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Clinical Behavior Therapy with Children

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INTRODUCTION

The extent of childhood behavioral and psychological problems in need of services is enormous. At least 12% (about 7.5 million) of children under age 18 suffer from one or more psychological disorders (Gould, Wunsch-Hitzig, & Dohrenwend, 1981). Of these 7.5 million, nearly half are considered severely impaired by their condition (Office of Technology Assessment, 1986). Evidence also suggests that some of these childhood problems persist into late adolescence and possibly adulthood (e.g., Kazdin, 1989; Kovacs et al., 1984). Moreover the economic costs of the direct treatment of the behavior problems of children (under age 14) are estimated at a conservative \$1.5 billion (Rice, Kelman, & Dunmeyer, in progress, cited in Institute of Medicine, 1989). Clearly, child behavior problems represent a significant social problem in search of potential solutions.

Many diverse disciplines, including clinical child psychology and psychiatry, pediatrics, and social work are called on to deliver effective services for these many children, their teachers, and their families. Treatments for children include a tremendous variety of approaches with interventions designed to reduce maladaptive behavior and increase social functioning (Johnson, Rasbury, & Siegel, 1986; Mash & Barkley, 1988). Only relatively recently have rigorous scientific methods been applied to the area of childhood psychopathology. At the forefront of clinical research and service is the field of child behavior therapy. Despite its short history, child behavior therapy has made substantial progress in the development of effective interventions for the treatment needed by a large number of children and their families.

The purpose of this chapter is to provide a broad overview of contemporary child behavior

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therapy. Following an attempt to put the field into perspective by providing some history and defining characteristics, our attention turns to a cornerstone of behavior therapy, the process of behavioral assessment. A brief and selective review of basic therapeutic paradigms and procedures follows. We conclude by highlighting some developmental and ethical issues. If we are able to provide the reader with an appreciation of the complexity and potential of a broad-based child behavioral-systems approach to the alleviation of children's suffering, we will have been successful.

HISTORICAL OVERVIEW

Attempts to modify the behavior of children date to antiquity, yet systematic behavioral applications to the treatment of childhood disorders were not evident until the early 1900s. Jones (1924) used conditioning principles to treat a 3-year-old boy's generalized fear of furry objects. Similarly, Mowrer and Mowrer (1938) successfully applied conditioning techniques to the treatment of enuresis. Despite such early efforts, applications of behavior therapy were generally limited to adult populations, and only occasional reports of behavior therapy with children occurred before the late 1950s.

During the 1950s and 1960s, many professionals grew discontented with the then-prevailing psychodynamic model. Many populations (e.g., those who were autistic and mentally retarded) were underserved. Reactions against the psychoanalytic establishments helped fuel the rise of applied behaviorism. The work of Skinner (1953), Eysenck (1957, 1960), Wolpe (1958), and Bandura (1961) addressed the utility of applying laboratory-derived methods to the modification of psychological disorders, and thus a firm foundation for the emerging field of behavior therapy was formed.

In the 1960s, operant conditioning principles came to be widely used in the treatment of child behavior problems. These techniques had demonstrated their efficacy in the laboratory, and it was believed that they could be easily adapted for use in "real life" settings. The transition from the laboratory, however, was not so smooth. Much of the work was done by researchers with little or no clinical experience. The focus was on demonstrating the efficacy of relatively simple operant procedures, and little was done to address developmental factors, cognitive variables, or the social network in which the behavior problems presented.

DEFINING CHILD BEHAVIOR THERAPY

Defining *behavior therapy*, whether for child or adult, is a difficult task. Different authors emphasize different features. Ollendick (1986) noted that

some define behavior therapy by the techniques employed (e.g., London); others define behavior therapy by its allegiance to learning principles (e.g., Wolpe); still others define it by its methodological approach to behavior change (e.g., Yates). (p. 526)

Similarly, Emmelkamp (1986) identified four "schools" of behavior therapy: those stressing learning theory; those relying heavily on mediational concepts; the technical eclecticists, or multimodal behavior-therapy group; and those who emphasize an "experimental-clinical" or empirical-methodological approach. We can find no better working definition of child behavior therapy than that espoused by Ross (quoted by Ollendick, 1986):

Like behavior therapy, in general, [it] is best defined as an empirical approach to psychological problems. It entails continuous evaluation of therapeutic interventions and thus calls for objectively defined terms and measurable procedures. It can thus be said that child behavior therapy is the application of psychology to the alleviation of the psychological distress of children. As such, it is an open-minded, self-correcting, and constantly changing field of endeavor. (p. 527)

One approach to characterizing child behavior therapy is to emphasize the methods of behavioral assessment. And one way to distinguish child behavioral assessment is to compare its assumptions, methods, and purposes with those of traditional psychological assessment. Several excellent reviews comparing the conceptual foundations of traditional and behavioral assessment can be found elsewhere (e.g., Barrios & Hartmann, 1986; Goldfried & Kent, 1972; Kanfer & Saslow, 1969). Ollendick and Hersen (1984) briefly summarized two major distinctions: 1) The traditional approach emphasizes psychological traits or dispositions that are assumed to underlie and produce behavioral consistency, whereas the behavioral approach focuses more on the behavior itself, while emphasizing situational influences upon behavior, and (2) traditional assessment interprets the child's response as a "sign" or indirect measure of some underlying personality trait, whereas behavioral assessment takes a "sample" approach, viewing the response as a sample of the target behavior to be assessed, relying on little inference. Though the process of contrasting behavioral assessment with "traditional" approaches has instructive and heuristic value, we agree with Mash and Terdal (1988), who emphasized the potential problems inherent in such a comparison. Such contrasts obscure a number of important and subtle distinctions, perpetuate the view of the field as reactionary, and foster dichotomous, either-or thinking (e.g., traits versus situations).

