal gains (see Kazdin 2000c).

THEORY AND RESEARCH ON THE NATURE OF THE CLINICAL DYSFUNCTION Treatment ought to be connected with what we know about the onset, maintenance, termination, and recurrence of the clinical problem that is the focus of treatment. Hypotheses about the likely factors leading to the clinical problem or pattern of functioning, about the processes involved, and about how these processes emerge

TABLE 3 Steps for developing treatment

1. Theory and research on the nature of the clinical dysfunction Proposals of key characteristics, processes, and mechanisms that relate to the development, onset, and course of dysfunction. Efforts to empirically test those processes.
2. Theory and research on the change processes or mechanisms of treatment Proposals of processes and mechanisms through which treatment may achieve its effects and how the procedures relate to these processes. Studies to identify whether the intervention techniques, methods, and procedures within treatment actually affect those processes that are critical to the model.
3. Specification of treatment Operationalization of the procedures, preferably in manual form, that identify how one changes the key processes. Provision of material to codify the procedures so that treatment integrity can be evaluated and treatment can be replicated in research and practice.
4. Tests of treatment outcome Direct tests of the impact of treatment drawing on diverse designs (e.g., open studies, single-case designs, full-fledged clinical trials) and types of studies (e.g., dismantling, parametric studies, comparative outcome studies).
5. Tests of moderators Examination of the child, parent, family, and contextual factors with which treatment interacts. The boundary conditions or limits of application are identified through interactions of treatment $\times$ diverse attributes.
6. Tests of generalization and applicability Examination of the extent to which treatment can be effectively applied to different problems, samples, and settings and of variations of the treatment. The focus is explicitly on seeing if the results obtained in research can be obtained under other circumstances.

or operate can contribute directly to treatment research. Many of the approaches to psychotherapy have originated from general models of treatment (e.g., psychoanalytic, family, and cognitive-behavioral) and emphasize processes (e.g., thwarted impulses, maladaptive family processes, distorted cognitions) that have wide applicability across disorders. These processes have often been too general to generate research and to provide testable hypotheses.

Testable hypotheses and then tests of the processes hypothesized to be implicated in the clinical problem are needed. For example, if cognitions are proposed to play a pivotal role in the onset or maintenance of a disorder or pattern of functioning, direct tests of this proposal are needed and ought to be part of the foundation leading toward the development of effective treatment. Research on the nature of the clinical problems is likely to identify subtypes, multiple paths leading to a similar onset, and various risk and protective factors. These characteristics are likely to influence treatment outcome and to serve as a basis for using different treatments with different types of children. Connections of treatment research with

psychopathology research could greatly enrich treatment by suggesting possible intervention targets and moderators of therapeutic change.

THEORY AND RESEARCH ON THE CHANGE PROCESSES OR MECHANISMS OF TREATMENT

Conceptual views are needed about what treatment is designed to accomplish and through what processes or mechanisms. Theories of change are distinguishable from theories of onset. The guiding question for therapy research is how does this particular treatment achieve change? The answer may involve basic processes at different levels (e.g., neurotransmitters, stress hormones, memory, learning, information processing, motivation). In turn, these changes may be induced or activated by therapeutic processes such as gaining new insights, practicing new ways of behaving, or habituating to external events.

Theories of change must be followed by empirical tests. Do the intervention techniques, methods, and procedures within treatment sessions actually affect those processes that are considered to be critical to the treatment model? At least three steps are required to conduct the requisite research: specifying the processes or factors responsible for change, developing measures of these processes, and showing that these processes change before therapeutic change occurs. This latter requirement is needed to establish the time line, i.e., processes are changing and are not merely concomitant effects of symptom improvement (see Kazdin 2003). Thus, evidence that the putative process (e.g., parenting practices, cognitions, family interactions) and child symptoms have changed at the end of treatment will not demonstrate that one caused, led to, or mediated the other. In both the child and adult therapy research, it is surprising how little attention has been given to the mechanisms of change, a point to which I return below.

SPECIFICATION OF TREATMENT

Research must specify precisely what is done by the therapist with, for, or to the child (adolescent, parent, or family) during the sessions. Treatments ought to be operationalized, preferably in manual form, so that the integrity of treatment can be evaluated, the material learned from treatment trials can be codified, and the treatment procedures can be replicated in research and clinical practice. Placing treatment into manuals does not rigidly fix treatment or provide a recipe book but rather codifies progress regarding what is essential to include. Much progress has been made on this front and manuals are available for scores of child treatments (see Kazdin 2000c).

