

Part IV: Effectiveness of Services

Chapter 8

Effectiveness of Therapies

Effectiveness of Therapies

INTRODUCTION

Although the scientific evaluation literature on child treatment is inadequate to answer many policy questions, an increasing amount of research on the effectiveness of children's mental health treatment is available. The fundamental conclusion that professional mental health treatment leads to significantly better outcomes than no treatment across age groups is supported by a substantial research base on the effectiveness of mental health treatment in general (38,484,616,647). Children's mental health treatments cannot be directly equated with treatments for adults (8), but general research tests some of the fundamental assumptions of treatment. Furthermore, there is an extensive theoretical rationale concerning treatment for children's mental disorders (see ch. 5). In many cases, such theory and data are supportive of child treatment interventions, even in the absence of applied research.

To assess current scientific understanding of what is known about the effectiveness of mental health intervention for children, this chapter first discusses reviews of the research that consider the effectiveness of psychotherapies for children in general. Available reviews of psychotherapy outcome research differ in the range of therapies they include within their purview—some including studies of family therapies, for example, and

others not; some including studies of group therapy and others limited to studies of individual therapy. By including studies of a variety of modalities, these reviews analyze the question of whether therapy in general can be effective with troubled children. This question is important because, currently, it is therapy in general that is reimbursed, not particular therapies.

The second part of this chapter examines research on the effectiveness of specific therapies described in chapter 5: behavioral therapy, cognitive therapy, group therapy, family therapy, crisis intervention, and psychopharmacological (drug) therapy.

It should probably be noted that for the most part the scientific literature contains evaluations of the effectiveness of therapies for mental disorders (see ch. 3) rather than subclinical mental health problems (see ch. 4); consequently, it is the effectiveness of therapies for diagnosable disorders which is reviewed in this chapter. Some services for subclinical mental health problems come under the rubric of prevention and mental health interventions in non-mental-health settings such as schools, homes, and the juvenile justice system; the effectiveness of such services is reviewed in chapter 9.

EFFECTIVENESS OF CHILD PSYCHOTHERAPY IN GENERAL AND METHODOLOGICAL ISSUES

Nearly 30 years separate the first review of child psychotherapy outcome research (382) from the most recent (104). Not surprisingly, the latest reviews of child psychotherapy outcome research in general have shown greater methodological sophistication, incorporating the more rigorous meta-analytic techniques (387,552,616) to paral-

lel an improved methodological soundness in the studies reviewed. Later reviews also indicate that, in general, treatment for children's mental health problems is more effective than no treatment. However, methodological problems persist, and the conclusions of the reviews should be viewed somewhat cautiously.

Reviews of Child Psychotherapy Outcome Research

Levitt (1957, 1963)

The first major efforts to assess children's mental health treatment were Levitt's (382,383) reviews of child psychotherapy outcome research. Levitt aggregated across available studies the percentages of children who were judged to have improved following treatment. Since most of these studies did not include control groups, he compared the aggregate percentage of treated children who improved to the aggregate percentage of untreated children who improved (derived from two studies).

In his 1957 review (382), Levitt concluded that an estimated 67 percent of treated children had improved at the close of treatment and that 78 percent of treated children had improved at followup; Levitt also found, however, that 72.5 percent of untreated children had improved. These observations suggested that, in general, child psychotherapy for mental health problems did not have an advantage over no treatment. Levitt's 1963 update (383) yielded similar results. Levitt wrote:

. . . the inescapable conclusion is that available evaluation studies do not furnish a reasonable basis for the hypothesis that psychotherapy facilitates recovery from emotional illness in children.

Levitt's conclusion can be criticized on several grounds. Levitt's estimate of the improvement in untreated children might not have been valid. Levitt derived the estimate of "improvement without treatment" from two studies with questionable methodology (43); and these studies might not have been comparable on several grounds to other treatment outcome studies (280). Furthermore, most of the untreated children were children who received a diagnostic assessment but did not continue with psychotherapy. There might have been systematic differences, aside from treatment, between these children and the treated children. The children who did not receive psychotherapy after diagnosis might have had a greater ability to cope, found other help for their problems, or found the diagnostic contact sufficient treatment (43,106,280). It is also possible that the

children in the untreated control groups received mental health treatment somewhere other than at the study site.

Even if Levitt's analytic methods were not suspect, the studies he reviewed might not be representative of the current state of child psychotherapy. The studies he reviewed were done in the 1930s, 1940s, and 1950s. Therapy techniques in those years differed in many ways from later techniques, and the populations studied might have been different from current clinical populations (43). Furthermore, the methods used in psychotherapy outcome studies in those years were primitive in comparison to contemporary methods.