In the history of child behavioral assessment, two primary themes characterized early developments in the field (Ollendick & Hersen, 1984). Early child behavioral work evidenced a strong commitment to an operant perspective, emphasizing observable events, contemporaneous behavior and situational influences, and within-subject comparisons. In addition, little attention was directed to developmental issues and processes, including the utility of normative comparisons. The early adherence to the operant approach, while restricting and limiting the domain of inquiry, nevertheless provided the foundation for an empirical approach to the assessment of child behavioral disorders.

Several basic objectives of behavioral assessment can be identified (e.g., Barlow, Hayes, & Nelson, 1984; Bornstein, Bornstein, & Dawson, 1984; Gross & Wixted, 1988; Mash & Terdal, 1988; Ollendick & Hersen, 1984):

1. The identification of the problem behaviors and their controlling variables (see Mash & Terdal, 1988, for a discussion of target behavior versus disorder assessment).
2. The systematic, repeated measurement of those behaviors that assesses the change resulting from the treatment interaction.
3. An evaluation of the durability of the treatment gains after the intervention program has concluded.

Such objectives stimulate the behavioral assessor to ask such questions as

1. What is the child's current behavioral repertoire, including the maladaptive responses that brought him or her to the clinician?
2. What is the frequency, intensity, rate, and duration of the maladaptive responses?
3. Under what circumstances (antecedents and consequences) are the maladaptive responses emitted?
4. What environmental conditions in the child's life lend themselves to therapeutic manipulation? (Ross, 1974)

Current behavioral assessment approaches are attempting a fuller integration of the developmental, social, cognitive, and affective dimensions, representing a convergence on ecologically oriented systems models (e.g., Belsky, Lerner, & Spanier, 1984; Evans, 1985; Mash & Terdal, 1988). According to Ollendick and Hersen (1984), "recent developments expand the

scope of child behavioral assessment to include broader and richer contexts in which ecological, social, cultural, and developmental influences on behavior can be examined more productively" (p. 6). These newer developments include a greater appreciation of developmental factors, such as the cognitive level and temperamental style of the child (e.g., Achenbach & Edelbrock, 1984); distal events, such as interactions with neighbors (e.g., Wahler, 1980); molar events, such as external stressors (e.g., Patterson, DeBarsyshe, & Ramsey, 1989); the wider social context (Bronfenbrenner, 1986); cognitions, such as parental expectations and attributions (e.g., Foster & Robin, 1989); and normative data (e.g., Achenbach & Edelbrock, 1984). The nature of behavioral assessment is changing from simple target behavior assessment to a more general, problem-solving analysis of system variables (e.g., Evans, 1985; Kanfer & Schefft, 1988; Mash & Terdal, 1988). In sum, the methods of assessment, but not the basic objectives, continue to change and evolve (Ollendick & Hersen, 1984).

Of course, the child behavior therapist requires specific procedures to actualize behavioral assessment objectives. Several criteria can be used to direct the selection of procedures (Ollendick & Hersen, 1984). First, a multimethod approach is useful in addressing the various contextual and behavioral dimensions evidenced by the child. The range of procedures and assessment strategies includes the clinical interview, self-monitoring, direct observation, psychophysiological recordings, standardized testing, ratings, and self-report (see Chapter 3 of this book or Mash & Terdal, 1988, for more extensive information). These various methods are assumed to provide incremental, unique information not derivable from one source in isolation (e.g., Mash, 1979). Second, empirically based and validated procedures should be given priority. Though the application of conventional psychometrics to behavioral measures is still somewhat controversial (e.g., Mash & Terdal, 1981), a number of sophisticated behavioral researchers acknowledge the importance of developing standardized and validated measures of child behavior (e.g., Cone, 1977; Ollendick & Hersen, 1984; Patterson, 1982). Finally, behavioral procedures should be chosen that demonstrate sensitivity to normal developmental processes (Ciminero & Drabman, 1977; Achenbach & Edelbrock, 1984; Mash & Terdal, 1988). Age-related constraints on assessment are notable and require further specification. For example, self-monitoring procedures appear to cause problems for preschool children (Ollendick & Cerny, 1981).

In addition, the child behavioral assessor must remain sensitive to several considerations unique to the process of child evaluation. First, children rarely refer themselves for treatment. Instead, the presenting complaint represents a complex series of judgments made by significant individuals in the child's environment (Mash & Terdal, 1988). Therefore, an examination of the referral process is essential. In particular, the therapist must assess the possible existence of problems originating elsewhere within the family system, such as marital discord, parental psychopathology, and social disadvantage. These issues may color parental perceptions and expectations, and such problems may supersede direct intervention targeting the child. Moreover, some evidence suggests that parent-referred children do not always differ from nonreferred siblings (Patterson, 1980) or from unrelated controls (Lobitz & Johnson, 1975). Second, an appreciation of the rapid and fluctuating developmental changes cutting across several dimensions of functioning is essential. Needless to say, it is important to know whether the desired behaviors are typically exhibited by children in the age group in question. The behaviors that constitute a problem for children of one age may not be a problem for children of another. One potential benefit of the incorporation of developmental data into behavioral assessment is the use of normative group comparisons to guide target selection and treatment (see later section on developmental issues).