The development of manuals is related to research on the mechanisms of therapeutic change. Without knowing how therapy works and what the necessary, sufficient, and facilitative ingredients are, and within what "dose" range they lie, it is difficult to develop meaningful treatment manuals. Treatment manuals may include effective practices, ancillary but important facets that make delivery more palatable, superstitious behavior on the part of those of us who develop manuals, and factors that impede or merely fail to optimize therapeutic change. The difficulty is that without understanding how treatment works, which element in a manual falls into which of these categories is a matter of surmise.

TESTS OF TREATMENT OUTCOME Outcome studies are central in developing treatment. A wide range of treatment tests (e.g., open studies, single-case experiments, full-fledged randomized clinical trials, qualitative studies, and quasi-experiments) can provide evidence that change is produced and that treatment is responsible for the change (see Kazdin 2003). Though outcome studies are the most common forms of research in child therapy, the types of studies to elaborate treatment outcome are restricted.

For example, the development of effective treatments would be enhanced by qualitative research that rigorously evaluates how clients change, their experience of change over the course of treatment, impediments to change among those who do and who do not improve, and likely factors that may influence responsiveness to treatment. Qualitative research may generate clinically informed theories and hypotheses and fuel quantitative studies that define effectiveness and then test how, why, and for whom treatment is effective.

TESTS OF MODERATORS Treatment effects may vary as a function of characteristics of the child, parent, family, context, therapist, and other influences. Moderators are characteristics on which outcome depends. Theory, empirical findings, and clinical experience can inform the search for moderators. For example, we know that many sexually abused children are likely to develop cognitions that the world is a dangerous place, that adults cannot be trusted, and that one's own efforts to influence the world are not likely to be effective (Wolfe 1999). Based on this understanding of the problem, one might predict that sexually abused youths with these cognitions would respond less well to treatment than those without such cognitions, if response to treatment were measured by posttreatment prosocial functioning. That is, unless these cognitions are altered in treatment, such children may be more socially restrained than similar children without these cognitions. Perhaps another study using this information would evaluate if the effectiveness of treatment could be enhanced by including a component that focuses on these cognitions.

Multiple child, parent, family, and contextual factors may influence responsiveness to treatment. The sparse evidence suggests that multiple factors contribute to treatment outcome in the way that risk factors accumulate in predicting onset (see Kazdin 2000c). Identifying moderators could greatly influence application of treatment with better triage of patients toward interventions to which they are likely to respond. Understanding how and why moderators exert their influence could have great implications for improving the effectiveness of treatment.

TESTS OF GENERALIZATION AND APPLICABILITY As a treatment is shown to produce change in a particular context or setting, it is valuable to evaluate the generality of the findings across other dimensions and domains. Tests of generality of a treatment are similar to tests of moderators but they are less conceptually inspired and more application oriented. Can treatment be effective in different ways, for different people, and in different settings? The extension of findings across diverse

samples (e.g., clients who vary in age, ethnicity, cultural background) and across disorders also reflects generality and applicability.

Mentioned in the discussion above of the limitations of child therapy research were the many ways in which treatment in research departs from treatment in clinical practice. This disparity has led to an urgent inquiry into whether effects obtained in the research setting can be obtained in clinical settings, an important priority to be sure (National Advisory Mental Health Council 1999, 2001). Such inquiries into the generality of treatments will profit from knowing why and for whom treatment works. In both settings one needs to ensure that the critical components of treatment are included and that a given client with a given characteristic is a good candidate for the intervention.

General Comments

To elaborate and understand a treatment and to be able to optimize its application clinically, the tasks or steps listed in Table 3 ought to be completed, although not necessarily in a fixed order. Typically, a study of treatment focuses first on treatment outcome. If the treatment shows promise, further analyses (steps) are completed. Exploration of each step enables progress over the course of the research.

Few examples in child and adolescent (or adult) therapy research illustrate progression through more than a subset of these steps. Research on parent management training as a means of treating oppositional and aggressive children illustrates several of the steps: conceptualization of conduct problems, research on family processes (inept and harsh discipline practices) that promote the problems, and outcome studies that establish the central role of these practices reflect many of the steps highlighted previously (e.g., Dishion et al. 1992, Forgatch 1991, Patterson et al. 1992). This research not only establishes an effective treatment but provides an empirically supported model of how the problems may develop for many children, how domains of functioning beyond conduct problems are affected, and how to effect therapeutic change.