Tramontana (1980)

In a review of the literature on the effectiveness of psychotherapy for adolescents, Tramontana (637) derived estimates of percentage improved similar to Levitt's. Overall, including both individual and group therapy, Tramontana found a median positive outcome rate of 75 percent with psychotherapy and 39 percent without psychotherapy. He questioned the meaningfulness of these figures, however, since the outcomes were so variable across studies—reflecting the variety of factors that influence adolescent therapy outcome. Most of the studies Tramontana reviewed looked at group therapy. Two of them are discussed further below in conjunction with a discussion of group therapy for adolescents.

Smith, Glass, and Miller (1980)

Smith, Glass, and Miller (616) examined 500 controlled studies in their 1980 meta-analysis of psychotherapy. This review was distinguished by its inclusion of controlled studies only and by its taking into account differences in the strength of the treatment effect (effect size) across studies. Critics of the review claim that it lumps together too many different kinds of studies and includes studies of poor as well as good design (174). In fact, Smith and his colleagues attempted to control for this problem by classifying studies according to methodological criteria (647). Although most of the studies examined treatment of adults, approximately 50 of the studies assessed treatment of children or adolescents.

The Smith, et al., 1980 meta-analysis found significantly better outcomes for patients who were treated with psychotherapy than for controls. The investigators concluded that the average person who receives therapy is better off at the end of it than 80 percent of the persons who do not.

Smith, et al., did not analyze the effectiveness of child psychotherapy separately from adult psychotherapy. In a correlational analysis, however, they found that patients' age had little effect on treatment outcome. This finding must be viewed cautiously. The treatment effects of the approximately 50 child and adolescent studies were not analyzed separately from the original 500 studies, and these 50 studies represent a subsample much smaller than the larger group.

Casey and Berman (1985)

Casey and Berman (104) reviewed 75 studies of child psychotherapy outcome dating from 1952 to 1983. They restricted their sample to studies that used a control group of untreated children from the same general population as the treated children. The sample excluded studies examining treatment of adolescents. Behavioral therapy was used in 56 percent of the studies Casey and Berman examined, cognitive-behavioral therapy in 21 percent, and nonbehavioral therapy (psychodynamic, client-centered, mixed, and unclassifiable) in 48 percent. (Some of the studies examined more than one form of treatment, so these figures add to more than 100 percent.)

Using meta-analytic techniques similar to those used by Smith, et al. (616), Casey and Berman (104) found that, overall, the average child receiving psychotherapy was better off after treatment than two-thirds of control children. This treatment effect is comparable to the treatment effect found by Smith, et al. (616), and others reviewing adult psychotherapy. Casey and Berman found little evidence either that one modality of treatment differed from any other in overall effectiveness, or that individual treatment differed from group treatment. Surprisingly, outcomes for children whose parents were treated concurrently did not differ from those of children whose parents were not treated. In general, treatment had a larger effect on problems related to fear and anxiety

than on problems involving self-esteem, social adjustment, or global adjustment. The research was insufficient to allow any conclusions matching specific treatment modalities to specific problems or diagnoses.

In general, Casey and Berman concluded that . . . clinicians and researchers need not be hesitant about defending the merits of psychotherapy for children" (104). The conclusions of Casey and Berman must be reviewed somewhat cautiously however, since only 24 percent of the 75 studies they reviewed clearly used children who were seeking treatment as subjects; most of the rest used "school children not seeking treatment" or "community volunteers for special projects" who were in mental distress but who had not sought treatment. Thus, it is not clear how representative of actual treatment situations their results are.

Methodological Issues

Clinicians and researchers have expressed two major concerns about analyses that aggregate results across different types of treatment as the reviews discussed above have done. One concern is that the research base has too many deficiencies to allow generalizations about the effectiveness of child psychotherapy. Several discussions of the effectiveness of child psychotherapy from Levitt (382) to Kazdin (336) detail the lack of methodologically sound research on the efficacy of child psychotherapy. Among the deficiencies mentioned are the absence or inadequacy of control groups; inadequate or misguided measurement of therapeutic, intervening, and outcome variables; lack of specific description of subjects, treatment, and outcome; heterogeneity of subjects; and failure to assess the effect of psychotherapy independently of other interventions (8,43,275,280,336,637).