Now, although behavioral assessment is a hallmark of behavior therapy characterized by an idiographic approach to the explication of behavior problems, some debate has arisen over the nomothetic application of such assessment data. In particular, the publication of the third edition of the *Diagnostic and Statistical Manual* (DSM-III; American Psychiatric Association, 1980)

sparked some controversy (e.g., Haynes & O'Brien, 1988). Much of the controversy revolves around the issue of the classification of behavior.

CLASSIFICATION ISSUES

The revised third edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III-R; American Psychiatric Association, 1987) has been put forth as the official diagnostic classification system for mental health professionals. The DSM-III and the DSM-III-R represent a significant advance over previous editions of the manual because they (1) take a descriptive, atheoretical approach; (2) provide explicit operational diagnostic criteria; (3) conducted basic reliability analyses during field trials; (4) provide increased attention to the problems of childhood and adolescence; and (5) incorporate a multiaxial approach to classification. Five major categories of "disorders first evident in infancy, childhood, or adolescence" have been identified: Disruptive Behavior Disorders (e.g., attention-deficit-hyperactivity disorder), Emotional Disorders (e.g., separation anxiety disorder), Habit and Eating Disorders (e.g., enuresis and anorexia), Developmental Disorders (e.g., mental retardation and dyslexia), and Gender Identity Disorders (e.g., transsexualism).

As noted, the DSM-III-R uses a multiaxial system of diagnosis. Specific classes of information are coded on each of the five axes as follows:

- Axis I: Clinical Syndromes
- Axis II: Personality and Developmental Disorders
- Axis III: Physical Disorders and Conditions
- Axis IV: Severity of Psychosocial Stressors
- Axis V: Global Assessment of Functioning

In an attempt to provide a more broad-based classification, the multiaxial approach allows for recognition of the roles that physical condition and environmental circumstance play in the course and treatment of psychiatric dysfunction. Millon (1983) noted that

the standard classification directs the clinician to address not the "disease entity," but an entire panorama of contextual dimensions, notably the person's overall style of psychological functioning, the qualities of the person's current situational environment, and his or her strengths and potentials for constructive and healthy coping. (p. 810)

Many behavior therapists have been reluctant to embrace the classification system presented in the DSM-III-R. This reluctance is largely based on a concern about the reliability and validity of the diagnostic categories and partly on the issue of classification itself. Concerning classification, some behavior therapists (usually operant) argue that a classification system like the DSM-III-R is antithetical to the idiographic behavior-analytic approach. In this approach, target behaviors are identified and classified functionally, based on the notion of response classes (i.e., responses are similar if they have the same controlling consequence). For the more typical, methodological behaviorist, concern about the DSM-III-R focuses on more traditional measurement issues, stimulating such questions as: How are the diagnostic criteria derived (empirically or intuitively)? How accurate is a diagnosis that is based on a single assessment measure (e.g., an informal interview)? Does information about diagnosis aid in the selection of a treatment strategy? Despite the need to address such questions in the development and refinement of any diagnostic scheme, the potential value of classification is evident. For example, a diagnostic classification system can serve an important function as a communication facilitator. A comprehensive diagnostic system provides a standard way of describing clinical populations. In addition, once a common communication system is empirically derived and in place, information can be compiled on the efficacy of specific treatments for specific disorders.

Another approach to the classification of child behavior problems that is receiving increas-

ing attention and acceptance among behavior therapists, largely because of its empirical focus, is the multivariate approach. For several decades, multivariate statistical studies of childhood psychopathology have labored to identify reliable and coherent clusters of behavior problems (see Achenbach, 1985, and Quay, 1986, for reviews). Achenbach and Edelbrock's extensive investigations (1981), which are representative of the multivariate model (see also Quay, 1986), have identified two "broad-band" (or higher order) dimensions, labeled *internalizing* and *externalizing problems*. Subsumed within the internalizing dimension are more "narrow-band" (or first-order) behavioral clusters, such as social withdrawal and depressed, and within the externalizing dimension, aggressive and hyperactive (e.g., Achenbach & Edelbrock, 1984). The multivariate approach is generally atheoretical, except for its strong commitment to the underlying statistical assumptions and their implications, and is therefore compatible with a broad behavioral orientation. Notably, such classification systems may prompt behavioral therapists to examine the full set of potentially covarying behaviors, while furthering our understanding of response-response relationships that may otherwise be missed (Ollendick, 1986).

Unfortunately, the child behavior therapy literature has lacked uniformity in its classification. As Kazdin (1983) admonished,

Failure to recognize or actively use DSM-III may make it difficult to integrate findings from child behavior therapy into clinical work in psychiatry, where the potential impact could and perhaps should be the greatest. (p. 94)

Behavioral assessment does not necessarily preclude the application of a diagnostic classification system. For example, behavioral assessment is conceptualized by Hersen and Bellack (1988) as an "idiographic approach within the broader nomothetic system" (p. 78). Consistent with this theme,

Behavioral assessment can play at least three significant roles within the confines of DSM-III-R. First behavioral assessment can be used to determine if a person belongs within one of the diagnostic categories. Second, behavioral assessment can be used to enrich traditional diagnoses by illuminating the interpersonal components that maintain the behaviors upon which the diagnosis is based. Third, behavioral assessment can be used to track clinical change in response to treatment with the end product hopefully being that the diagnostic label no longer applies. (Tryon, 1989, p. 53)

Child behavioral assessment and classification have as their ultimate purpose the development and implementation of effective interventions that will assist children and their families. The section that follows provides a whirlwind and select review of behavioral procedures. An exhaustive exposition, considering the wide range of techniques and child problems, is clearly beyond the scope of this chapter (see Mash & Barkley, 1989). For the purpose of review, the internalizing-externalizing classification system will be used. This is not to claim that such an approach is the most empirically sound or comprehensive (cf. Achenbach, 1985; Rutter, Tuma, & Lann, 1988); but it does offer a useful framework for organizing some of the child behavior-therapy literature around the many problems involving children, adolescents, and their families.