The steps outlined above emphasize theoretical and empirical development and a progression of research along several fronts. Currently, the accumulation of studies is haphazard. The narrow path through which the research has wandered limits what we can say about therapy. A more proactive stance is one that begins with a model of what we need to know and specifies some of the critical steps to move in that direction.

ACCELERATING PROGRESS IN TREATMENT RESEARCH

Expanding the Focus

QUESTIONS ASKED ABOUT TREATMENT The steps previously outlined give an overarching framework for the types of knowledge needed to develop therapy. The framework can be translated into concrete questions that can guide individual investigations. Several specific questions need to be answered regarding a particular psychotherapy (see Table 4). Progress can be made by ensuring that for a given

TABLE 4 Range of questions to guide treatment research

1. What is the impact of treatment relative to no treatment?
2. What treatment components contribute to change?
3. What treatments can be added (combined treatments) to optimize change?
4. What parameters can be varied to influence (improve) outcome?
5. How effective is this treatment relative to other treatments for this problem?
6. What child, parent, family, and contextual features influence (moderate) outcome?
7. What processes or mechanisms mediate (cause, influence, are responsible for) therapeutic change?
8. To what extent are treatment effects generalizable across problem areas, settings, and other domains?

treatment and clinical problem these questions, but not necessarily only these questions, are addressed systematically. Some finite number of controlled studies might adequately address these basic questions, after which research could be devoted to the more complex issues (e.g., therapy processes, boundary conditions).

OUTCOMES The range of outcomes evaluated in research ought to be expanded beyond the exclusive focus on symptom change. Although symptom change is important, it is difficult to find compelling evidence that symptom change, as opposed to reduced impairment or improvements in prosocial functioning, family interaction, or peer relations, is the best predictor of long-term adjustment and functioning. For example, palpable improvements in functioning in everyday life would be very important as an outcome of treatment because impaired functioning contributes significantly to the referral of children for mental health services (Bird et al. 1990, Sanford et al. 1992). Moreover, by focusing almost exclusively on symptom reduction, current therapy research probably underestimates the benefits of child therapy.

Many other outcomes beyond reduction of symptoms are critically important because of their significance to the child, family, and contexts in which the child functions. Table 5 samples some of the key domains that are important to include in outcome research. The relevance of any particular domain may vary by developmental level of the child and clinical disorder (e.g., anxiety, attention deficit disorder) or indeed by subtype of a given disorder. However, for most clinical problems brought to treatment, the benefits of treatment are not captured fully by changes in symptoms. Indeed, the benefits of child treatment are often reflected in decreases in parent psychopathology and stress and improved family relations (Kazdin & Wassell 2000, Szapocznik et al. 1989).

SAMPLES Sampling of children and adolescents raises multiple issues for research. First, a key concern is that most samples in therapy studies are recruited rather than clinically referred. As part of this recruitment, they are screened in such a way as to make them quite different from the majority of cases seen in clinical work in terms of severity, duration, and scope of dysfunction. These dimensions can

TABLE 5 Range of outcome criteria for evaluating treatment effectiveness

1. Child functioning
   a. Symptoms
   b. Impairment
   c. Prosocial competence
   d. Academic functioning
2. Parent and family functioning
   a. Dysfunction (e.g., symptoms)
   b. Contextual influences (e.g., stress, quality of life)
   c. Conditions that promote adaptation (e.g., family relations and organization)
3. Social impact measures
   a. Consequences on systems (e.g., school activities, attendance, truancy)
   b. Service use (e.g., reductions in special services, hospitalization)

readily affect generality of the findings from research. Clinically referred samples ought to be studied more routinely.

Second, a number of clinical samples are rarely included in therapy research, and greater attention to these samples is important. For example, relatively few outcome studies have evaluated treatments for children of adults who have severe disorders (e.g., depression, alcohol abuse); children with mental retardation, physical handicap, and chronic disease; children exposed to physical or sexual abuse and neglect; juvenile offenders; and homeless youth. Each of these populations has a higher rate of clinical dysfunction than the community at large and represents a high priority for intervention. For example, delinquent youth often have high rates (50–80%) of diagnosable psychiatric disorders (see Kazdin 2000a) but are infrequently included in clinical treatment trials.