The other major concern is that an overall estimate of the effectiveness of child psychotherapy may have little relevance for clinical practice and mental health policy, because so much seems to depend on a number of mediating factors that influence both children's problems and treatments (see, e.g., 43,280,561,637). Thus, Levitt's (382) review found that the percentage of child patients

who improved at close of treatment ranged from 43 to 86 percent across studies, while Tramon-tana's (637) review found that the percentage improved ranged from 35 to 100 percent. In Casey and Berman's (104) review, the standard deviation exceeded mean effect size, an indication of great variability.

The paucity of good research reflects in part the difficulties of introducing methodological rigor to the study of child psychotherapy (8). Many design features of treatment studies that would be desirable on methodological grounds (e.g., random assignment to treatment or control groups) are rejected as infeasible logistically or questionable ethically (647,719), although there is disagreement about the true extent of logistical and ethical problems. Another obstacle to mental health research in general is the difficulty of specifying what the treatment is, since psychotherapy is often tailored to the specific theoretical orientation of the therapist, the personalities of the therapist and patient, the conditions under which therapy takes

place, and, for children's therapy, the developmental stage of the child.

Summary

In summary, research reviews which aggregate a variety of treatments and problems yield mixed evidence for the effectiveness of child psychotherapy. Levitt (382,383) found little difference between treated and nontreated children, but there are serious reservations about the analytic method he used and the studies he reviewed. Smith, et al. (616), found a positive effect of psychotherapy over all ages, with no significant correlation of age with treatment effect; however, they did not analyze studies of child and adolescent treatment separately from studies of adult treatment. Casey and Berman (104) found that treated children had outcomes better than two-thirds of untreated children, but their conclusions must be tempered by the fact that the majority of studies they reviewed did not use actual patients.

EFFECTIVENESS OF SPECIFIC THERAPIES

A refrain resembling the one familiar in adult psychotherapy research seems even more apt for research in child psychotherapy (8,43,280). The important question may not be about the effectiveness of child psychotherapy in general but about:

1. what specific psychotherapy is effective;
2. under what conditions;
3. for which children;
4. at which developmental level;
5. with which problems;
6. under what environmental conditions; and
7. with which concomitant parental, family, environmental, or systems interventions?

The following sections discuss reviews of the research on the effectiveness of specific psychotherapies identified in chapter 5: behavioral therapy, cognitive therapy, group therapy, family therapy, crisis intervention, and psychopharmacological (drug) therapy. Although considerable research has been done for some treatments, such as several types of behavior therapy and some spe-

cific pharmacological agents, no research reviews focus specifically on psychodynamic therapy; therefore, a discussion of the effectiveness of psychodynamic therapy is not included.

Effectiveness of Individual Therapy

Behavioral Therapy

Perhaps because of the specificity of behavioral therapy, there are few assessments of the overall effectiveness of behavioral therapy with children. Most studies have investigated the effectiveness of a given behavioral technique for a given problem with a given population in a given context. An exception is Casey and Berman's (104) calculation of an overall treatment effect size across 37 studies of behavioral therapy. Casey and Berman found that behaviorally treated children had better outcomes than 96 percent of untreated children, although treated children had better outcomes than only 55 percent of untreated children when outcome measures that closely resembled

the activities of therapy itself (e.g., the number of positive behaviors) were omitted. Behavioral therapy was also one of the modalities represented in the Smith, et al. (616), review.

The effectiveness of specific behavioral treatments for specific problems identified in chapter 3 is briefly reviewed below.

Developmental Disorders.—For children with pervasive developmental disorder (PDD), behavioral treatments have been developed both to increase appropriate behaviors and to decrease maladaptive behaviors (554). Reviews of the research have supported the effectiveness of operant conditioning for teaching PDD children appropriate behaviors such as language and self-care and academic skills although progress is typically slow (252). One difficulty with behavioral treatments is that they often do not generalize beyond the site of treatment. A child learning a skill in a day treatment program may not maintain the learning at home. Although methods of addressing this problem are being developed, further work is needed.

Behavior Disorders.—Some studies of behavioral approaches to the treatment of attention deficit disorder with hyperactivity (ADD-H) suggest that behavioral approaches have had real success in reducing off-task behavior, overactivity, and other problem behaviors and in increasing attention and academic performance (14,29,473). Yet

other evidence raises concerns about whether behavioral therapy's effectiveness for ADD-H generalizes to settings beyond the treatment setting, about the duration of the treatment effect (556), and about the possible distracting effect of the rewards used in behavior modification (81). Furthermore, Abikoff and Gittleman (4) found that behavioral treatment of children with ADD-H only reduced aggressiveness; it did not reduce attention deficits, hyperactivity, or impulsivity (555). Abikoff and Gittleman's study suggests that further evaluation is needed to understand the clinical usefulness of behavioral treatment of hyperactivity .

