

Practice Parameter for the Assessment and Treatment of Children and Adolescents With Oppositional Defiant Disorder

ABSTRACT

Oppositional defiant disorder (ODD) is a common clinical problem in children and adolescents. Oppositionality and associated types of aggressive behavior are among the most common referral problems in child psychiatry. Grouped among the disruptive behavior disorders, ODD is frequently comorbid with other psychiatric conditions and often precedes the development of conduct disorder (CD), substance abuse, and severely delinquent behavior. Youth with ODD may also have specific CD behaviors, such as aggression. Although compared with CD there exists a smaller and less sophisticated empirical database for ODD, this parameter draws upon the existing ODD and CD literature to make recommendations regarding diagnosis and treatment of ODD. The etiology of ODD is complex and its development is based on a cumulative risk/protective factor model that combines biological, psychological, and social factors. Recommended treatment is multimodal and extensive, involving individual and family psychotherapeutic approaches, medication, and sociotherapy. Methodologically sound controlled clinical trials are lacking. *J. Am. Acad. Child Adolesc. Psychiatry*, 2007;46(1):126–141.

Key Words: practice guideline, oppositional defiant disorder, child psychiatry, diagnosis, treatment, practice parameter, practice guideline.

Oppositional defiant disorder (ODD), grouped among the disruptive behavior disorders (DBD), is one of the

most commonly encountered clinical disorders in children and adolescents. The clinician is most often alerted when problems with oppositionality, vindictiveness, negativistic and hostile behavior, and other forms of associated aggression (including verbal threats and physical acts) create a significant disturbance in social, academic, or occupational functioning. ODD is frequently comorbid with other psychiatric conditions and often precedes the development of conduct disorder (CD), substance abuse, and severely delinquent behavior. Treatment of ODD may be particularly problematic and often demands multimodal treatment, involving psychosocial and, occasionally, medication therapy. There is some evidence that early intervention is preferable, is more likely to succeed, and prevents progression into the more problematic disturbances listed.

These guidelines are applicable to the evaluation of child and adolescent patients ages 18 and younger. The term *child* refers to both adolescents and younger children unless explicitly noted.

METHODOLOGY

A National Library of Medicine search was initially performed in 1999, covering the preceding 5 years. Using a combination of *PsycINFO* and *Mehvyl* on-line

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This parameter was developed by Hans Steiner, M.D., and Lisa Remsing, M.D., principal authors, and the Work Group on Quality Issues: Valerie Arnold, M.D., Joseph Beitchman, M.D., R. Scott Benson, M.D., William Bernet, M.D., co-chair, Oscar Bukstein, M.D., co-chair, Joan Kinlan, M.D., David Rue, M.D., Jon Shaw, M.D., Ulrich Schoettle, M.D., Sandra Stock, M.D., and Heather Walter, M.D. AACAP Staff: Kristin Kroeger Ptakowski. Research assistants: Becky Elizabeth Hall, Nicole Hernandez, Melissa Silverman.

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In 2005, a consensus group reviewed and finalized the content of this practice parameter. The consensus group consisted of representatives of relevant AACAP components as well as independent experts: Oscar G. Bukstein, M.D., Work Group co-chair; Hans Steiner, M.D., author; Heather Walter, M.D. and Ulrich Schoettle, M.D., members of the Work Group on Quality Issues; Marty Drell, M.D., Council Representative; Andy Cook, M.D. and Ujjala Dixit, M.D., Assembly of Regional Organizations Representatives; and Richard Malone, M.D. and Alan Kazdin, M.D., independent expert reviewers; and Kristin Kroeger Ptakowski, Director of Government Affairs and Clinical Practice.

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systems, the following topics were reviewed: oppositional defiant disorder (290 articles), oppositional defiant disorder and adolescence (53 articles), oppositional defiant disorder and delinquency (8 articles), disruptive behavior disorder (285 articles), aggressive behavior and adolescence (255 articles), aggressive behavior and delinquency (83 articles), and treatment of delinquency (97 articles). This search was updated periodically (most recently in May 2005) to identify new articles. Some pertinent publications published before the 5-year search period were also reviewed, as were review articles addressing these issues. Especially important and salient references are preceded by an asterisk. In determining the final list of references to be included in this document, we relied heavily on recent reviews and summaries of the literature to keep the list manageable.

BRIEF HISTORY

The diagnosis of ODD, suggested by the Group for the Advancement of Psychiatry in 1966, appeared for the first time in *DSM-III* (American Psychiatric Association, 1980). More extensive field trials provided information for the latest permutation of the diagnostic category in *DSM-IV-TR* (American Psychiatric Association, 2000). The creation of a psychopathological grouping containing disorders of antisocial/aggressive or socially disruptive conduct remains controversial (for more detailed discussion, see Connor, 2002; Steiner and Karnik, 2004). Empirical support for the diagnosis has also not been uniform. However, the latest factor analysis suggests significant coherence of ODD behaviors contained in the diagnostic criteria (reviewed in Burke et al., 2002; Loeber et al., 2000).

EPIDEMIOLOGY

The current epidemiology has been reviewed in several publications (Angold et al., 2002; American Psychiatric Association, 2000; Burke et al., 2002; Connor, 2002; Loeber et al., 2000) to be summarized below. Past modifications in the *DSM* have made diagnostic criteria more stringent, resulting in reduced prevalence. In the *DSM-IV* there were only minor modifications (American Psychiatric Association, 2000). The community prevalence of the disorder is reported as ranging widely, between 1% and 16%, depending on which criteria and assessment methods

are used, which time window is considered, and how many informants are used (Loeber et al., 2000). Good data on the prevalence of ODD in the preschool age range are lacking. ODD, like CD, occurs mostly in lower socioeconomic groups (SES). The evidence regarding frequencies in rural versus urban environments is inconsistent. Burke et al. (2002) note that there appear to be some inconsistent age effects (higher frequency in prepubertal youth) and gender effects (boys tend to outnumber girls). There is an active debate in the literature as to whether the criteria are truly applicable to girls as well as boys (Connor, 2002). The disorder is usually manifest by age 8 years (American Psychiatric Association, 2000; Connor, 2002).

ETIOLOGY/RISK FACTORS

The best available data are contained in the body of research on CD, because there are no separate systematic investigations into the origin of ODD. Most authorities agree that single-cause or main-effects models are unlikely to do justice to the complexity encountered in ODD (Burke et al., 2002; Connor, 2002; Hinshaw and Anderson, 1996; Rutter et al., 1999) and that “convincing evidence of causal links remains elusive” (Burke et al., 2002). The most prevalent opinion is that ODD arises out of a complex mix of risk and protective factors originating in the biopsychosocial constellation of an individual. Loeber has illustrated the gradual stacking of factors in the genesis of CD (Burke et al., 2002). A similar pyramid is likely to be relevant for the development of ODD. An expanded model would include a parallel set of protective factors, balancing the gradual aggregation of risk (American Academy of Child and Adolescent Psychiatry, 1997). Comparatively less is known about protective factors, in part because there is an ongoing debate regarding their precise definition (Burke et al., 2002). The current understanding of etiology has implications for early intervention because as risk aggregates, our chances to succeed may diminish (Steiner, 1999).

Biological Factors

Most authorities believe that biological factors are important in ODD, as there is familial clustering of certain disorders (e.g., DBD, attention-deficit/

hyperactivity disorder [ADHD], substance use disorders, and mood disorders). The studies of the genetics of ODD produce mixed results (Burke et al., 2002). Temperamental factors have been implicated in the future development of disruptive behavior (Moffitt, 1993; Connor, 2002). Baseline underarousal has been found consistently in persistently aggressive and delinquent youth and in those with ODD (Raine, 2002). Exogenous biological factors, such as exposure to toxins, exposure to nicotine in utero, and deficient nutrition and vitamins, all seem to have effects, but findings are inconsistent (Raine, 2002). Studies have implicated abnormalities in the prefrontal cortex, altered neurotransmitter function in the serotonergic, noradrenergic, and dopaminergic systems, and low cortisol and elevated testosterone levels (Connor, 2002; Raine, 2002).

Psychological Factors

Attachment theorists have noted the similarities between the behavioral manifestations of insecure attachment (especially anxious-avoidant) and DBD (Lyons-Ruth et al., 1996). Oppositional behavior is seen as a special signal to an unresponsive parent. However, empirical findings have been inconsistent. Shaw and colleagues (2001) further elaborated the pathways for externalizing behavior disorders, suggested by social learning and attachment models. This study also confirmed Moffitt's (1993) original hypothesis that children with comorbid patterns of ADHD, ODD, and CD experience multiple intraindividual and contextual risk factors that begin in infancy and may lead to adverse personality formation in adulthood as the ultimate manifestation of risk (Rutter et al., 1999).