Third, more attention is needed to samples of minority and underrepresented groups. An assumption often made is that ethnicity, race, and gender ought to be taken into account in deciding what treatment to provide or whether treatment ought to be adapted in some way. This assumption would be supported if the effects of a well-developed treatment (e.g., evidence-based) were shown to be moderated by one of these variables. I am not suggesting that outcome would or would not be moderated by one of the variables noted above or by other subject and demographic characteristics. However, absence of programmatic research on this issue is a serious deficiency. Evidence that treatment is moderated by one of these key variables would foster the design of new treatments or the adaptation of existing ones. The factors that account for attenuated or improved effects of treatment with one group rather than another are needed as well. Ultimately, understanding the bases for factors that moderate treatment can contribute enormously to treatment and to clinical care.

Systematic Monitoring of Progress

Progress depends not only on a plan for research but also on some effort to evaluate the extent to which gains are being made. Existing methods of reviewing the

literature (narrative, meta-analytic) attempt to chart progress. The goal is to encompass as much of the literature as feasible and then to draw conclusions. The problem is that if we, as investigators, have ignored many critical questions about therapy, the conclusions from reviews will be quite limited. Reviews of the literature cannot be expected to bring to light knowledge on critical questions if the constituent studies continue to neglect such questions. For example, the processes through which therapeutic change is achieved (mediators) are rarely studied. Moreover, when the mediators are studied, investigations are not designed to establish the time line between the putative process or mechanism and the observed therapeutic change (Kazdin 2003). In short, the studies are not developed and designed in ways capable of answering this critical question about treatment. Understandably, in this circumstance reviews of research (e.g., Fonagy et al. 2002, Kazdin 2000c, Weersing & Weisz 2002) cannot shed much light on how treatment works.

I recommend a different type of review, one that identifies the progress made on the key questions (Kazdin 2000b). It would be useful to know when progress is made in answering the questions I have listed in Table 4. Such a progress review would consolidate gains in research, identify questions that are not being addressed, and indicate whether more or indeed less research is needed in a particular area. Of course, a review of progress could be proactive, modifying the research agenda and providing, as it were, a midcourse correction.

Continuation of current research, even with improvements in rigor and elegance, will not lead us to the knowledge we need for effective treatment and understanding the change process. It is important not to confuse the accumulation of studies with the accretion of knowledge. In child and adolescent therapy research, the latter depends heavily on a slight shift in the research agenda and more programmatic attention to what we wish to know about treatment. To guide research, three pressing questions immediately come to mind:

What do we wish to know about therapy and its effects?
What of this do we already know?
What needs to be accomplished to fill in the gap between the two prior questions?

It is not safe to assume that the literature will address question number three without some proactive stance about what needs to be accomplished. A plan for therapy research would not rigidly dictate which studies deserve to be completed or published. Rather, it would specify key areas in need of attention and facilitate subsequent evaluation (progress review) of progress.

CONCLUSIONS

Considerable progress has been made in child and adolescent psychotherapy research, as reflected in the quantity and quality of outcome studies and the identification of evidence-based treatments for several clinical problems. Despite the progress, fundamental questions remain about therapy and its effects. As prominent examples, we do not know why or how therapies achieve change, how to optimize therapeutic change, and for whom a particular treatment is well suited.

A great deal of concern in contemporary research focuses on the extent to which treatment effects obtained in research generalize to practice. Because we do not understand why or how most treatments work, we do not know which facets of treatment are particularly important to clinical practice. It is therefore likely that relatively weak or clearly less-than-optimal treatments are being tested in research and proposed for extension to clinical practice.

Much has been learned about child and adolescent psychotherapy, but little of this has been extended to clinical services. Most treatments used in clinical practice have not been evaluated empirically; treatments that have been established as evidence-based are not in widespread use in clinical practice (Kazdin 2000c). One can readily quibble about the research completed to date, noting, for example, that the symptoms of patients recruited in research are not always of the same severity as those seen in clinics; and evidence-based treatments, whether in medicine or psychology, cannot be expected to work in all instances and, for some disorders, even in most instances. Nevertheless, such treatments should represent the first line of attack; they should be used prior to exploratory and non-evidence-based treatments. Further efforts are needed to ensure that treatment research is clinically relevant but also to ensure that clinical practice draws on the remarkable findings already available.

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