The overall effectiveness of behavior modification for children with conduct disorders is difficult to assess because of the great variation in conduct-disordered behaviors (e.g., from truancy to assault), the great effect that a child's developmental level has on the types of conduct-disordered behaviors exhibited, and the great variation in the severity of conduct disorders. Studies of treatment for younger, less severely disordered children tends to focus on classroom interventions and parent training programs. A number of studies have shown that reinforcement techniques based in the classroom and/or at home have reduced disruptive behavior at school (27).

Parent training programs to reduce conduct-disordered behavior have helped reduce a child's disruptive, difficult behaviors in many families (468). In one effective parent training program (497), parents learned behavioral strategies in a parent training group and made behavioral assessments and changes in their parenting behavior at home. An average of 60-percent reduction in the target disruptive behaviors was achieved.

Emotional Disorders.—Research on behavioral treatment of emotional disorders has been largely restricted to laboratory treatment of specific phobias, a subset of anxiety disorders. One recent review of the outcome research (252) found ample evidence for the effectiveness of modeling procedures but not for reciprocal inhibition or operant conditioning, for treating phobias. The effectiveness of modeling procedures with children diagnosed with other anxiety disorders has not been demonstrated; nor has it been shown that treatment has a lasting effect in a child's normal



Photo credit Charter Colonial Institute Newport News, VA

A variety of treatment modalities, including individual therapy, are used to treat children's mental health problems.

environment. Behavioral treatment of anxiety disorders is promising, but further research is needed before conclusions about its effectiveness can be made with certainty.

Psychophysiological Disorders.—Evidence for the effectiveness of behavioral treatments for psychophysiological disorders tends to be greater when there is a behavioral component to the disorder. Evidence for the effectiveness of behavioral treatment of Tourette's syndrome (598) and other stereotyped movement disorders is limited.

Evidence for the effectiveness of various behavioral treatments for enuresis (lack of control over urination) is more encouraging. A number of studies have been conducted with several of the behavioral treatments (147). Mowrer's (450) bell-and-pad treatment achieved complete success in 75 percent of studied cases, although 41 percent relapsed when examined at followup (147). Of individuals who relapsed and were retreated, 68 percent achieved lasting success. Strengthening the reinforcement, self-control, or practice components of the bell-and-pad treatment have been found to increase the success rate (147). Most studies examining operant conditioning methods for treating enuresis have found evidence for the success of this method as well (252).

With encopresis (lack of control over defecation), operant conditioning has been successful in several studies, although the total number of children studied has been small (147).

Some evidence exists for the effectiveness of operant conditioning to promote weight gain in patients with anorexia nervosa, but research on behavioral treatment mostly fails to consider the help these patients need with psychological and social aspects of the disorder (54). Behavioral treatment of bulimia has been studied too little for an overall assessment to be made.

Cognitive Therapy

During the past 15 years, the amount of research evaluating cognitive therapies for children often combined with behavioral approaches has increased dramatically (301,341). Cognitive models of treatment have been developed for problems including hyperactivity and conduct disorder, which have often been considered resistant

to other treatments. Cognitive therapy and related methods are important approaches in child treatment, because they are closely tied to theory and research in developmental psychology; therefore, they deserve careful assessment (336,399,510,674).

Kendall and Braswell's (341) volume on cognitive-behavioral therapy comprehensively reviews much of the research on this method. The review treats separately two different forms of cognitive-behavioral therapy: self-instructional training and problem-solving. After reviewing nearly 30 studies, Kendall and Braswell concluded that self-instructional training has been shown to be successful with several types of mental health problems. Studies have shown a positive effect of treatment on children's fears, hyperactivity, disruptive behavior, and general self-control. Outcomes were most successful when self-instructional training was combined with operant conditioning, a form of behavioral therapy.

Kendall and Braswell found that much less research has been conducted on problem-solving cognitive approaches, yet much of the research that has been conducted finds successful outcomes such as decreases in disruptive behavior and increases in prosocial behavior.

Cognitive-behavioral therapies were also included in Casey and Berman's (104) review of child psychotherapy outcome studies. Fourteen studies of cognitive-behavioral therapies showed on average that treated children fared better than 81 percent of untreated children, although this figure may be invalid because of the inclusion of outcome measures resembling the therapy (e.g., cognitive functioning rather than behavior).