Other important research is by Dodge (1991), who focused on aggressive children's deficient social information processing. Aggressive children underutilize pertinent social clues, misattribute hostile intent to peers, generate fewer solutions to problems, and expect to be rewarded for aggressive responses.

Social Factors

Ecological factors such as poverty, lack of structure, and community violence are believed to contribute to the likelihood of an ODD diagnosis, with different neighborhoods conferring different risks and contributing to vertical and horizontal spread (Burke et al., 2002; Connor, 2002). However, Mash and Dozois (1996)

note that in most studies of psychopathology and SES, the amount of the variance explained by SES is <1%. Intrafamilial social processes have consistently been implicated in the pathogenesis of disruptive behavior, especially by coercive family processes (Patterson, 1982), lack of parental supervision, lack of positive parental involvement, inconsistent discipline practices, or outright child abuse (Connor, 2002).

CLINICAL PRESENTATION

ODD consists of recurrent patterns of negativistic, hostile, or defiant behavior, creating disturbances in at least one of the three domains of functioning mentioned, lasting at least 6 months. The diagnosis also refers to angry and vindictive behavior and problems with control of temper. Most of the behaviors are directed at someone, such as an authority figure. There is no pattern of major antisocial violations of the rights of others or of violations of age-appropriate societal norms or rules, as found in criterion A for CD and antisocial personality disorder (APD), although specific CD behaviors such as aggression or lying may be present. The diagnosis is not given if the symptoms appear only in the context of a mood or psychotic disorder. The identified behaviors are either not part of the developmental stage of the child (e.g., coercive behavior around ages 2–3 and in early adolescence) or are severe compared with the expected behaviors for that stage, representing more troublesome behavior than normative oppositionality (Skovgaard et al, 2004; Thomas and Guskin, 2001; Wright et al, 2004).

The diagnosis is not limited to a particular age group, but most commonly emerges in late preschool or early school-age children. ODD-type behaviors on average appear 2 to 3 years earlier, and the diagnosis implies more circumscribed disturbances of lesser severity than CD. Empirical data support the notion that ODD is usually a milder form of psychopathology compared with other DBDs (American Psychiatric Association, 2000; Burke et al., 2002; Connor, 2002; Hinshaw and Anderson, 1996). Although most empirical evidence supports a distinction between ODD and CD within the ODD-CD spectrum, other evidence appears to support a distinction between ODD behaviors and aggressive CD behaviors and another that includes nonaggressive CD behaviors (Achenbach, 1991; Loeber et al., 2000).

There is ongoing concern that ODD criteria (as well as CD criteria) may not adequately reflect gender differences. In particular, Zoccolillo (1993) has drawn attention to the fact that in early development (before adolescence), girls may manifest aggression in ways that are not captured by the current definitions (i.e., they may be less overtly aggressive and more covertly aggressive, especially in the context of relationships). Indirect (i.e., hidden, passive), verbal (as expressed in words rather than actions), and relational (as expressed in relationships) expressions of aggression may be more descriptive of girls' oppositionality; however, they are not included in the definitions (Connor, 2002).

Another concern is that diagnostic criteria are purely descriptive and allow only for limited contextual interpretation (American Psychiatric Association, 1994). It is challenging to clinicians to discriminate intraindividual disorder from contextual reaction (Steiner, 1999).

NATURAL COURSE OF THE DISORDER

The diagnosis of ODD is relatively stable over time, but most children (approximately 67%) will ultimately exit from the diagnosis after a 3-year follow-up (Connor, 2002; Hinshaw and Anderson, 1996; Loeber et al., 2000). Earlier age at onset of ODD symptoms conveys a poorer prognosis in terms of progression to CD and ultimately APD. Many children who have an early onset of ODD later progress to develop CD ($\approx 30\%$; Connor, 2002; Loeber et al., 2000). Those with earlier-onset ODD had a three-fold increase in CD. Which children desist from this progression is not clear based on current diagnostic criteria. Even more crucial is the ultimate progression to APD. Extrapolating from studies of CD, in which 40% will progress into APD (Zoccolillo et al., 1992), this implicates $\approx 10\%$ of a baseline cohort of ODD ending up with APD and other personality disorders (Zoccolillo et al., 1992; Rutter et al., 1999). Preschool children with ODD are likely to exhibit additional disorders several years later. With increasing age, comorbidity with ADHD (most common), anxiety, or mood disorders begins to appear (Lavigne et al., 2001).

COMORBIDITY AND DIFFERENTIAL DIAGNOSIS

Although the criteria of *DSM-IV* preclude formally making a diagnosis of ODD in presence of full CD

criteria, the literature is not clear whether ODD and CD can be comorbid (American Psychiatric Association, 2000). ADHD is a major differential diagnostic consideration because of substantial overlap between these conditions. The distinction among ADHD, ODD, and CD seems to be supported, but not in all studies (Burke et al., 2002; Connor, 2002; Hinshaw and Anderson, 1996; Rutter et al., 1999). As with CD, the association of ODD and ADHD appears to confer poor prognosis. Youngsters with ODD and ADHD tend to be more aggressive, show a greater range and persistence of problem behaviors, are rejected at higher rates by peers, and underachieve more severely in the academic domain. Furthermore, ADHD perhaps facilitates the early appearance of ODD and CD. Depression and CD reciprocally influence each other. ADHD is hypothesized to facilitate the onset of ODD and hasten the transition to CD in the presence of ODD.

Youth with ODD appear to have significantly higher rates of comorbid psychiatric disorders and significantly greater family and social dysfunction relative to psychiatric comparison subjects. Angold and colleagues (1999), in a population-based study, reported that in cases of ODD, 14% of children have comorbid ADHD, 14% have comorbid anxiety disorder, and 9% have comorbid depressive disorder. Exact numbers for learning disabilities and language disorders complicating ODD specifically are lacking, but clinical consensus and studies of disruptive behavior as well as CD and ADHD suggest that such comorbidity should be common (Connor, 2002). Concurrent substance abuse should always be considered, especially in teenagers and especially when interventions do not produce the expected response.

Subjects with ODD and with comorbid CD had higher rates of mood disorders and social impairment than those with ODD alone. Caution is warranted because antagonistic behaviors in this age group are commonly found in internalizing disorders such as anxiety disorders and depression, in which oppositional behavior may be used to manage anxiety in the face of overwhelming demands.

Clinicians need to be aware that oppositional behavior is sometimes used to manage anxiety in the face of overwhelming demands (Wilson and Steiner, 2002). Pervasive developmental disorders also are often accompanied by what appears to be manifest oppositionality. Language and learning disorders are

significant precursors to and comorbid conditions with oppositional and defiant behaviors, CD, and ODD (Connor, 2002).

PREVENTIVE INTERVENTION

Many consider prevention a key element in ODD and other DBD intervention (Burke et al., 2002; Connor, 2002; Hinshaw and Anderson, 1996; Rutter et al., 1999). Interventions can be delivered in schools, clinics, and other community locations. The clinician can provide consultation to primary care physicians, teachers, and other professionals. The list of interventions is not exhaustive. Exemplary studies and programs are discussed below and some are listed in Table 1. The reader is referred to several recent reviews for more details (Brestan and Eyberg, 1998; Burke et al., 2002; Connor, 2002; Kazdin, 1997; McCord and Tremblay, 1992), as well as to a description of model programs by the Substance Abuse and Mental Health Services

Administration, Center for Substance Abuse Prevention (<http://modelprograms.samhsa.gov>) and the Blueprints For Violence Prevention from the Center for the Study And Prevention Of Violence <http://www.colorado.edu/cspv/blueprints>.

For preschool children, there is some evidence that programs such as Head Start have, as one of their outcomes, prevented future delinquency (Connor, 2002; Greenspan, 1992). Home visitation to high-risk families as a preventive intervention has produced positive outcomes in areas related to ODD (Eckenrode et al., 2000).