TREATMENT FROM A BEHAVIORAL PERSPECTIVE: A BRIEF AND SELECTIVE REVIEW

Historically, behavior therapy has looked to the laboratory and experimental psychology for a grounding of its therapeutic procedures in the principles of learning. Such basic learning procedures include respondent conditioning, operant conditioning, and observational learning. Over the last several decades, basic behavioral research has expanded its borders to include "cognitive science" and the study of information processing. The following overview of child behavior-therapy methods is organized around basic learning paradigms, not because of a single

one-to-one correspondence, but as a heuristic device to facilitate an understanding of the behavioral approach to intervention.

The Respondent Conditioning Paradigm and Internalizing Problems

The behavioral treatment of fear, anxiety, and avoidant or withdrawn behavior in children dates back to the classic work of Jones (1924) and the treatment of "Peter." The child appeared fearful of rabbits, fur coats, and similar objects. The treatment consisted of the progressive exposure of the child to a rabbit while he was engaged in a pleasurable activity (i.e., eating). The fear of the rabbit dissipated, as well as the fear of the related stimuli. This early case study is typically presented as an example of the application of classical or respondent conditioning principles to the amelioration of fear responses. Generally, the interpretation of the data has been that the child was gradually "deconditioned" to the fear stimuli.

Building on this early work, Wolpe (1958) developed a method he called "systematic desensitization" and presented adult case-study data supporting its effectiveness. The logic behind this approach rests on the assumption that fearful behavior can be reduced via "counterconditioning" with anxiety-incompatible stimuli and responses. In practice, the fear- or anxiety-arousing stimuli are systematically and gradually paired (imaginally or *in vivo*) with competing stimuli, such as food, praise, imagery, or cues generated by muscular relaxation.

Early work with systematic desensitization used the predominantly imaginal presentation of the fearful stimuli. Systematic desensitization with children consists of three basic steps: (1) training in deep-muscle relaxation; (2) the rank ordering of fearful situations from lowest to highest; and (3) fear stimulus presentation via imagery while the subject is in a relaxed state (see Morris & Kratochwill, 1983, for a review). Such procedures appear to work well with older children and adolescents (see Barrios & O'Dell, 1989, for a review). However, younger children seem to have difficulty with both the imaginal presentation of fear stimuli and the acquisition of the incompatible muscular-relaxation response typically used (Ollendick & Cerny, 1981). Therefore, the constraints of development suggest that *in vivo* desensitization may be more effective with younger children (e.g., Hatzeneubler & Schroeder, 1978; Ultee, Griffioen, & Schellekens, 1982).

According to the original formulation (Watson & Morgan, 1917), fear and anxieties are acquired via respondent conditioning. Demonstrations of fear induction through respondent conditioning are numerous, but criticisms abound regarding a strict respondent-conditioning theory of fear (see Barrios & O'Dell, 1989). Likewise, several alternative interpretations (other than counterconditioning) of behavior change following systematic desensitization have been proposed (e.g., Masters, Burish, Hollon, & Rimm, 1987). For example, the process of extinction, in which the fear-evoking stimuli are presented repeatedly while the nonoccurrence of the unconditioned (or other aversive) stimuli is ensured, may account for the observed fear reduction. Operant shaping, modeling, and self-instruction have been offered as explanations, as well as nonspecific factors such as positive expectancy and demand characteristics (Kazdin & Wilcoxon, 1976). At present, the relative influence of these various mechanisms on anxiety reduction in children is unknown.

Additional interventions for internalizing problems, largely based on a respondent conditioning paradigm, include flooding, implosion, and graduated exposure. To facilitate anxiety reduction, these procedures require the child to be exposed to the anxiety-eliciting stimuli for the extinction of the conditioned responses to occur (see Morris & Kratochwill, 1983). Flooding is characterized by prolonged *in vivo* exposure to the anxiety-arousing situation; implosion is similar but is conducted imaginally. Graduated exposure is the process of progressive *in vivo* exposure to the fearful stimuli. Numerous case reports and experiments support the efficacy of these approaches (Barrios & O'Dell, 1989). Though they are listed as distinct procedures, a comparison of the parameters related to these four methods reveals basic similarities. They do

differ, however, along at least three dimensions: *in vivo* versus imaginal stimulus presentation, progressive versus prolonged presentations, and the presence or absence of programmed incompatible responses. Of course, the various procedures can be combined and tailored to the clinical situation, as when imaginal and *in vivo* desensitization are used concurrently (e.g., Phillips & Wolpe, 1981).