The conclusion that cognitive and related therapies have been shown to be effective must be qualified in several ways. First, there are some questions about the clinical relevance of some studies, since many of the children have been selected rather than randomly assigned, and many of the outcomes have been measured by scores on tests of cognitive functioning rather than by changes in actual problem behavior (301,336,341). Several studies, however, do show positive effects with clinical populations (336,341). Second, successful outcomes do not always generalize beyond the training situation to the classroom or home, although studies that have included operant con-

ditioning methods or that have broadened the scope of the treatment have often achieved better generalization effects (81,341). Third, aggressive behavior has been especially resistant to cognitive methods (341).

Recent research has investigated such variables as age, developmental level, and cognitive styles of children to help explain differences in outcome and to help tailor cognitive therapies to the requirements of different children (81,341). In a similar vein, Kazdin (336) has noted that studies of more intensive courses of cognitive therapy, with greater focus on specific clinical problems, are needed to test their clinical potential completely.

Effectiveness of Group Therapy

As noted in chapter 5, group therapy for adolescents differs from group treatment for younger children. Child group therapy tends to rely on group play and activities, while adolescent group therapy is more of a “talking” therapy. The literature on each has been discussed in separate reviews. Group therapy has also been included in reviews by Smith, et al. (616), and Casey and Berman (104).

Group Therapy With Prepubescent Children

Abramowitz (5) has reviewed the outcome research on group therapy with prepubescent children. The literature reviewed included studies using verbal approaches (39 percent), play and activity approaches (37 percent), and behavior modification (24 percent). The studies focused on treatment of immature or problem behavior, social isolation or withdrawal, poor self-concept, or academic underachievement. Outcome measures focused chiefly on improvement in personality variables, appropriateness of behavior, interpersonal relations, and academic performance. Abramowitz found that about one-third of the studies demonstrated positive effects of group therapy, one-third had a mixture of positive, negative, and null results, and one-third found no effects of treatment. The generalizability of this evidence must be questioned, however, since most of the outcome studies in Abramowitz’s review investigated group therapy that lasted only 10 to 15 sessions and so may not apply to therapy

which lasts longer. Many clinicians argue that a number of initial sessions are needed for a group to “jell” and develop sufficient intimacy for effective therapeutic work to be done (722).

Casey and Berman’s (104) review of child psychotherapy included a separate treatment effect size for 33 studies of group treatment. Casey and Berman found that the average child treated in group therapy had a better outcome than 50 percent of untreated children. However, their review does not provide information on the nature of the group treatment; thus, it is difficult to determine if the 33 studies reviewed by Casey and Berman are any more representative than those reviewed by Abramowitz. A fair conclusion is that the full range of child group therapy has not yet been adequately assessed.

Group Therapy With Adolescents

As noted earlier in this chapter, most of the treatment outcome studies in Tramontana’s (637) review of adolescent therapy utilized group therapy. Although most of the studies in the Tramontana review were methodologically flawed, two of the studies that evaluated the effectiveness of adolescent group therapy were relatively rigorous. In a study by Persons (503), institutionalized delinquents of both sexes receiving a combination of individual and group psychotherapy were compared with adolescents receiving the standard institutional regimen. The group therapy combined directive and nondirective elements. Persons found positive effects of treatment on anxiety, other psychopathology, academic performance, and anti-social behavior within the institution and at followup in the community. Treated youths also showed better outcomes on measures of employment and recidivism. In a study of a similar population, Redfering (529,530) contrasted institutionalized delinquent adolescents (girls only) receiving short-term group counseling to a non-treated group. At the end of 11 weeks of treatment, the girls in therapy had greater positive changes in self-concept and feelings about parents and peers. Over time, significant differences in parental and self ratings were maintained. Also, treated girls were released more frequently from the institution and recommitted less frequently.

Effectiveness of Family Therapy

Family therapy to deal with children's mental health problems has gained increasing use by clinicians. Family systems theory was found to be useful by more than 60 percent of child therapists in a survey by Koocher and Pedulla (365). Yet outcome studies of family therapy have rarely been included in generic reviews of treatment such as those by Smith, et al. (616), and Casey and Berman (104). Their lack of inclusion speaks both to the newness of family therapy and its status as a conceptually different form of treatment.