In school-age children, parent management strategies are the most empirically supported programs (see Table 1). Psychoeducational packages targeting social skills, conflict resolution, and anger management are available as preventive interventions (for discussion, see Burke et al., 2002). For prevention in adolescence, psychoeducation packages, including cognitive interventions and skills training, vocational training, and academic preparations appear to reduce disruptive

TABLE 1
Parent Management Training Packages

Program	Ages, yr	Parents	Teachers	Children	Mode of Administration	Level of Evidence	References	Contact Information
Incredible Years	Up to 8	X	X	X	Group	RCT	Webster-Stratton et al., 2004; Webster-Stratton and Reid, 2003	http://www.incredibleyears.com
Triple P-Positive Parenting Program	Up to 13	X				RCT	Sanders et al., 2000; Hoath and Sanders, 2002	http://www19.triplep.net
Parent-Child Interactional Therapy	Up to 8	X		X	Individual family	RCT	Brinkmeyer and Eyberg, 2003; Herschell et al., 2002	http://www.pcit.org
Helping the Noncompliant Child: Parenting and Family Skills Program	Up to 8	X			Individual family	RCT	McMahon and Forehand, 2003; Hough and Daniel, 2003	mcmahon@u.washington.edu
COPE	Up to 12-14	X			Group	RCT	Cunningham, 1998; Cunningham et al., 1995	Charles Cunningham, Ph.D., McMaster University, Hamilton, ON, Canada
Defiant Children	Up to 12	X			Individual family		Barkley, 1997	The Guilford Press
The Adolescent Transitions Program (ATP)	11-13	X		X	Individual family and group	RCT	Dishion et al., 2003; Dishion and Kavanagh, 2002	http://cfc.uoregon.edu/atp.htm

RCT = Randomized clinical trial.

behaviors (Arbuthnot, 1992; Burke et al., 2002; Connor, 2002; McCord and Tremblay, 1992; Rutter et al., 1999).

School-based prevention programs offer an efficient mechanism for delivering prevention interventions (Burke et al., 2002). Clinicians who serve as consultants to schools need to be familiar with these programs. A detailed discussion of this complex literature is contained in the recent summaries by Burke et al. (2002). The focus of school programs ranges from bullying (Olweus, 1994) to antisocial behavior and peer group influences. Modest positive effects are noted (Burke et al., 2002; Loeber et al., 2000; Loeber and Farrington, 2001). There is evidence that some forms of group treatment can have significant negative effects on outcomes, especially among deviant youth (Dishion et al., 1999). Including normal peers in community-based groups treating delinquent boys can shape some prosocial peers to become more antisocial.

RECOMMENDATIONS

Each recommendation in this parameter is identified as falling into one of the following categories of endorsement, indicated by an abbreviation in brackets preceding the statement. These categories indicate the degree of importance or certainty of each recommendation.

- [MS] *Minimal standards* are recommendations that are based on rigorous empirical evidence (e.g., randomized, controlled trials) and/or overwhelming clinical consensus. Minimal standards are expected to apply >95% of the time (i.e., in almost all cases).
- [CG] *Clinical guidelines* are recommendations that are based on empirical evidence and/or strong clinical consensus. Clinical guidelines apply \approx 75% of the time (i.e., in most cases). These practices should almost always be considered by the clinician, but there are significant exceptions to their universal application.
- [OP] *Options* are practices that are acceptable, but not required. There may be insufficient empirical evidence and/or clinical consensus to support recommending these practices as minimal standards or clinical guidelines.
- [NE] *Not endorsed* refers to practices that are known to be ineffective or contraindicated.

The recommendations of this parameter are based on a thorough review of the literature as well as clinical

consensus. The following coding system is used to indicate the nature of the research that supports the recommendations.

- [rdb] *Randomized, double-blind clinical trial* is a study of an intervention in which subjects are randomly assigned to either treatment or control groups and both subjects and investigators are blind to the assignments.
- [rct] *Randomized clinical trial* is a study of an intervention in which subjects are randomly assigned to either treatment or control groups.
- [ct] *Clinical trial* is a prospective study in which an intervention is made and the results are followed longitudinally.

Recommendation 1. Successful Assessment and Treatment of ODD Requires the Establishment of Therapeutic Alliances With the Child and Family [MS].

In obtaining information for both assessment and subsequent treatment, the success of these tasks will require building a therapeutic alliance with the parents and the child separately (Santisteban et al., 1996; Steiner, 1997). Building that coalition while avoiding being drawn into a power struggle frequently requires patience and perseverance. Clinicians must aim to quickly clarify their role as helpers to the patient. One caveat must be heeded in collecting collateral information (from parents and teachers): Relying extensively on collateral information may further alienate patients and prevent clinicians from engaging them appropriately, although this may vary with the age of the child. Children are usually brought in by parents and often are not in agreement with the nature (or existence) of the problems and frequently lack the motivation to resolve them. Engagement with the child is often best achieved by empathizing with the patient's anger and frustration while refraining from sanctioning oppositional/aggressive behavior. Most patients do realize that their behavior is out of line, although this capacity is age dependent (Steiner, 1997). They defiantly tend to rationalize their behavior as justified by the circumstances, but they are not happy about it. This admixture of anger, defiance, insight, and unhappiness opens a unique door for alliance building.

Simultaneously, the clinician needs to constructively raise issues regarding efficacy of parenting without

making the parent feel accused or judged. This is best done through compiling an exhaustive list of parental strategies currently being used to contain or deal with the child's behavior. Questions can be raised about how these strategies work and whether the parents think they have achieved the desired short and long-term outcomes. The clinician needs to convey empathy with the parent's frustration without allying unduly with them.

Recommendation 2. Cultural Issues Need to Be Actively Considered in Diagnosis and Treatment [MS].

The literature does not adequately discuss the role of ethnicity on treatment and outcome. However, there is a substantial body of literature on different standards of parenting in different ethnic subgroups and the efficacy and risks of such practices. There is also a growing body of literature regarding the risks clinicians encounter when approaching cases in a culturally insensitive fashion. Of particular interest are different standards of obedience and parenting in ethnic subgroups. It is probable that such differences are not easily discussed when the treatment is offered by a person from another ethnic background. To become effective, the clinician needs to be sensitive to these areas of mismatch in patient/doctor backgrounds and should be prepared to be educated. This is particularly relevant in ODD because discipline is bound to be a core point of discussion in every case (DeYoung and Zigler, 1994; Portes et al., 1986; Walker-Barnes and Mason, 2001).

Recommendation 3. The Assessment of ODD Includes Information Obtained Directly From the Child As Well As From the Parents Regarding the Core Symptoms of ODD, Age at Onset, Duration of Symptoms, and Degree of Functional Impairment [MS].

Typically, the child or adolescent is brought in by his or her parents for problems that are contained within the home, but with increasing severity get out of control in situations outside the home because the child or adolescent is being persistently antagonistic and unpleasant. The forms of aggression reported are more likely to be minor and verbal, as opposed to the more severe, physical forms encountered in CD (American Psychiatric Association, 2000). The child does not necessarily see his or her behavior as a problem, or may even see it as a justified response to particular contextual circumstances. These problems are not transient and lead to interference in several domains of functioning (Connor, 2002).

Delineation of ODD from normative oppositional behavior, transient antisocial acts, and CD is of paramount importance (Steiner, 2002) for the clinician, but difficult (Burke et al., 2002; McCord and Tremblay, 1992). Isolated occurrences of oppositional behavior in a child or adolescent with good levels of premorbid functioning and preserved functioning in the majority of his or her current domains are more likely associated with a positive prognosis. This is especially true if it can be shown that some of his or her problems are the result of peer-related conflicts or a recent significant stressor (Steiner, 2002). The clinician always needs to explore carefully the possibility that the child's oppositionality is triggered or even caused by incidences of physical abuse, sexual abuse, or neglect in the family or in the child's extended social orbit, and thus are reactive and contextually driven.

Oppositional-defiant behaviors may be present in some settings and not in others. Commonly, a child may be difficult with parents but compliant in school and with other adult figures. The clinician must also consider that children sometimes become oppositional in response to excessive and unrealistic parental demands or that these demands may reinforce the child's maladaptive response (Steiner, 2002).

A portion of the assessment of the child with ODD should take the form of a functional analysis of the child's behavior, including identification of the antecedents and consequences of the child's behavior and parent and others' behavior that may reinforce the child's problem behaviors (Mash and Terdal, 2001). Parents may unwittingly reinforce a child's coercive or oppositional behavior (Brestan and Eyberg, 1998; Patterson et al., 1992; Reid et al., 2002). Parents who complete a task originally assigned to a child have just reinforced that child's negative behavior. Alternatively, reinforcement of problem behavior can also occur when a parent repeatedly desists from a demand and an uncomfortable confrontation as the child escalates in his or her oppositionality and coercion.