With respect to the relative effectiveness of respondent-conditioning-based methods, Ollendick (1986) concluded as follows:

In summary, systematic desensitization, emotive imagery, flooding, and implosion all represent reasonably effective procedures for anxiety-based disorders in children. While several questions remain, they represent viable options and are welcome additions to the behaviorally-oriented clinicians armamentarium. (p. 533)

The Operant Conditioning Paradigm and Externalizing Problems

The operant-based approach to interventions, relying on the basic concepts of reinforcement, punishment, and stimulus control, and elaborated into more applied procedures such as the token economy, contingency contracting, time-out, and positive attention, enjoys increasing popularity in a variety of settings. Problem behaviors such as noncompliance, tantrums, and aggression can be influenced by altering the consequences of the behavior. Social or tangible rewards can be delivered for appropriate behavior to increase such behavior and withheld to suppress inappropriate behavior.

For example, token economies are reinforcement programs in which individuals earn tokens or points for certain behaviors (Ayllon & Azrin, 1968). The tokens can then be exchanged for a variety of tangible primary reinforcers or additional privileges. Often these programs include a "response cost" provision, in which previously earned tokens or points are deducted for inappropriate behavior. Token economies have been used successfully in many settings, such as in classrooms (Stumpf & Holman, 1985), in psychiatric wards (Ayllon & Azrin, 1968), as a component of parent training programs (Kazdin, 1977b; Patterson, Reid, Jones, & Conger, 1975), and in residential treatment programs (Phillips, Phillips, Fixsen, & Wolf, 1971).

One of the most noted residential treatment programs using the token economy is Achievement Place (Phillips, 1968). Originally established in 1967, the Achievement Place approach was developed for conduct-disordered adolescents and is now termed the Teaching-Family Model (TFM; Willner, Braukmann, Kirigin, & Wolf, 1978). The goal of the TFM is to teach prosocial behaviors. In each home, a family setting is established with a married couple (professionally trained to serve as teaching parents) and six to eight court-referred adolescents. The teaching parents model, role-play, and reinforce the use of appropriate social skills. There are currently more than 215 group homes using the TFM. Kirigin, Braukmann, Atwater, and Wolf (1982) examined police and court records in an evaluation of the effectiveness of the TFM and found significant reductions in the recorded offenses of adolescents in 13 TFM programs compared with those of adolescents from 9 "traditional" community-based residential programs, for the period during which the adolescents were in treatment. However, no differences were found between the groups in reported offenses for the one-year period following treatment. The initial success of the program and the subsequent decline in treatment gains at follow-up suggest the need for intervention with the family to which the adolescent is returned after treatment. The incorporation of "transition and maintenance" care is likely to enhance the long-term effectiveness of the program.

Contingency management methods are used routinely and "naturally" by many in our society, including day care centers, schools, and parents. The efficacy of more programmed contingency management procedures, often with parents acting as behavior modifiers and cotherapists, is well supported for children evidencing problems of the externalizing type (e.g., Barkley, 1989; Devany & Nelson, 1986; Kazdin, 1987; McMahon & Wells, 1989; O'Dell, 1974;

Ollendick, 1986; Wells & Forehand, 1981), especially younger children (Weisz, Weiss, Alicke, & Klotz, 1987). Such an approach to intervention is typically referred to as behavioral parent training (BPT). BPT focuses on teaching parents new ways to interact with their children, with the goal of changing the child's problem behavior in the natural environment. Parents are trained to be more effective in providing age-appropriate, consistent, and immediate consequences for both good and problem behavior. Successful programs train parents to give contingent praise for appropriate behaviors, to ignore annoying behaviors, to decrease criticism and nattering, and to use time-out for aggressive and noncompliant behavior (e.g., Barkley, 1987; Forehand & McMahon, 1981; Patterson & Chamberlain, 1988).

BPT programs are on the cutting edge of child behavior therapy. Consistent with the contemporary behavioral systems approach (e.g., Mash, 1989), BPT incorporates multiple procedures into a comprehensive, compound treatment package. Recent applications attempt to address developmental considerations (e.g., Eyberg, 1987), bidirectional influences (e.g., Patterson, 1982), and factors in the wider social environment (e.g., Dumas, 1986). Attempts are being made to promote generalization across settings (e.g., Sanders & Christensen, 1985) and to incorporate the educational components of normal development (e.g., Campbell, 1990). Programs are also being expanded to incorporate a systems view of family and school functioning, thereby focusing on more general social interactional processes that may influence the parents' successful participation in therapy (e.g., Dadds, Schwartz, & Sanders, 1987; Eyberg, 1987). Programs with the most general and long-term efficacy go beyond the strict operant approach, use other learning-based procedures such as modeling and instruction, and address broader family functioning (Eyberg, 1987). As Ollendick (1986) observed, the trend is away from "parent training" and toward "behavioral family therapy."

Campbell (1990) summarized a number of the preceding points nicely:

Broad-based parent training approaches that take into account other aspects of family relationships and also involve direct observations of parent-child interaction or at least include role-playing, coaching, and feedback have the most obvious impact on the child and family and are most likely to lead to changes that are maintained at follow-up. In addition, it appears that families living under more stressful conditions or parents who feel less supported socially and emotionally may be either less able to follow through with the treatment initially or less able to maintain gains once treatment is over. (p. 191)

Observational Learning Paradigm and Internalizing Problems

The notion that persons can learn many different forms of behavior through "imitation" is not new, dating back to at least the days of Plato and Aristotle. Empirical research addressed this phenomenon in the work of Miller and Dollard (1941) and Bandura (1969; Bandura & Walters, 1963). Such work was stimulated by findings suggesting that learning occurs in situations not easily predicted by traditional conditioning theory. Through the process of observational learning (or modeling), one may acquire behavioral dispositions simply by viewing and cognitively processing the actions of another individual (Benson, Messer, & Gross, 1992). The process does not require an individual to actively perform the behavior; therefore, trial-and-error learning, along with its potential hazards, is not essential.

