Oppositional Defiant Disorder

S. SUTTON HAMILTON, MD, and JOHN ARMANDO, LCSW, *Underwood-Memorial Hospital, Woodbury, New Jersey*

Oppositional defiant disorder is defined by the *Diagnostic and Statistical Manual of Mental Disorders,* 4th ed., as a recurrent pattern of developmentally inappropriate, negativistic, defiant, and disobedient behavior toward authority figures. This behavior often appears in the preschool years, but initially it can be difficult to distinguish from developmentally appropriate, albeit troublesome, behavior. Children who develop a stable pattern of oppositional behavior during their preschool years are likely to go on to have oppositional defiant disorder during their elementary school years. Children with oppositional defiant disorder have substantially strained relationships with their parents, teachers, and peers, and have high rates of coexisting conditions such as attention-deficit/hyperactivity disorder and mood disorders. Children with oppositional defiant disorder are at greater risk of developing conduct disorder and antisocial personality disorder during adulthood. Psychological intervention with both parents and child can substantially improve short- and long-term outcomes. Research supports the effectiveness of parent training and collaborative problem solving. Collaborative problem solving is a psychological intervention that aims to develop a child's skills in tolerating frustration, being flexible, and avoiding emotional overreaction. When oppositional defiant disorder coexists with attention-deficit/hyperactivity disorder, stimulant therapy can reduce the symptoms of both disorders. (*Am Fam Physician*. 2008;78(7):861-866, 867-868. Copyright © 2008 American Academy of Family Physicians.)

▶ **Patient information:** A handout on oppositional defiant disorder, written by the authors of this article, is provided on page 867.

Oppositional defiant disorder is among the most commonly diagnosed mental health conditions in childhood. It is defined by a recurrent pattern of developmentally inappropriate levels of negativistic, defiant, disobedient, and hostile behavior toward authority figures.[1] This behavior must be present for more than six months and must not be caused by psychosis or a mood disorder, and the behavior must negatively impact the child's social, academic, or occupational functioning *(Table 1)*.[1]

Several large community-based studies have found that approximately 3 percent of children meet criteria for oppositional defiant disorder as described by the *Diagnostic and Statistical Manual of Mental Disorders,* 4th ed. (DSM-IV).[2-4] However, studies show considerable variance associated with differences in the criteria used, age at assessment, and number of informants used, resulting in prevalence estimates of 1 to 16 percent.[5]

Children with oppositional defiant disorder have substantially impaired relationships with parents, teachers, and peers. These children are not only impaired in comparison with their peers, scoring more than two standard deviations below the mean on rating scales for social adjustment, but they also show greater social impairment than do children with bipolar disorder, major depression, and multiple anxiety disorders.[6] When compared with oppositional defiant disorder, only conduct disorder and pervasive developmental disorder had nonstatistical differences in social adjustment.[6]

Oppositional defiant disorder is more common in boys than girls, but the data are inconsistent.[7] Some researchers propose that different criteria be used with girls, who tend to exhibit aggression more covertly.[5] Girls may use verbal, rather than physical, aggression, often excluding others or spreading rumors about another child. Oppositional defiant disorder is more common among children in low-income households and is typically diagnosed in late preschool to early elementary school with symptoms often appearing two or three years earlier. Cross-sectional epidemiologic studies show a gradually increasing prevalence of oppositional defiant disorder as children age.[4]

Etiology

Researchers agree there is no single cause or even greatest single risk factor for oppositional defiant disorder. Rather, it is best understood in the context of a biopsychosocial model in which a child's biologic vulnerabilities and protective factors interact complexly with the protective and harmful

SORT: KEY RECOMMENDATIONS FOR PRACTICE

Clinical recommendation	*Evidence rating*	*References*	*Comments*
Children with ADHD should be evaluated for oppositional defiant disorder.	C	10	Many studies show oppositional defiant disorder commonly co-occurring in children with ADHD
Outpatient therapy directed at children, parents, or both improves outcomes in children with oppositional defiant disorder.	B	13, 16, 19	Studies find outpatient therapy effective in treating oppositional defiant disorder
Media-based parent training is effective for improving outcomes of behavioral problems in children with oppositional defiant disorder.	B	17, 19	Cochrane review
Psychostimulants reduce the behaviors of oppositional defiant disorder in children with coexisting ADHD.	A	20-22	Data from the Multimodal Treatment Study of Children with ADHD and other randomized prospective studies

ADHD = attention-deficit/hyperactivity disorder.

A = consistent, good-quality patient-oriented evidence; B = inconsistent or limited-quality patient-oriented evidence; C = consensus, disease-oriented evidence, usual practice, expert opinion, or case series. For information about the SORT evidence rating system, go to http://www.aafp.org/afpsort.xml.

aspects of his or her environment to determine the likelihood of developing this disorder.[5]

Recent theories conceptualize children with oppositional defiant disorder as possessing deficits in a discrete skill set that lead to oppositional behavior.[6] An apparently noncompliant child who "explodes" in response to a parental demand may lack the cognitive or emotional skills required to comply with the adult's request. For example, a child may not have developed the skill of affective modulation, and tends to emotionally overreact, losing his or her capacity to reason. A child may possess deficits in his or her executive cognitive skills (e.g., working memory, ability to change tasks, organized problem solving). These deficits undermine the child's ability to comply with adult demands. Such skill deficits are components of the transactional conceptualization of oppositional defiant disorder, which emphasizes the interaction of the children and parents, and the context of the behavior. An important feature of this model is the relative predictability of the context (e.g., bath time, dinnertime) and the parent and child behaviors that precipitate a child's meltdown.