Many of the problematic behaviors of ODD will not necessarily manifest themselves directly with the examiner in an initial contact (except in the most severe cases), but would be apparent in interactions with the primary caregiver(s). It is also important to document the unrelenting nature of the problem. *DSM-IV-TR* specifies a minimum duration of 6 months. Exasperated parents may request intervention

long before that, and early intervention using the same modalities is reasonable in these cases. An associated issue of great importance is the assessment of children's access to weapons and supervision of such. In all cases, multiple settings and multiple pathogenic processes need to be considered for an exhaustive assessment, and the interaction of these variables needs to be described (Connor, 2002).

A special issue relevant to the assessment of this domain is the child's involvement in bullying as either a victim and/or as a perpetrator. Such interactions may serve as an additional indicator that the child's functioning is impaired and that he or she is at risk for aggression and even violence (Olweus, 1994).

Recommendation 4. Clinicians Should Carefully Consider Significant Comorbid Psychiatric Conditions When Diagnosing and Treating ODD [MS].

The assessment of comorbidity in ODD is an important part of the evaluation because the condition is usually highly comorbid. As a first step, the clinician needs to delineate whether this is truly ODD or a simple adjustment reaction. The second step is to determine whether this is still ODD or already has progressed to CD.

Comorbid conditions require treatment along with treatment of the ODD behaviors. If these comorbid conditions respond to treatment, then oppositionality may lessen or even disappear (Connor, 2002). This expectation may be particularly relevant if the comorbid condition precedes the onset of oppositionality.

The clinician should be aware of the common increase of disruptive behavior with chronic pediatric illness (Connor, 2002). Clinicians should establish whether the child is receiving ongoing pediatric care. It would be prudent to have the most recent pediatric examination available for review upon initial assessment. The clinician also should inquire about the child's age-appropriate compliance with the pediatric treatment.

Recommendation 5. Clinicians May Find It Helpful to Include Information Obtained Independently From Multiple Outside Informants [CG].

Clinicians should consider information from multiple informants, such as daycare providers, teachers, and other school professionals. External observations help in determining that despite variation in the social

environment, the child continues to manifest oppositional behavior. This information will help determine how many domains of functioning are affected, and confirm the diagnosis. Although such information is useful and important, the clinician should be aware that there is generally a relatively low rate of agreement between multiple informants, raising the issue of which report should be considered more clinically meaningful. Teachers and parents tend to agree more with each other in terms of externalizing behaviors than with the child (Angold and Costello, 1996). However, children's self-reported problem behaviors are better predictors of stability after 1 year, especially when covert acts are involved (Connor, 2002). This requires that the clinician be prepared to make an educated judgment when conflicting information arises, one of the hazards of this practice.

Parents and youths may manifestly disagree when describing the nature and origin of the problem. Such disagreements can be difficult to reconcile without the input of neutral informants outside the family, such as teachers, especially in cases involving child abuse. The need to complete a database must be counterbalanced with the consequences to the treatment alliance.

Recommendation 6. The Use of Specific Questionnaires and Rating Scales May Be Useful in Evaluating Children for ODD and in Tracking Progress [OP].

A wide range of instruments and interviews have been developed that measure oppositional behavior and other forms of aggression in childhood and adolescence in many different settings (Collett et al., 2003; Connor, 2002). Table 2 summarizes some instruments that may be applicable to clinical practice. A variety of structured and semistructured interviews are supported by favorable psychometric properties (see McClellan and Werry, 2000). Most of these instruments include a special module for the assessment of DBD.

Scales can be useful in clinical practice not only to help establish the diagnosis but also to track progress and response to intervention(s). Most of these instruments use continuous measures of diverse constructs, standardizing disruptive or aggressive behavior for different ages. This can lead to scores that can be compared to age-appropriate ranges, aiding in the delineation of normative and non-normative behaviors. The list of instruments was updated from compilations by Connor (2002) and Malone (2000).

TABLE 2

Instruments to Use in Practice as Diagnostic Aids and Tools for Tracking Progress

Instrument	Construct	Ages	Psychometrics	References	Comments	Information
CPRS CTRS	Oppositional Hyperactivity/impulsivity subscales	School age and up	Excellent psychometrics; 10 items	Conners et al., 1998	*Multiple formats and across ages *Does not desegregate impulsivity from hyperactivity	Parent or teacher report
AAQ	Impulsive and premeditated aggression, mood, and agitation	Late adolescents–adults	Excellent psychometrics; 22 items	Barratt et al., 1999	*Does desegregate different forms of aggression *Valid only in older adolescents *Modified by Steiner for use in adolescents	Self-report
CBCL	Internalizing and externalizing behaviors	School age and up	Excellent psychometrics; 118 items	Achenbach, 1991	*Best for long-term patterns	Parent report
YSR	Internalizing and externalizing behaviors	School age and up	Excellent psychometrics; 102 items	Achenbach, 1991	*Best for long-term patterns (i.e., last 6 mo of symptoms)	Self-report
OAS	Overt aggression (verbal, physical aggression against self, objects, and other people)	Adult inpatients	Acceptable psychometrics; 21 items	Yudofsky et al., 1986	*Multiple modifications (modified OAS [Kay et al., 1988], OAS modified for outpatients [Cocarro et al., 1991], and retrospective OAS [Sorgi et al., 1991]); best for use in controlled settings (i.e., inpatients)	Observational
AQ	Predatory and affective aggression	Children and adolescents	Acceptable psychometrics; 10 items	Vitiello et al., 1990; Malone et al., 1998	*Does desegregate different forms of aggression *Limited empirical support	Observational
BDHI	Overt and covert hostility	Late adolescents- young adults	Good psychometrics; 21 items	Buss and Durkee, 1957	*Anger assessment in adolescents *Not suited for younger children	Self-report
STAXI	8 state and trait anger subscales	Late adolescents- young adults	Excellent psychometrics; 44 items	Fuqua et al., 1991	*Anger assessment in adolescents *Not suited for younger children	Self-report

AIAQ	Labile anger, irritability, and assault	Children, some adolescents, and young adults	Acceptable psychometrics; 28 items	Coccaro et al., 1991	*Use in youth not fully established	Self-report
B-P AQ	Physical and verbal aggression, anger, and hostility	School age and up	Excellent psychometrics; 29 items	Buss and Perry, 1992	*Updated inventory from the Buss-Durkee; improved psychometrics, shortened questionnaire, expanded age range	Self-report
LHA	Total lifetime aggression (aggression, consequences/antisocial, self-directed aggression)	Young adults	Excellent psychometrics; 11 items	Coccaro et al., 1996	*Modification of Brown-Goodwin history of lifetime aggression	Interview
CAS-P	Use of weapons, verbal aggression; provoked and initiated physical aggression, aggression toward objects and animals	Children ages 7–11	Acceptable psychometrics; 33 items	Halperin et al., 2002	*Written for parents *Limited empirical support	Parent report
CASS	Conduct problems and anger control problems subscales	Adolescents	Excellent psychometrics; 64 items	Conners and Wells, 1997	*Limited to adolescents *Epidemiological orientation	Self-report
PDR	Antisocial (problem behaviors) and problematic (target) behavior	All ages	Excellent psychometrics; 30 items	Kazdin and Ezveldt-Dawson, 1986	*Parent interview of antisocial behavior of child over last 24 h; tested in controlled trials	Parent report
IAB	Diverse overt, covert and antisocial behaviors	All ages	Excellent psychometrics; 23 items	Chamberlain and Reid, 1987	*Parent interview of antisocial behavior of child over last 24 h with differentiation of aggression subtype	Parent report

Note: Excellent psychometric properties: cohesion, convergent, discriminant and predictive validity have all been tested in diverse and representative samples. These studies have produced good results and replications. *Good psychometric properties:* as above, but studies have one to two of the criteria listed above missing. *Adequate psychometric properties:* more than two of the criteria listed above are not met, but the scale is conceptually interesting or particularly suitable for clinical practice. CPRS, CTRS = Connors Rating Scale (parent and teacher versions); AAQ = Barratt Aggressive Acts Questionnaire; CBCL = Child Behavior Checklist; YSR = Youth Self-Report; OAS = Overt Aggression Scale; AQ = Aggression Questionnaire; BDHI = Buss-Durkee Hostility Inventory; STAXI = Spielberger Anger and Expression of Anger Inventory; AIAQ = Anger, Irritability, and Aggression Questionnaire; B-P AQ = Buss-Perry Aggression Questionnaire; LHA = Life History of Aggression; CAS-P = Children's Aggression Scale; CASS = Connors/Wells Adolescent Self-Report of Symptoms; PDR = Parent Daily Report; IAB = Interview for Antisocial Behavior.

Recommendation 7. The Clinician Should Develop an Individualized Treatment Plan Based on the Specific Clinical Situation [MS].