Gurman and Kniskern's Overview (1978)

In the most comprehensive review of the family therapy outcome literature, Gurman and Kniskern (267) identified over 200 outcome studies on marital and family therapy. Most of the studies reviewed by Gurman and Kniskern (267) did not identify a child as the patient and will not be considered here (although therapy with parents alone can be helpful to children). Of the studies in which a child was identified as the patient, Gurman and Kniskern (267) reviewed studies of behaviorally based family treatment separately from studies of nonbehavioral family therapies. They also treated studies which used "no treatment" control groups separately from those studies which did not compare families receiving family therapy to families receiving no treatment. Gurman and Kniskern (267) judged that most of the controlled studies they reviewed were well designed.

In the only five studies of behavioral family therapy with children as identified patients, and which used control groups, those children and/or families who received treatment had more positive outcomes than those who received no treatment. Behavioral family therapy led to improvement in the parents' and observers' ratings of children in the majority of uncontrolled studies as well.

In 60 percent of controlled studies of nonbehavioral family therapy, treatment led to more favorable outcomes than no treatment. Because these studies did not include long-term followup, however, the effects of treatment over a longer period of time are not known. Finally, in 19 uncontrolled studies of nonbehavioral family therapy in which children or adolescents were iden-

tified as the patients, 71 percent of treated children and/or families improved, while 29 percent either did not improve or deteriorated. In summary, most studies reviewed in Gurman and Kniskern's comprehensive evaluation found that, in general, family therapy was better than no treatment. Questions remain, however, about the representativeness of the treatments and samples in the studies that Gurman and Kniskern reviewed (267). In addition, their reviews did not speak to the efficacy of family therapy for specific childhood mental health problems.

Effectiveness of Family Therapy With Conduct-Disordered and Delinquent Children

Some researchers have focused on the effectiveness of family therapy with specific childhood mental health problems (268). Two prominent research groups have investigated family therapy for conduct-disordered and delinquent children and adolescents (268,336).

Behavioral family treatments of conduct-disordered children have been extensively investigated by Patterson and associates with over 200 families in studies spanning two decades. Patterson's family intervention, a form of parent training based on social learning principles, has been found to be effective in reducing aggressive and antisocial behavior both in the home (488,493, 495,681,710) and in the classroom (496). Positive effects have also been found in the behavior of siblings and in the mental health of mothers of the identified patients (493,494).

The Functional Family Therapy program of Parsons and Alexander—a cognitive-behavioral family treatment of delinquent adolescents—led not only to an improvement in family interaction (485), but also to a decrease in recidivism (16). Improved family interaction was correlated with declining recidivism. A followup 2% to 3 years later revealed that siblings of the original identified patients had a reduced number of court contacts as well (356).

While family treatments of conduct-disordered children and youths appear promising, questions remain about the effectiveness of these models of treatment across the broad range of children with conduct disorders. More severely disadvantaged,

troubled families have been found to benefit much less than other families from parent management training (336). Similarly, one criticism of parsons and Alexander's work is that many of the families treated were of the Mormon faith, which stresses family and community cohesiveness and may have provided an unusual impetus for coping with problem behavior (268).

Effectiveness of Family Therapy With Children With Psychophysiological Disorders

Minuchin and colleagues (442,443,444) have studied the effectiveness of family therapy for children with psychophysiological disorders such as anorexia nervosa and chronic illnesses such as diabetes and asthma. They found improvement both in measures of psychosocial functioning and in measures specific to the patients' physical problems (e.g., weight in patients with anorexia nervosa, respiratory functioning in asthmatics). In one study, Schwartz, et al. (268), found improved psychosocial functioning and control of eating in bulimic children treated with family therapy. The lack of control groups in studies of family therapy for children's psychophysiological disorders necessitates caution in interpreting the results, but the achievement of therapeutic results on several fronts with patients often considered unlikely to improve without treatment suggests the potential effectiveness of family therapy.

Summary: Effectiveness of Family Therapy

In general, family therapy outcome studies provide preliminary evidence for the effectiveness of family therapy with many children and families, despite a number of methodological limitations. Studies with some specific populations, such as conduct-disordered children and adolescents, show particular promise. Further research would be necessary to determine when family therapy is most appropriate and to allow knowledgeable matching between type of child, type of disorder, and specific family therapy models and techniques.