An observational learning approach to fear and anxiety acquisition has been explicitly addressed by a number of theorists and clinicians, including Rachman (1977) and Bandura (1986). For Rachman, modeling is one route, along with respondent conditioning and verbal instruction, for the acquisition of fears. Bandura also proposed that fear, avoidance, and withdrawal may be acquired through vicarious experience and are mediated by perceptions of self-efficacy in the face of threat.

Though exposure to a model is sufficient to promote observational learning, behavioral performance is influenced by reinforcement contingencies. Modeled behavior that is reinforced

(or punished) is likely to increase (or decrease) the probability of the observer's behavior through the process of vicarious conditioning. Therefore, modeled behavior typically reflects the joint contributions of observational learning, operant conditioning, and probably respondent conditioning as well. Through observational learning and its associated mechanisms, behaviors may be increased in frequency through acquisition, disinhibition, and facilitation; they may be decreased in frequency through inhibitory and incompatible behavior effects (Bandura, 1986). Such learning has been demonstrated in a variety of children's behaviors, such as speech (Lovaas & Newsom, 1976), gender-role behaviors (Perry & Bussey, 1979), prosocial behavior (Bandura, 1977), and aggression (Bandura, Ross, & Ross, 1963), to list just a few.

The application of modeling procedures to fearful and avoidant behavior has proved effective (Barrios & O'Dell, 1989). Therapeutic modeling in this case involves the demonstration of nonfearful behavior as well as the exhibition of appropriate coping behavior. Following the demonstration, the child is prompted to imitate the model's performance, while feedback, coaching, and reinforcement are provided during repeated rehearsals (see Morris & Kratochwill, 1983). Moreover, modeling can be accomplished via filmed, live (*in vivo*), or participant approaches. Ollendick (1979) provided data suggesting the relative efficacy of participant modeling, at least for children with mild to moderate fears. Through this process, anxiety is reduced and coping skills are also acquired (Ollendick, 1986).

Modeling procedures have been used successfully to increase interaction among socially withdrawn children (Evers & Schwartz, 1973; Keller & Carlson, 1974; Ollendick, 1981) and to reduce childhood fears of snakes (Meichenbaum, 1971), the dark (Klingman, 1988), dental procedures (Melamed, Weinstein, Hawes, & Katin-Borland, 1975), and surgery and anesthesia (Melamed & Siegel, 1975). Though such procedures have yielded some success, many of the studies have used nonclinical populations. In addition, more studies are necessary to delineate the influence of particular parameters, such as the model's similarity, likability, and status; the use of multiple models; and the utility of active versus passive coping models (Graziano, DeGiovanni, & Garcia, 1979). Lastly, modeling techniques have proved versatile as adjunctive components in the compound treatment packages common in clinical practice (Barrios & O'Dell, 1989). Such compound treatments are consistent with the behavioral systems perspective.

The Cognitive Paradigm and Externalizing Problems

The last several decades have evidenced a tremendous upsurge of interest, research, and practice in cognitively based interventions. Associated with the cognitive paradigm are a number of creative and varied therapeutic approaches typically developed initially for adults, such as Ellis's rational-emotive therapy (1970), Beck's cognitive therapy (1976), Goldfried, Decentecio, and Weinstein's systematic rational restructuring (1974), Lazarus's cognitive restructuring (1974), Meichenbaum's self-instructional training (1977), and Spivack and Shure's problem-solving approach (1974). Such cognitively based procedures often incorporate more traditional behavioral approaches, assuming that behavioral change be induced through direct, vicarious, and symbolically represented experience. The hallmark of the cognitive perspective is an explicit recognition of the influential role that cognitive processes play in mediating and regulating overt behavior. Foster, Kendall, and Guevremont (1988) noted that, "regardless of the procedures producing change, though, the mechanisms assumed to be responsible for the change lie in the cognitive events or processes producing behavior" (p. 79). These contemporary cognitively based procedures owe a major intellectual debt to the cognitive social learning theory developed and tested by Bandura and his colleagues (e.g., Bandura, 1969, 1986; Bandura & Walters, 1963), in which major emphasis is placed on information processing, reciprocal determinism, and self-regulation.

A cognitive approach to understanding and treating externalizing problems is based on the assumption that cognitive deficiencies are partly responsible for the unwanted behavior (e.g., Foster *et al.*, 1988). One primary deficiency proposed is the absence of self-guided private speech, which is hypothesized to promote self-regulation through covert self-instruction. Such a general framework has guided a number of therapeutic approaches to externalizing problems. For example, Camp, Blom, Herbert, and von Doornenck (1977) developed the "Think Aloud" program, of which self-instruction training was a major component, relying on the rehearsal of such self-statements as "What is my plan?" "Am I using the plan?" and "How did I do?" as well as the correction of faulty self-statements (Ollendick, 1986). In addition, social problem-solving training was conducted using games devised by Shure and Spivack (1978). Gains in classroom prosocial behavior and improved performance on various cognitive tests were noted, but nonsignificant reductions in aggressions were evidenced (Camp *et al.*, 1977). Similar findings have been reported by Kendall and Finch (1978) and Lochman, Nelson, and Sims (1981) for impulsive and aggressive children. More positive results were obtained among a sample of "delinquent" adolescents reported by Snyder and White (1979). Substantial improvements were demonstrated in the performance of daily activities as well as a reduction of impulsive behaviors maintained at the two-month follow-up.