As with the treatment of all psychiatric disorders, the clinician should develop a treatment plan in accordance with a biopsychosocial formulation of the case. Given the current understanding of ODD, interventions should target domains that are assessed as dysfunctional. Because of the frequent presence of comorbidity and multiple dysfunctional domains, multimodal treatment is often indicated. Different modalities may be more important for individual cases, depending on the age of the child; the severity of the presenting problems; and the goals, resources, and circumstances of the parents. Treatment must be delivered for an adequate duration (usually several months or longer) and may require multiple episodes either continuously or as periodic booster sessions, reinforcing previous skills or improvements. Many authorities (American Academy of Child and Adolescent Psychiatry, 1997; Burke et al., 2002; Connor, 2002; Hinshaw and Anderson, 1996; Steiner, 1999) suggest that the treatment of ODD, not unlike the treatment of CD, be multitarget, multimodal, and extensive, combining individual psychotherapy, family psychotherapy, pharmacotherapy, and ecological interventions (including placement and school-based interventions), especially when severe and persistent. This suggestion is made in the absence of a strong comparative clinical trial literature, which would help distinguish between single best interventions supported by checkered evidence and interventions that produce minimal or no effect. Several reviews summarize the most clinically relevant and available information (Brestan and Eyberg, 1998; Burke et al., 2002; Hoagwood, 2001; Kazdin, 2005).

The two types of evidence-based treatments for youth with ODD are individual approaches in the form of problem-solving skills training and family interventions in the form of parent management training. Individual approaches should be specific to problems encountered, behaviorally based, and as much as is possible oriented to the development of problem solving skills (Kazdin, 2005). Family interventions (see recommendation 8) are among the best-studied treatments in this context (Brestan and Eyberg, 1998). They usually encompass training in effective disciplining and age-appropriate supervision. Ecological interventions offer the opportunity for early intervention at

different levels of intensity (as in school-based programs) and provide safety when this is an issue for a particular patient (as in hospitalization and residential placement; Steiner, 1999).

Different ages may call for different admixtures of these treatments. In preschool, emphasis should be placed on parental education and training. In school-age, school-based interventions, family-based treatment, and occasionally individual approaches are indicated. In adolescence, individual approaches are more often used along with family interventions. Throughout all ages, psychopharmacological interventions can be useful adjuncts.

A note of caution must be given considering there are few controlled clinical trials specific to ODD comparing modalities such as parent training versus individual approaches. Consequently, except for parent training and some pharmacological approaches, current recommendations regarding the use of modalities such as individual therapy are based on clinical wisdom and consensus rather than extensive empirical evidence. There is some indication, from a retrospective analysis of a large case series, that dynamically oriented approaches may be useful as well (Fonagy and Target, 1994).

Recommendation 8. The Clinician Should Consider Parent Intervention Based on One of the Empirically Tested Interventions [MS].

Parent management training in the use of contingency management methods to help them better handle disruptive behavior is one of the most substantiated treatment approaches in child mental health (Brestan and Eyberg, 1998; Kazdin, 2005). The principles of these approaches can be summarized as follows:

1. Reduce positive reinforcement of disruptive behavior.
2. Increase reinforcement of prosocial and compliant behavior. Positive reinforcement varies widely, but parental attention is predominant. Punishment usually consists of a form of time out, loss of tokens, and/or loss of privileges.
3. Apply consequences and/or punishment for disruptive behavior.
4. Make parental response predictable, contingent, and immediate.

These interventions are effective in community and clinical samples (Connor, 2002). They target one of the

most studied causal processes by which children become oppositional—their coercive response to parental demands, and ways in which parents unwittingly reinforce the child's noncompliance (Patterson et al., 1992). Almost all of the best known and evidence-based parent management training programs are variations of Hanf's (1969) two-stage behavioral treatment model and are listed in Table 2. Defined as model programs by Substance Abuse and Mental Health Services Administration, these programs are available for dissemination and offer technical assistance and training by their developers. The programs have multimedia formats on videotape or DVD and are manual based. Other family therapies include models designed for prevention or intervention with youths with CD and/or substance use disorders. These therapies include functional family therapy (Sexton and Alexander, 2003) and multi-systemic therapy (Henggeler and Terry, 2003).

The issues associated with family or parental approaches are as follows: the use of mild forms of spanking, the high treatment dropout rates with these families and their children (sometimes up to 50%), and the existence of parental psychopathology, which impedes participation and progress. Adverse side effects may be the misuse of the techniques to control children, especially in abusive homes, and the possibility of these intervention techniques resulting in increased or more severe confrontations between child and marginally controlled parents.

Recommendation 9. Medications May Be Helpful as Adjuncts to Treatment Packages, For Symptomatic Treatment and to Treat Comorbid Conditions [CG].

At this point, medications for youth with ODD are mostly considered to be adjunctive, palliative, and noncurative. Medication should not be the sole intervention in ODD. Medication trials are most effective after a strong treatment alliance has been established (Steiner, 2004). Prescribing medications only at the parent's request without enlisting the child's support or assent is unlikely to be successful, especially if an adolescent is involved. After starting medications, adherence, compliance, and possible diversion need to be monitored carefully. Nonresponsiveness to a specific compound should lead to a trial of another class of medication rather than the rapid addition of other medications. Polypharmacy may further cloud these already complicated cases (Steiner et al., 2003b).

Pharmacotherapeutic interventions for ODD are not well studied, but several agents have received support in open-label and double-blind placebo-controlled studies of disruptive behavior (CD or ODD) in the context of other principal diagnoses (Connor, 2002; Pappadopulos et al., 2003; Schur et al., 2003; Steiner et al., 2003a). Medications, such as stimulants and atomoxetine, used to treat ODD in the context of other principal diagnoses such as ADHD, may result in improvement of the oppositional behavior as well (Connor and Glatt, 2002; MTA Cooperative Group, 1999; Newcorn et al., 2005).

Results from controlled clinical trials when CD was the principal diagnosis for inclusion show promise for mood stabilizers such as divalproex sodium and lithium carbonate, antipsychotics, and stimulants (Steiner et al., 2003a,b). The targets of these trials are invariably aggressive behavior. Regardless of diagnosis, atypical antipsychotics seem to be the most commonly prescribed medications for the treatment of acute and chronic maladaptive aggression (Connor, 2002; Pappadopulos et al., 2003; Schur et al., 2003). It is recommended that medications be started only after an appropriate baseline of symptoms or behaviors has been obtained because starting before that point may lead the clinician to attribute effects to drugs that were actually caused by a stabilizing environment (Malone et al., 1997).

Because aggressive and oppositional behavior complicates a wide range of other diagnoses in this age range, it is recommended that if comorbid conditions are present, then medication should be targeted to those specific syndromes as much as possible. Several open and double-blind placebo controlled studies show that typical and atypical antipsychotics are helpful in treating aggression after appropriate psychosocial interventions have been applied in the context of mental retardation and pervasive developmental disorders (Pappadopulos et al., 2003; Schur et al., 2003). If the first medication is not effective, then a trial of another atypical or a switch to a mood stabilizer is recommended. A consensus group of clinicians provides an algorithm for trials of new compounds in case the first one is ineffective (Pappadopulos et al., 2003; Schur et al., 2003). There is only limited evidence from one open-label trial that selective serotonin reuptake inhibitors may be helpful against ODD in the context of mood disorders (Steiner et al., 2003b). In

conjunction with recent warnings issued by the FDA regarding the use of these compounds in youth, these should not be considered first-line agents at the present time unless major depressive disorder or anxiety is diagnosed along with ODD.

Recommendation 10. Intensive and Prolonged Treatment May Be Required If ODD Is Unusually Severe and Persistent [CG].

Although typically more severe, persistent cases of ODD eventually meet diagnostic criteria for CD, ODD cases that are subthreshold for CD exist. Lack of progress is one consideration driving placement considerations because placement is usually considered a measure of last resort. As in the treatment of other disorders, issues of the safety of the patient and those around him or her need to be considered. Self-injurious behavior may be thinly disguised as extreme recklessness, and poor impulse control along with extreme irritability may rapidly progress into situations in which harm to self or others becomes a major issue. Predatory or planned aggressive behavior before school age is rare, but begins to emerge in the school years, dominates during adolescence (Steiner, 2002), and generally is associated with poor outcomes (Connor, 2002).