Effectiveness of Crisis Intervention

Few studies have evaluated the outcome of crisis intervention. Those studies that have been identified as evaluations have generally focused on

adult populations and have not isolated the effectiveness of crisis intervention for child patients. Furthermore, methodological shortcomings limit the conclusions that can be drawn from these studies. Homebuilders, the program discussed in chapters as exemplifying crisis intervention, was evaluated only in terms of its cost-effectiveness and success in avoiding outside placement of patients (350), not in terms of patient functioning. Outside placement was avoided for 90 percent of patients with an estimated cost savings of over \$3,200 per patient.

Effectiveness of Psychopharmacological (Drug) Therapy

The effectiveness of psychopharmacological agents in treating childhood disorders can only meaningfully be assessed separately for each pharmacological treatment. The various classes of drug treatment have such contrasting purposes and therapeutic effects that it is impossible to discuss them as a whole. In assessing these medications, the evidence for each intended therapeutic effect must be considered and weighed against the medications' side effects.

Stimulants

The use of stimulant drugs to treat ADD and ADD-H is by far the most common application of psychopharmacological therapy in children, and its effectiveness with children has been researched more than any other drug treatment. Researchers have differentiated the effects of stimulants on specific cognitive functions, academic achievement, social behavior, personality variables, and mood (96). Most research has been focused on short-term effects, but medium and long-term effects of stimulants have also received attention.

Cantwell and Carlson (96) found 15 laboratory experiments demonstrating that several different stimulants successfully aided children with ADD-H in tests of attention, impulsivity, distractibility, motor restlessness, short-term memory, and new learning. These results, however, are not necessarily relevant outside the laboratory.

The effects of stimulants on academic achievement by hyperactive children has been assessed

by a number of studies. Barkley and Cunningham (42) reviewed 120 studies of the effect of stimulant drugs on academic achievement, although only 17 of the studies used objective academic measures. Few positive effects of stimulants on academic achievement were found, and those that were found may have reflected the influence of the drugs on school examinations and not on daily learning. Followup studies supported these findings. Thus, there is some evidence for the effectiveness of stimulants on attention deficits, but little evidence that the use of stimulants to treat ADD-H is associated with academic improvement.

Teachers and parents have noted improvements in social behavior in children treated with stimulants for hyperactive and disruptive behavior, (121). Recent research has found parallel effects on some symptoms of ADD-H in adolescents (673), yet methodological difficulties and the developmental differences between adolescents and children prevent any firm conclusions about the effectiveness of stimulants at this time with adolescents with ADD-H.

Although stimulant drugs achieve good short-term results in children with ADD-H, the limited research findings regarding long-term results are much less impressive (526). Available studies have compared children who have been treated continuously for a number of months with children who have had less or no drug treatment, and they show few long-term positive effects of stimulants (526). Some studies suggest that adolescents who have received stimulant treatment sometime during childhood have fewer symptoms of ADD-H than those who have not received stimulant treatment, but that they are still prone to antisocial behavior, poor peer relationships, low self-esteem, and academic problems (279).

Concerns about the side effects of stimulant treatment focus on: 1) possible retardation of physical growth (568), 2) negative effects on learning (628), 3) drug dependence or later drug abuse, and 4) euphoriant effects. A panel appointed by the Food and Drug Administration evaluated the available evidence and concluded that stimulants may have a minor suppressive effect on growth when prescribed in the average-to-high range of dosage. Rapoport (526) addressed the concern about the effects of stimulants on learning and

concluded, after reviewing six studies, that stimulant drugs seem neither to enhance nor retard learning significantly in children with ADD-H. The connection to drug dependence and later drug abuse and the euphoriant effects of stimulants on children have been determined not to be problems (121,658), although some believe that these issues have not been settled conclusively (121).

Neuroleptics

As noted in chapter 5, neuroleptic medication—sometimes called antipsychotic medication—is used not as a treatment to reverse a disorder, but rather as a means of reducing troublesome symptoms associated with a disorder. Neuroleptic medication is prescribed most frequently to control aggressive, assaultive, hyperactive, socially inappropriate, and difficult to manage behavior in severely impaired children, including children with PDD and especially children with mental retardation (390).

The effects of neuroleptic medications with severely disturbed children have been evaluated in a number of studies (714). Most studies have found positive effects of neuroleptics on many outcome measures of behavior, but as Winsberg and Yepes (714) state, these outcomes suggest that neuroleptics “. . . appear useful only in the management of psychotic children, making them less withdrawn, less overactive, less anxious, less agitated and more tractable” Two studies by Campbell and associates (90,91) also found positive effects of neuroleptics for severely disturbed children in a behavioral (operant) learning paradigm, probably because of their effect of reducing inappropriate responses (92).