Nevertheless, even when such studies suggest short-term improvements, many questions remain regarding the maintenance and generalization of the trained skills and the comparative efficacy of the cognitive and the traditional approaches, especially among clinically disturbed samples (Ollendick, 1986). In addition, further advances are necessary in cognitive assessment and the study of its implications for intervention strategies.

Regarding externalizing problems, increasing evidence suggests that a cognitive "deficiency" approach may tell only part of the story. Dodge (1980; Dodge & Frame, 1982) proposed and provided support for a cognitive "distortion" model of aggressive behavior. Aggressive children tend to misattribute neutral circumstances as reflecting peer hostility and to act accordingly. Conceptualization of the behavior problems as deficiency- or distortion-generated is likely to influence the selection and implementation of the treatment approach, and the behavioral component of the cognitive-behavioral conjunction must not be overlooked (Foster *et al.*, 1988). Last, more information is needed about the interaction of developmental factors with cognitive assessments and treatments (e.g., Cole & Kazdin, 1980; Kendall, 1984). Age-related differences in cognitive and conceptual abilities suggest that intervention targets and methods require tailoring to the child's developmental level.

DEVELOPMENTAL ISSUES

In general, theory and nomenclature relating to child psychopathology have reflected downward extensions from adult work. Age-related changes in behavioral manifestations have not been explicitly addressed. As Campbell (1990) noted:

Although it is obvious to any student of child development that behavior, whether "normal" or "abnormal," must be examined within a developmental context, it is only recently that child psychiatry and clinical child psychology have paid more than lip service to this notion. (p. 5)

Likewise, traditional behavioral work has largely neglected the explicit recognition of developmental factors; probably partly because of the strong assumption that learning principles are universal across organisms and ages (Mash, 1989). Also, developmentalists (e.g., Piaget, 1969) have long espoused philosophical and theoretical positions that run counter to classical behavioral theory.

The developmental and behavioral positions are not necessarily incompatible, however. For example, Achenbach & Edelbrock (1984) argued that, if the two approaches are integrated, the assessment process is enriched. The nomothetic approach characterizing much of developmental

psychology can provide normative baseline data. By use of these norms, individual patterns of behavior at the idiographic level can be compared with those of an appropriate reference group. As might be expected, numerous age differences were found in Achenbach & Edelbrock's inventory of problem behaviors (1983). According to Achenbach & Edelbrock (1983), such norms can be useful (1) in the establishment of the incidence and prevalence rates of child behavior problems; (2) as guides in the selection of appropriate target behaviors; (3) to assess the validity of informants' judgments of children's behavior; (4) in longitudinal epidemiological evaluations of behavioral stability; and (5) in the evaluation and "social validation" (Kazdin, 1977a) of treatment interventions (see Achenbach & Edelbrock, 1983, for such norms).

Developmental, or age-related, factors have implications for behavioral treatment as well. Take, for example, the notion of age-by-treatment interactions. A common clinical assumption is that treatments tend to be more efficacious for younger (versus older) children. Apparently, this assumption is based on the logic that younger are more malleable and their habits are less well established (Mash, 1989). A recent meta-analysis provides indirect support for such a proposition (Weisz *et al.*, 1987). The mean treatment-effect size was .92 for children aged 4-12 and was .58 for 13-18-year-olds. Some evidence suggests that the effects of operant procedures are a function of age-related factors (e.g., Johnson & McGillicuddy-Delisi, 1983). For example, rewards that provide information regarding competence are more efficacious for older children (Schultz, Butkowsky, Pearce, and Shanfield, 1975). In addition, older children require a longer time-out period for the implementation of behavior change (White, Nielsen, & Johnson, 1972).

The preceding findings support the differential effectiveness of certain behavioral procedures as a function of age or developmental level. However, Mash (1989) emphasized the importance of identifying specific age-related developmental capacities and incorporating them into treatment. For example, cognitive and language-related capacities very likely interact with both the child's developmental level and her or his responses to environmental contingencies (Robinson, 1985). Age differences have been reported for the efficacy of cognitive self-instructional training across a range of problems (Hobbs, Mognin, Tyroler, & Lahey, 1980). Similarly, mental imagery capacities appear to be age-related. Nine-year-olds can effectively use mental imagery in recall conditions, whereas five- and six-year-olds cannot (Purkel & Bornstein, 1980).

Child behavior therapy may ultimately benefit from the recent emergence of a new subdiscipline, developmental psychopathology. The field represents "the study of the origins and course of individual patterns of behavioral maladaptation" (Sroufe & Rutter, 1984, p. 241). Developmental psychopathology holds great promise for the elucidation of the complex interactive processes that characterize both "normal" and "abnormal" behavioral development (Messer, 1990). The hallmark of the approach is a transactional or ecological view that assumes a coherence and predictability in development, despite changes and transformations (Sroufe, 1979).

Such a perspective is generally consistent with contemporary broad behavioral-systems approaches. Consequently, child behavior therapy appears to be more open to developmental issues. Such openness seems wise because the child therapy field is complicated by a host of factors influencing problem definition, treatment, course, and outcome, such as chronological age, level of cognitive and social development, family background, and sociocultural factors (Campbell, 1990).