A concern in severe cases is determining the appropriate level of care. Treatment ought to be carried out in the least restrictive setting, one that guarantees safety and allows for a regular delivery of interventions. Increased levels of care may need to be considered and restricted to the shortest possible intervals to guarantee safety and progress. Day treatment, residential, and hospitalization facilities may need to be considered if the family is unable or unwilling to collaborate with the treatment of a more severe case of ODD. Hospitalizations are needed for crisis management only. Out-of-home community-based alternatives to residential placement include therapeutic foster care and respite care (Chamberlain, 2003).

Placement in residential facilities also has some associated risks, such as separation from the family and occurrences of institutional victimization. Risks and benefits of placement need to be carefully weighed because treatment gains in structured settings do not necessarily generalize to the community and family. Rapid return to community and family should be the basic goal while treatment is provided in a safe and efficient manner.

Intensive in-home therapies such as multisystemic therapy, wraparound services, and family preservation models such as Homebuilders, which are often sponsored by child welfare agencies, are preferable alternatives to residential placement.

Recommendation 11. Certain Interventions Are Not Effective [NE].

Experts agree that any dramatic, one-time, time-limited, or short-term intervention is usually not going to be successful (Burke et al., 2002; Connor, 2002; Hinshaw and Anderson, 1996; Steiner, 1999). Inoculation approaches continue to resurface in a variety of forms (e.g., boot camps, shock incarceration). These approaches are at best ineffective and at worst injurious, especially when used in isolation from evidence-based approaches (Rutter et al., 1999). Exposure of children and adolescents to frightening scenarios or situations, which are meant to induce them to desist from aggressive behaviors while not offering any other behavioral alternatives, only serve to worsen such symptomatic behaviors through heightening a fear-aggression reaction or modeling of deviance (Connor, 2002).

SCIENTIFIC DATA AND CLINICAL CONSENSUS

Practice parameters are strategies for patient management, developed to assist clinicians in psychiatric decision-making. These parameters, based on evaluation of the scientific literature and relevant clinical consensus, describe effective and generally accepted approaches to assess and treat specific disorders or to perform specific medical procedures. These parameters are not intended to define the standard of care; nor should they be deemed inclusive of all proper methods of care or exclusive of other methods of care directed at obtaining the desired results. The ultimate judgment regarding the care of a particular patient must be made by the clinician in light of all of the circumstances presented by the patient and his or her family, the diagnostic and treatment options available, and available resources.

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REFERENCES

References marked with an asterisk are particularly recommended.

- Achenbach TM (1991), *Manual for Child Behavior Checklist 4-18, 1991 Profile*. Department of Psychiatry, Burlington, VT: University of Vermont
- Alexander JF, Parsons BV (1973), Short term behavioral intervention with delinquent families: impact on family process and recidivism. *J Abnorm Psychol* 81:219-225
- American Academy of Child and Adolescent Psychiatry (1997), Practice parameters for the assessment and treatment of children and adolescents with conduct disorder. *J Am Acad Child Adolesc Psychiatry* 36:122S-139S
- American Psychiatric Association (1980), *Diagnostic and Statistical Manual of Mental Disorders, Third Edition (DSM-III)*. Washington, DC: American Psychiatric Press
- American Psychiatric Association (1994), *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)*. Washington, DC: American Psychiatric Press
- American Psychiatric Association (2000), *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR)*. Washington, DC: American Psychiatric Press
- Angold A, Costello EJ (1996), Toward establishing an empirical basis for the diagnosis of oppositional defiant disorder. *J Am Acad Child Adolesc Psychiatry* 35:1205-1212
- Angold A, Costello EJ, Erkanli A (1999), Co-morbidity. *J Child Psychol Psychiatry* 40:57-87
- Angold A, Erkanli A, Farmer EMZ, Fairbank JA, Burns BA, Keeler G, Costello EJ (2002), Psychiatric disorder, impairment and service use in rural African American and white youth. *Arch Gen Psychiatry* 59:893-901
- Arbuthnot J (1992), Sociomoral reasoning in behavior-disordered adolescents: cognitive and behavioral change. In: *Preventing Antisocial Behavior: Interventions from Birth Through Adolescence*, McCord J, Tremblay RE, eds. New York: The Guilford Press, pp 283-310
- Barkley RA (1997), *Defiant Children, Second Edition: A Clinician's Manual for Assessment and Parent Training*. New York: The Guilford Press
- Barkley RA, Connor DF (2002), *Aggression and Antisocial Behavior in Children and Adolescents: Research and Treatment*. New York: The Guilford Press
- *Brestan EV, Eyberg SM (1998), Effective psychosocial treatments of conduct-disordered children and adolescents: 29 years, 82 studies, and 5,272 kids. *J Clin Child Psychol* 27:180-189
- Brinkmeyer M, Eyberg SM (2003), Parent-child interaction therapy for oppositional children. In: *Evidence-Based Psychotherapies for Children and Adolescents*, Kazdin AE, Weisz JR, eds. New York: The Guilford Press, pp 204-223
- *Burke JD, Loeber R, Birmaher B (2002), Oppositional defiant and conduct disorder: a review of the past 10 years, part II. *J Am Acad Child Adolesc Psychiatry* 41:1275-1293
- Buss AH, Durkee A (1957), An inventory for assessing different kinds of hostility. *J Consult Psychol* 21:343-348
- Buss AH, Perry M (1992), The aggression questionnaire. *J Pers Soc Psychol* 63:452-459
- Chamberlain P (2003), An overview of the history and development of the multidimensional treatment foster care model and the supporting research. In: *Treating Chronic Juvenile Offenders: Advances Made Through the Oregon Multidimensional Treatment Foster Care Model*. Law and Public Policy, Chamberlain P, ed. Washington, DC: American Psychological Association, pp 47-67
- Coccaro EF, Berman ME, Kavoussi RJ (1997), Assessment of life history of aggression: development and psychometric characteristics. *Psychiatry Res* 73:147-157
- Collett BR, Ohan JL, Myers KM (2003), Ten-year review of rating scales. VI: Scales assessing externalizing behaviors. *J Am Acad Child Adolesc Psychiatry* 42:1143-1170
- Conners CK, Sitarenios G, Parker JD, Epstein JN (1998), The revised Conners' Parent Rating Scale (CPRS-R): factor structure, reliability, and criterion validity. *J Abnorm Child Psychol* 26:257-268
- Conners CK, Wells KC, Parker JD, Sitarenios G, Diamond JM, Powell JW (1997), A new self-report scale for assessment of adolescent psychopathology: factor structure, reliability, validity, and diagnostic sensitivity. *J Abnorm Child Psychol* 25:487-497
- Connor DF (2002), *Aggression and Antisocial Behavior in Children and Adolescents: Research and Treatment*. New York: The Guilford Press
- Connor DF, Glatt SJ, Lopez ID, Jackson D, Melloni RH (2002), Psychopharmacology and aggression: I. A meta-analysis of stimulant effects on overt/covert aggression-related behaviors in ADHD. *J Am Acad Child Adolesc Psychiatry* 41:253-261
- Cunningham CE, Bremner R, Boyle M (1995), Large group community-based parenting programs for families of preschoolers at risk for disruptive behaviour disorders: utilization, cost effectiveness, and outcome. *J Child Psychol Psychiatry* 36:1141-1159
- Cunningham CE (1998), A large-group community-based, family systems approach to parent training. In: *Attention-Deficit/Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*, Barkley RA, ed. New York: The Guilford Press, pp 394-412
- DeYoung Y, Zigler EF (1994), Machismo in two cultures: relation to punitive child rearing practices. *Am J Orthopsychiatry* 64:386-395
- Dishion TJ, McCord J, Poulin F (1999), When interventions harm: peer groups and problem behavior. *Am Psychol* 54:755-764
- Dishion TJ, Kavanagh K (2002), The adolescent transitions program: a family-centered prevention strategy for schools. In: *Antisocial Behavior in Children and Adolescents: A Developmental Analysis and the Oregon Model for Intervention*, Reid JB, Snyder JJ, Patterson GR, eds. Washington, DC: American Psychological Association, pp 257-272
- Dishion TJ, Nelson SE, Kavanagh K (2003), The family check-up for high-risk adolescents: motivating parenting monitoring and reducing problem behavior. Special series: behavior oriented interventions for children with aggressive behavior and/or conduct problems. *Behav Ther* 34:553-571
- Dodge K (1991), The structure and function of reactive and proactive aggression. In: *The Development and Treatment of Childhood Aggression*, Pepler DJ, Rubin KH, eds. Hillsdale, NJ: Lawrence Erlbaum Associates, pp 201-218
- Eckenrode J, Ganzel B, Henderson CR, Smith E, Olds DL, Powers J, Cole R, Kitzman H, Sidora K (2000), Preventing child abuse and neglect with a program of nurse home visitation: the limiting effects of domestic violence. *JAMA* 284:1385-1391
- Findling RL, McNamara NK, Branicky LA, Schluchter MD, Lemon E, Blumer JL (2000), A double-blind pilot study of risperidone in the treatment of conduct disorder. *J Am Acad Child Adolesc Psychiatry* 39:509-516
- Fonagy P, Target M (1994), The efficacy of psychoanalysis for children with disruptive disorders. *J Am Acad Child Adolesc Psychiatry* 33:45-55
- Forgays DK, Spielberger CD, Ottaway SA, Forgays DG (1998), Factor structure of the State-Trait Anger Expression Inventory for middle-aged men and women. *Assessment* 5:141-155
- Forehand R, Long N (2002), *Parenting the Strong-Willed Child*, 2nd ed. Chicago: Contemporary Books
- Fuqua DR, Leonard E, Masters MA, Smith RJ, Campbell JL, Fischer PC (1991), A structural analysis of the State-Trait Anger Expression Inventory. *Educ Psychol Meas* 51:439-446
- Greene RW, Biederman J, Zerwas S, Monuteaux MC, Goring JC, Faraone SV (2002), Psychiatric comorbidity, family dysfunction, and social impairment in referred youth with oppositional defiant disorder. *Am J Psychiatry* 159:1214-1224
- Greenspan SI (1992), *Infancy and Early Childhood: The Practice of Clinical Assessment and Intervention with Emotional and Developmental Challenges*. Madison, CT: International Universities Press
- Halperin JM, McKay KE, Newcorn JH (2002), Development, reliability, and validity of the Children's Aggression Scale-Parent Version. *J Am Acad Child Adolesc Psychiatry* 41:245-252
- Hanf C (1969), A two stage program for modifying maternal controlling during the mother-child interaction. Paper presented at the meeting of the Western Psychological Association, Vancouver, Spring
- Henggeler SW, Terry L (2003), Multisystemic treatment of serious clinical problems. In: *Evidence-Based Psychotherapies for Children and Adolescents*, Kazdin AE, ed. New York: The Guilford Press, pp 301-322