One neuroleptic, haloperidol (Haldol), has been shown to be effective in reducing the tics and other symptoms of Tourette's syndrome, although there are few controlled studies (598). Neuroleptics have also been used in low doses to treat ADD-H; however, in comparative studies, stimulants have usually outperformed neuroleptics for treatment of hyperactivity and are generally preferred clinically (714).

A number of side effects of neuroleptics have been documented and are of concern. The sedative effect of neuroleptics appears to impair cog-

nitive functioning in children who are already cognitively impaired (17,75). Evidence for this effect, however, has been limited to nonclinical populations. Other short-term side effects can include drowsiness; blurred vision; and moderate motor dysfunction like tremors, occasional mood changes, and changes in urinary behavior. The long-term side effects of most concern are medication-induced movement disorders, especially those that emerge when the medication is stopped (220), and, in a few cases, tardive dyskinesia (498).

The proportion of children treated with neuroleptics who develop side effects is unknown; in the few studies available, estimates of the prevalence of the different side effects of neuroleptics vary widely. Conners and Werry (121) note that most side effects are not serious, and those that are (e. g., tardive dyskinesia) are infrequent and occur only with high doses or prolonged use. It appears, however, that the decision to use neuroleptics with severely disordered children must be made judiciously and the dosage must be carefully controlled. Some side effects—especially the general “quasi-sedative” effect (714)—have provoked concern among many professionals and parents about the frequent use of drugs (622).

Antidepressants

Well-conducted research on the effectiveness of antidepressant treatment of childhood depression has increased in the past several years, but definitive information awaits the completion of more studies. In a recent review, Puig-Antich and colleagues (518) note that none of the more rigorous studies so far have shown antidepressants to be better than placebos across samples of depressed children, although certain subgroups of

depressed children have responded to antidepressants. Such issues as appropriate dosage, effect of a child’s developmental level, and clinical improvements due apparently to placebo effects complicate conclusions about the effectiveness of antidepressants in treating childhood depression.

In addition to being used to treat depression, antidepressants have been used to treat enuresis, ADD-H, separation anxiety, and school phobia. The antienuretic effect of antidepressants maybe entirely separate from their antidepressant action, but numerous studies have found antidepressants to be effective in reducing, though not curing, enuresis (527). Antidepressants are somewhat effective in treating ADD-H, but generally less effective than stimulants (528). Antidepressants have been used successfully in combination with psychosocial (behavioral, cognitive, and psychodynamic) treatments to treat school phobia (233), and separation anxiety caused, according to the investigator’s theory, by biochemical disturbances not associated with depression (232).

Although the side effects of antidepressants can be dangerous in some children (121), the immediate side effects (e.g., dry mouth, drowsiness, sweating) of moderate to low doses of antidepressants mainly cause discomfort (527). In higher dosages, antidepressant medication can have cardiovascular side effects, but these can be minimized by adhering to strict limits on dosage level (518). Use of antidepressants with suicidally depressed children is risky, because overdoses of these drugs are extremely toxic (527). Conners and Werry (121) state:

. . . of all the psychotropic drugs commonly used in children, the tricyclics call for the greatest caution.

CONCLUSION

Although methodological problems plague research on the effectiveness of children’s mental health treatments, considerable evidence has accumulated to suggest the effectiveness of a wide range of modalities of treatment. The most recent review of the effectiveness of child psychotherapy in general (104) found that the average child receiving therapy was better off after treatment

than two-thirds of control children, and the authors recommend that professionals not hesitate in defending child psychotherapy’s merits. Even this review is limited, however, by the fact that most studies reviewed did not use actual patients in treatment. Many treatments, used widely for a variety of mental health problems, have not yet been evaluated systematically.

With respect to specific treatments, even though an overall assessment of their effectiveness cannot yet be made, several psychosocial therapies have shown promise in a number of studies, especially in some specific problem areas. Thus, for example, behavioral treatment is clearly effective for phobias and enuresis, and cognitive-behavioral therapy is effective for a range of disorders involving self-control (except aggressive behavior). Group therapy has been found to be effective with delinquent adolescents, and family therapy appears

to be effective for children with conduct disorders and psychophysiological disorders. Psychopharmacological treatment, while not curative, has been found to have limited effectiveness with children with ADD-H, depression, or enuresis, and also in managing the behavior of children who are severely disturbed. Further, more rigorous research may demonstrate the usefulness of several other treatments for which there is preliminary evidence of effectiveness.