Foster *et al.* (1988) listed several developmental considerations potentially relevant to an understanding of children's behavior: (1) the influence of age-graded tasks, situations, and transitions (Mize & Ladd, 1990); (2) qualitative changes in the developing child's attentional, perceptual, and memorial processes (Cohen & Schleser, 1984); (3) children's increasing utilization of symbolic activity, problem solving, and self-regulation (Bernard, 1984); (4) age-related differences in the efficacy of rewards and punishments (Robinson, 1985); and (5) age-

related differences in the conceptual abilities necessary to generalize acquired skills. Looking to the future, Mash (1989) stated:

At a more complex level, a developmental emphasis would require the incorporation of developmental principles and findings into our conceptualizations of child and family psychopathology, such that treatments are sensitive not only to a child's age and sex but also to ongoing developmental *processes* as they unfold and interact with and within one or more dynamic and changing social systems. (p. 9)

Such a tall order could be filled only by: (1) an extensive study of age/gender-by-treatment interactions; (2) an accumulation of normative data providing guidelines concerning "normal" development; (3) prognostic data enlightening us regarding the course and the long-term sequelae of problem behavior; and (4) an explication of developmental principles and processes (e.g., security of attachment and temperamental style). Once such knowledge was obtained, treatments could intervene and influence such processes.

ETHICAL CONSIDERATIONS

In closing, we would be remiss if we did not briefly address a few key ethical issues. First, children are not capable of granting legal (competent, voluntary, and informed) consent to treatment. Consent is provided on behalf of the child by a parent or a legal guardian. Likewise, children are not free to terminate treatment at their own discretion. This perceived lack of control by the child may result in refusal to cooperate with the therapist. It is wise to allow the child to play as active a role as possible in the selection of treatment strategies.

Second, children rarely refer themselves for treatment. Thus, the central issue is raised of whether the child is in need of treatment. Simply put, does the behavior noted in the presenting complaint warrant intervention? Stated otherwise, what is the appropriate treatment focus? As mentioned previously, an awareness of developmental factors and context is essential in making normative judgments. Is the parent knowledgeable about age-appropriate behavior? Unreasonable parent expectations and their consequences may serve only to frustrate the parent and the child alike and perhaps should be the treatment focus. Because the therapist relies to some degree on the parents' reports for assessment information, he or she needs to ascertain whether the parent is capable of providing an accurate report of the child's behavior. Panaccione and Wahler (1986) found that depressed mothers displayed a distorted perception of their children, reporting that their child's behavior was more negative than noted by objective observers. This finding further emphasizes the importance of conducting a thorough assessment that includes multiagent information from and about the parents, the siblings, and any significant others in the child's environment. Moreover, children are often referred by outside agencies (schools or courts) for problem behavior that may otherwise be adaptive in the child's home environment. In such cases, the most effective intervention is likely to be with the family as a unit rather than simply with the individual child. It should be clear, then, that the behavioral-systems approach stressed throughout this chapter facilitates an appreciation of the complex factors involved in the referral process.

Third, selecting the target behavior is more complicated when one is dealing with a child than when one is dealing with an adult. Who determines what behaviors are to be modified—the child, the parent, or the therapist? When the objectives of the child differ from those of the parent, which are given more weight? A widely held assumption is that parents know what is "best" for their child. For example, what about the child who presents with gender-identity disorder? One may question whether the modification of the child's sex-role behavior is in the interest of the child or of the parent (see Winkler, 1977).

Fourth, therapists have an ethical responsibility to provide the most effective treatment available. Related to this responsibility is accountability. The empirical approach of behavior

therapy has long demonstrated an awareness of the need for accountability. As Harris (1983) pointed out, "the ability to specify goals and to measure change is one of the strong points in favor of a behavioral approach" (p. 437). Increased insurance benefits for psychiatric treatment and the proliferation of private psychiatric facilities will only fuel accountability demands.

Fifth, an often neglected ethical issue is the lack of treatment of children who need it. It has been estimated that only 20%–30% of children with clinically significant disturbances actually receive treatment (Knitzer, 1982). Exacerbating this problem is the fact that many children have not yet developed the communicative capacity to adequately express their subjective distress. Other children are unwilling to discuss their problems with their parents, for very obvious reasons, such as when the problem involves their parents (as in the case of child abuse). What is our obligation to these "invisible" clients? We take the position that child behavior therapists must educate those who work with children (e.g., teachers and day care workers) to make efforts to recognize behavioral problems and must provide adequate referral sources. In addition, there is a pressing need to provide behaviorally informed screening services for the identification of children at risk, as well as to develop prevention and early-intervention programs within communities.

SUMMARY

For many years the practice of behavior therapy with children was characterized by the downward extension of adult models. Recently, child behavior therapy has evolved into an independent discipline in which the application of clinical behavioral methods reflects a greater awareness of social, cognitive, and developmental variables.

This chapter has presented an overview of the current state of child behavior therapy from a behavioral-systems perspective. Following a brief survey of the nature of behavior therapy, we discussed the principles and procedures of child behavioral assessment. We also addressed some pertinent issues in the classification of child behavior disorders. In particular, we highlighted the strengths and weaknesses of examining children's behavioral difficulties from both the traditional DSM perspective and an empirical multivariate approach.

We also selectively reviewed child behavior-therapy treatments, including the basic respondent, operant, observational learning, and cognitive-behavioral paradigms, along with their application in treating the internalizing and externalizing disorders. The chapter concluded with a discussion of developmental and ethical issues in child behavior therapy. Interventions targeting the amelioration and prevention of childhood behavioral problems will benefit from further conceptual and methodological work, in the pursuit of comprehensive, empirically based approaches to child behavior therapy.

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