- Herschell A, Calzada E, Eyberg SM, McNeil CB (2002), Parent-child interaction therapy: new directions in research. *Cognitive Behav Pract* 9:9–16
- *Hinshaw SP, Anderson CA (1996), Conduct and oppositional defiant disorders. In: *Child Psychopathology*, Mash EJ, Barkley RA, eds. New York: The Guilford Press, pp 113–149
- Hoagwood K (2001), Research on youth violence: progress by replacement, not addition. In: *Making Schools Safer and Violence Free: Critical Issues, Solutions, and Recommended Practices*, Walker HM, Epstein MH, eds. Austin, TX: PRO-ED
- Hoath FE, Sanders MR (2002), A feasibility study of Enhanced Group Triple P–Positive Parenting Program for parents of children with attention-deficit/hyperactivity disorder. *Behaviour Change* 19: 191–206
- Hough MG, Daniel SS (2003), Parenting the strong-willed child: the clinically proven five-week program for parents of two- to six-year-olds. *J Am Acad Child Adolesc Psychiatry* 42:1380–1381
- Joshi S, Khanzode L, Steiner H (2004), The psychology of psychopharmacology. In: *Handbook of Mental Health Interventions in Children and Adolescents: An Integrated Developmental Approach*, Steiner H, ed. San Francisco: Jossey-Bass
- Kay SR, Wolkenfeld F, Murril LM (1988), Profiles of aggression among psychiatric patients: I. Nature and prevalence. *J Nerv Ment Dis* 76: 539–546
- Kay SR, Wolkenfeld F, Murril LM (1988), Profiles of aggression among psychiatric patients: II. Covariates and predictors. *J Nerv Ment Dis* 176: 547–557
- *Kazdin AE (1997), Practitioner review: psychosocial treatments for conduct disorder in children. *J Child Psychol Psychiatry* 38:161–178
- Kazdin AE (2005), *Parent Management Training: Treatment for Oppositional, Aggressive, and Antisocial Behavior in Children and Adolescents*. New York: Oxford University Press
- Kazdin AE, Esveltd-Dawson K (1986), The interview for antisocial behavior: psychometric characteristics and concurrent validity with child psychiatric inpatients. *J Psychopathol Behav Assess* 8:289–303
- Lahey BB, Loeber R, Quay HC, Applegate B, Shaffer D, Waldman I, Hart EL, McBurnett K, Frick PJ, Jensen PS (1998), Validity of DSM-IV subtypes of conduct disorder based on age of onset. *J Am Acad Child Adolesc Psychiatry* 37:435–442
- Lavigne JV, Cicchetti C, Gibbons RD, Binns HJ, Larsen L, DeVito C (2001), Oppositional defiant disorder with onset in preschool years: longitudinal stability and pathways to other disorders. *J Am Acad Child Adolesc Psychiatry* 40:1393–1400
- *Lipsey MW, Wilson DB (1998), Effective intervention for serious juvenile offenders: a synthesis of research. In: *Serious & Violent Juvenile Offenders: Risk Factors and Successful Interventions*, Loeber R, Farrington DP, eds. Thousand Oaks, CA: Sage Publications, pp 313–345
- *Loeber R, Burke JD, Lahey BB, Winters A, Zera M (2000), Oppositional defiant and conduct disorder: a review of the past 10 years, part I. *J Am Acad Child Adolesc Psychiatry* 39:1468–1484
- *Loeber R, Farrington DP (2001), *Child Delinquents: Development, Interventions, and Service Needs*. Thousand Oaks, CA: Sage Publications
- Lyons-Ruth K, Zeanah CH, Benoit D (1996), Disorder and risk for disorder during infancy and toddlerhood. In: *Child Psychopathology*, Mash EJ, Barkley RA, eds. New York: The Guilford Press, pp 457–491
- Malone RP (2000), Assessment and treatment of abnormal aggression in children and adolescents. In: *Understanding and Treating Violent Psychiatric Patients*, Crowner ML, ed. Washington, DC: American Psychiatric Publishing, pp 21–47
- Malone RP, Luebbert JF, Delaney MA, Biesecker KA, Blaney BL, Rowan AB, Campbell M (1997), Nonpharmacological response in hospitalized children with conduct disorder. *J Am Acad Child Adolesc Psychiatry* 36:242–247
- Malone RP, Bennett DS, Luebbert JF, Rowan AB, Biesecker KA, Blaney BL, Delaney MA (1998), Aggression classification and treatment response. *Psychopharmacol Bull* 34:41–45
- Mash EJ, Dozois DJ (1996), Child psychopathology: a developmental-systems perspective. In: *Child Psychopathology*, Mash EJ, Barkley RA, eds. New York: The Guilford Press 3–60
- Mash EJ, Terdal LG (2001), Assessment of child and family disturbance: a behavioral-systems approach. In: *Assessment of Childhood Disorders*, 3rd ed, Mash EJ, Terdal LG, eds. New York: The Guilford Press, pp 3–68
- McClellan JM, Werry JS (2000), Introduction: Research psychiatric diagnostic interviews for children and adolescents. *J Am Acad Child Adolesc Psychiatry* 39:19–27
- *McCord J, Tremblay RE, eds. (1992), *Preventing Antisocial Behavior*, New York: The Guilford Press
- McMahon RR, Forehand RL (2003), *Helping the Noncompliant Child*. New York: The Guilford Press
- Moffitt TE (1993), Adolescence-limited and life-course-persistent antisocial behavior: a developmental taxonomy. *Psychol Rev* 100:674–701
- MTA Cooperative Group (1999), Moderators and mediators of treatment response for children with attention-deficit/hyperactivity disorder. *Arch Gen Psychiatry* 56:1088–1096
- Newcorn JH, Spencer TJ, Biederman J, Milton DR, Michelson D (2005), Atomoxetine treatment in children and adolescents with attention-deficit/hyperactivity disorder and comorbid oppositional defiant disorder. *J Am Acad Child Adolesc Psychiatry* 44:240–248
- Olweus D (1994), Bullying at schools: basic facts and effects of a school based intervention program. *J Child Psychol Psychiatry* 35:1171–1190
- Patterson GR (1982), *The Coercive Family Process*. Eugene, OR: Castalia
- Patterson GR, Reid JB, Dishion TJ (1992), *Antisocial Boys*. Eugene, OR: Castalia
- Pappadopulos E, MacIntyre JC, Crismon ML, Findling R, Malone RP, Derivan A, Schooler N, Sikich L, Greenhill L, Schur SB, Felton C, Kanzler H, Rube D, Sverd J, Finnerty M, Ketner S, Siennick SE, Jensen PS (2003), Treatment recommendations for the use of antipsychotics for aggressive youth (TRAAY): II. *J Am Acad Child Adolesc Psychiatry* 42:145–161
- Portes PR, Dunham RM, Williams S (1986), Assessing child rearing style in ecological settings: its relation to culture, social class, early age intervention and scholastic achievement. *J Adolesc* 21:723–735
- *Raine A (2002), Annotation: the role of prefrontal deficits, low autonomic arousal and early health factors in the development of antisocial and aggressive behavior in children. *J Child Psychol Psychiatry* 43:417–434
- Reich W (2000), Diagnostic interview for children and adolescents (DICA). *J Am Acad Child Adolesc Psychiatry* 39:59–66
- Reid JB, Patterson GR, Snyder J, eds. (2002), In: *Antisocial Behavior in Children and Adolescents: A Developmental Analysis and Model for Intervention*. Washington, DC: American Psychological Association
- *Rutter M, Giller H, Hagell A (1999), Antisocial behavior by young people. *J Am Acad Child Adolesc Psychiatry* 38:1320–1321
- Sanders MR, Markie-Dadds C, Tully L, Bor B (2000), The Triple P–Positive Parenting Program: a comparison of enhanced, standard, and self-directed behavioural family intervention for parents of children with early onset conduct problems. *J Consult Clin Psychol* 68:624–640
- Santisteban DA, Szapocznik J, Perez-Vidal A, Kurtines WM, Murray EJ, LaPerriere A (1996), Efficacy of intervention for engaging youth and families into treatment and some variables that may contribute to differential effectiveness. *J Family Psychol* 10:35–44
- Schur S, Sikich L, Findling R, Malone R, Crismon M, Derivan A, MacIntyre J, Pappadopulos E, Greenhill L, Schooler N, Van Orden K, Jensen P (2003), Treatment recommendations for the use of antipsychotics for aggressive youth (TRAAY): I. A review. *J Am Acad Child Adolesc Psychiatry* 42:132–144
- Sexton TL, Alexander JF (2003), Functional family therapy: a mature clinical model for working with at-risk adolescents and their families. In: *Handbook of Family Therapy: The Science and Practice of Working with Families and Couples*, Sexton TL, Weeks GR, Robbins MS, eds. New York: Brunner-Routledge, pp 323–348
- Shaw DS, Owens EB, Giovannelli J, Winslow EB (2001), Infant and toddler pathways leading to early externalizing disorders. *J Am Acad Child Adolesc Psychiatry* 40:36–43
- Skovgaard AM, Houmann T, Landorph SL, Christiansen E (2004), Assessment and classification of psychopathology in epidemiological research of children 0–3 years of age: a review of the literature. *Eur Child Adolesc Psychiatry* 13:337–346
- Sorgi P, Ratey J, Knoedler DW, Market RJ, Reichman M (1991), Rating