Table 1. DSM-IV Diagnostic Criteria for Oppositional Defiant Disorder

A pattern of negativistic, hostile, and defiant behavior lasting at least six months, during which four (or more) of the following are present:
Often loses temper
Often argues with adults
Often actively defies or refuses to comply with adults' requests or rules
Often deliberately annoys people
Often blames others for his or her mistakes or misbehavior
Is often touchy or easily annoyed by others
Is often angry and resentful
Is often spiteful or vindictive
The disturbance in behavior causes clinically significant impairment in social, academic, or occupational functioning
The behaviors do not occur exclusively during the course of a psychotic or mood disorder
Criteria are not met for conduct disorder, and, if the individual is 18 years or older, criteria are not met for antisocial personality disorder

NOTE: *Consider a criterion met only if the behavior occurs more frequently than is typically observed in individuals of comparable age and developmental level.*

DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, *4th ed., rev.*

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Neurobiologic theories have been explored in the etiology of aggression. Neurotransmitters such as serotonin, norepinephrine, and dopamine have been investigated in their role with aggression. No single neurotransmitter or neurologic pathway has been identified as the root cause. Oppositional defiant disorder is clearly familial, but research has yet to determine what role genetics play because studies on the genetics of the disorder have produced inconsistent results.[5] Smoking during pregnancy and malnutrition during pregnancy have been associated with the development of oppositional defiant disorder, although causality has not been firmly established.[8]

Natural History

The natural history of oppositional defiant disorder is not completely understood. The

majority of persons who are diagnosed with the disorder in childhood will later develop a stable pattern of oppositional defiant disorder behavior, an affective disorder, or oppositional defiant disorder with coexisting attention-deficit/hyperactivity disorder (ADHD) or affective disorders. Some children persist with oppositional defiant disorder without coexisting conditions. Children who were diagnosed with oppositional defiant disorder at a young age (e.g., preschool, early elementary school) may later transition to a diagnosis of ADHD, anxiety, or depression.[9] In general, earlier and more severe oppositional defiant disorder is associated with a poorer long-term prognosis.[9]

Coexisting Conditions

Coexisting conditions are common in children with oppositional defiant disorder, particularly ADHD and mood disorders. The extent and nature of their coexistence is not precisely defined. The most comprehensive study of children with ADHD is the Multimodal Treatment Study of Children with ADHD. In this study, researchers found that 40 percent of children with ADHD also meet diagnostic criteria for oppositional defiant disorder.[10] Children who have both disorders tend to be more aggressive, have more persistent behavioral problems, experience more rejection from peers, and more severely underachieve academically.[5]

In one community study of children with oppositional defiant disorder, 14 percent had coexisting ADHD, 14 percent had anxiety, and 9 percent had a depressive disorder.[7] The authors of another study found that children with oppositional defiant disorder were twice as likely to have severe major depression or bipolar disorder compared with a reference group.[6,11] Specific data are lacking, but expert consensus is that learning disabilities and language disorders also commonly coexist with oppositional defiant disorder.[5]

Oppositional defiant disorder has commonly been regarded as a subset and precursor of the more serious conduct disorder, in part because most children with conduct disorder have a history of oppositional defiant disorder. Approximately one third of children with oppositional defiant disorder subsequently develop conduct disorder, 40 percent of whom will develop antisocial personality disorder in adulthood.[12] Children with coexisting oppositional defiant disorder and ADHD are particularly likely to develop conduct disorder.

Among other features, aggression toward other people and animals, a disregard for the rights of others, and the theft or destruction of others' property characterize conduct disorder.[1] The DSM-IV precludes diagnosing a child with both oppositional defiant disorder and conduct disorder. When a diagnosis of conduct disorder is made, the diagnosis of oppositional defiant disorder must be dropped if strict adherence to the DSM-IV is sought. Some researchers conceptualize conduct disorder and oppositional defiant disorder less as separate disorders, but rather as differing primarily in the severity of their disruptive behavior. Other researchers consider the two as entirely separate disorders. There is little disagreement that conduct disorder is more serious and is a poor outcome for children previously diagnosed with oppositional defiant disorder.

Case

Lisa is a five-year-old girl whose parents asked their family physician to see her because of their increasing concern about her temper tantrums in the home. The parents indicated that Lisa often becomes enraged and argumentative with them, refusing to follow rules or take direction. In particular, they report difficulty getting her to transition from playing with her toys to coming to the dinner table. After Lisa ignored her parents' repeated prompts, her father became frustrated and told her that she had lost her dessert privilege. Lisa became aggressive and destructive, breaking her toys and smashing food and water from the dinner table into the carpet. Her parents described similar scenarios at bedtime, bath time, and when getting dressed in the morning. They described her as irritable in these situations and they felt she was deliberately ignoring or trying to annoy them.