- aggression in the clinical setting. A retrospective adaptation of the Overt Aggression Scale: preliminary results. *J Neuropsychiatry Clin Neurosci* 3:52–56
- Spaccarelli S, Cotler S, Penman D (1992), Problem-solving skills training as a supplement to behavioral parent training. *Cognitive Ther Res* 16:1–18
- Spielberger CD, Reheiser EC, Sydeman SJ (1995), Measuring the experience, expression and control of anger. *Issues Compr Pediatr Nurs* 18:207–232
- Steiner H (2002), Disruptive behavior disorders. In: *Comprehensive Textbook of Psychiatry/VII, Volume 2*, Kaplan HI, Sadock BJ, eds. New York: Williams & Wilkins, pp 2693–2703
- *Steiner H (2004), *Handbook of Mental Health Interventions in Children and Adolescents: An Integrated Developmental Approach*. San Francisco: Jossey-Bass
- Steiner H, Karnik N (2004), Child or adolescent antisocial behavior. In: *Comprehensive Textbook of Psychiatry/VIII, Volume 2*, Sadock BJ, Sadock VA, eds. New York: Williams & Wilkins
- Steiner H, Petersen M, Saxena K, Ford S, Matthews Z (2003), A randomized clinical trial of divalproex sodium in conduct disorders. *J Clin Psychiatry* 64:1183–1191
- Steiner H, Saxena K, Chang K (2003), Psychopharmacological strategies for the treatment of aggression in youth. *CNS Spectr* 8:298–308
- Steiner H (1999), Disruptive behavior disorders. In: *Comprehensive Textbook of Psychiatry/VII, Volume 2*, Kaplan HI, Sadock BJ, eds. New York: Williams & Wilkins, pp 2693–2703
- Steiner H, ed. (1997), *Treating School Age Children*. San Francisco: Jossey-Bass
- Szapocznik J, Perez-Vidal A, Brickman AL, Foote FH, Santisteban D, Hervis O, Kurtines WM (1988), Engaging adolescent drug abusers and their families into treatment: a strategic structural systems approach. *J Consult Clin Psychol* 56:552–557
- Thomas JM, Guskin KA (2001), Disruptive behavior in young children: what does it mean? *J Am Acad Child Adolesc Psychiatry* 40:44–51
- Tremblay RE, Pagani-Kurtz L, Masse LC, Vitaro F, Phil R (1995), A bimodal preventative intervention for disruptive kindergarten boys: its impact through mid-adolescence. *J Consult Clin Psychol* 63:560–568
- Vitiello B, Behar D, Hunt J, Stoff D, Ricciuti A (1990), Subtyping aggression in children and adolescents. *J Neuropsychiatry Clin Neurosci* 2:189–192
- Walker-Barnes CJ, Mason CA (2001), Ethnic differences in the effect of parenting on gang involvement and gang delinquency: a longitudinal, hierarchical linear modeling perspective. *Child Dev* 72:1814–1831
- Webster-Stratton C, Hancock L (1998), Training for parents of young children with conduct problems: content, methods, and therapeutic processes. In: *Handbook of Parent Training: Parents as Co-Therapists for Children's Behavior Problems*, 2nd ed. Briesmeister JM, Schaefer CE, eds. New York: John Wiley & Sons, pp 98–152
- Webster-Stratton C, Reid MR (2003), The incredible years parents, teachers and children training series: a multifaceted treatment approach for young children with conduct problems. In: *Evidence-Based Psychotherapies for Children and Adolescents*, Kazdin AE, Weisz JR, eds. New York: The Guilford Press 224–240
- Webster-Stratton C, Reid MJ, Hammond M (2004), Treating children with early-onset conduct problems: intervention outcomes for parent, child, and teacher training. *J Clin Child Adolesc Psychol* 33:105–124
- Wilson J, Steiner H (2002), Conduct problems, substance abuse and social anxiety. *Clin Child Psychol Psychiatry* 7:235–247
- Wright H, Holmes G, Stader S, Penny R, Wieduwilt K (2004), Psychiatric diagnoses of infants and toddlers referred to a community mental health system. *Psychol Rep* 95:495–503
- Yudofsky SC, Silver JM, Jackson W, Endicott J, Williams D (1986), The Overt Aggression scale for the objective rating of verbal and physical aggression. *Am J Psychiatry* 143:35–39
- Zoccolillo M (1993), Gender and the development of conduct disorder. *Dev Psychopathol* 5:65–78
- Zoccolillo M, Pickles A, Quinton D, Rutter M (1992), The outcome of conduct disorder. *Psychol Med* 22:971–986

ERRATUM

In the article by Greenhill et al., “Efficacy and Safety of Immediate-Release MPH Treatment for Preschoolers With ADHD,” which appeared in the November 2006 issue of the *Journal* (*J Am Acad Child Adolesc Psychiatry*, 45:1284–1293), the first sentence of the third paragraph of the Results section is incorrect (p. 1289). The sentence should read, “For those preschoolers who completed titration ($N = 147$), blind ratings classified 7 (5%) preschoolers as nonresponders; 14 (10%) as placebo nonresponders; 24 (16%) as best responding to 1.25 mg t.i.d. (0.2 mg/kg/day); 26 (18%) as best responding to 2.5 mg t.i.d. (0.4 mg/kg/day); 30 (20%) as best responding to 5.0 mg t.i.d. (0.8 mg/kg/day); 36 (24%) as best responding to 7.5 mg t.i.d. (1.2 mg/kg/day); 7 (5%) as best responding to 10 mg t.i.d. (1.3 mg/kg/day); and 3 (2%) as having insufficient data.”