Diagnosis

Tools such as the National Initiative for Children's Healthcare Quality (NICHQ) Vanderbilt Assessment Scale,[13] designed for the primary care evaluation of children with suspected or diagnosed ADHD, contain questions that aid in the identification of oppositional defiant disorder. Use of this or similar instruments, such as the SNAP-IV Teacher and Parent Rating Scale for children with ADHD,[14] may allow enhanced detection of oppositional defiant disorder as well as other psychological concerns. Screening tools such as the Pediatric Symptom Checklist are not specific for oppositional defiant disorder, but can screen for cognitive, emotional, or behavioral problems, thereby identifying children who require additional investigation.[15] *Table 2* provides more information on how to access these tools online.[13-15]

Table 3 provides a differential diagnosis for oppositional defiant disorder.[1] A higher index of suspicion should be maintained in children with known risk

Table 2. Tools to Identify ADHD, Oppositional Defiant Disorder, and Other Behavioral Disorders

NICHQ Vanderbilt Assessment Scale[13]
Web site: http://www.nichq.org/NICHQ/Topics/ChronicConditions/ADHD/Tools/
SNAP-IV[14]
Web site: http://www.adhdcanada.com/pdfs/SNAP-IVTeacherParetnRatingScale.pdf
Pediatric Symptom Checklist[15]
Web site: http://www.massgeneral.org/allpsych/PediatricSymptomChecklist/psc_english.pdf

ADHD = attention-deficit/hyperactivity disorder; NICHQ = National Initiative for Children's Healthcare Quality; SNAP-IV = Swanson, Nolan, and Pelham Teacher and Parent Rating Scale, 4th ed.

Information from references 13 through 15.

factors such as ADHD because approximately 40 percent of children with ADHD have coexisting oppositional defiant disorder.[10] It is useful to recognize the role of established environmental risk factors such as living in a single-parent household and having low socioeconomic status. Chronically obese children are also at increased risk for oppositional defiant disorder.[4] Relevant family history includes that of oppositional defiant disorder, conduct disorder, or antisocial personality disorder.[1]

Oppositional defiant disorder is most commonly diagnosed during the elementary school years, although most children with the disorder have a history of significant oppositional behavior in preschool.

The initial step in diagnosis is to determine whether or not the behavior is, in fact, abnormal. A certain amount of oppositional behavior is normal in childhood. Oppositional defiant disorder is only distinguishable by the duration and degree of the behavior. Physicians should carefully explore the possibility that the child's oppositional behavior is caused by physical or sexual abuse, or neglect. Given the wide range of normal oppositional behavior during the preschool years, caution should be exercised in diagnosing this disorder in the preschool-age child.[5] Assessment of the child with a potential diagnosis of oppositional defiant disorder depends on establishing a therapeutic alliance with both the child and family. The assessment should include information gathered from multiple sources (e.g., preschool, teachers) as well as history obtained from the child directly.

To satisfy DSM-IV criteria for oppositional defiant disorder, a child must frequently demonstrate behavior from at least four of nine criteria *(Table 1)*.[1] The behavior must be considerably more frequent than is typically observed in persons of comparable age and developmental level and must cause clinically significant impairment in social, academic, or occupational functioning.[1]

When the diagnosis is unclear, patients should be referred to a psychologist or psychiatrist trained in the assessment of children with behavioral disorders. For children in elementary school, a physician's written request should facilitate a school-based evaluation by an appropriate professional. Evaluation of preschool children can most often be prompted by a telephone call to a county's Child Find or similar program. When available, a developmental-behavioral pediatrician can be an ideal beginning point of an assessment. Structured psychological interviews (such as the National Institute of Mental Health's Diagnostic Interview Schedule for Children [DISC] version 2.3), typically administered by a psychologist, can be used for formal diagnosis. When these services are unavailable, physicians may wish to use a brief series of questions that researchers have shown to possess 90 percent sensitivity and 94 percent specificity for identifying oppositional defiant disorder *(Table 4)*.[7]

Neuroimaging (e.g., functional magnetic resonance imaging, single-photon emission computed tomography, electroencephalography) has a role in the research of aggressive behavior, but it has no clinical role in the evaluation of children with suspected oppositional defiant disorder.

Nonpharmacologic Treatment

Research supports outpatient psychological interventions for children with oppositional defiant disorder. Studies have demonstrated that parent training is an effective means of reducing disruptive behavior.[16] Parents often come to see their child's behavior as deliberate and under the child's control, intentionally hurtful toward the parent, or as an attribute of a disliked family

Table 3. Differential Diagnosis of Oppositional Defiant Disorder

Attention-deficit/hyperactivity disorder
Conduct disorder (by DSM-IV criteria; cannot be diagnosed with both)
Impaired language comprehension (e.g., hearing loss, mixed receptive-expressive language disorder)
Mental retardation
Mood disorders (including bipolar disorder)
Normal individualization (i.e., in adolescence)
Psychotic disorders

DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, *4th ed., rev.*

Information from reference 1.

member (e.g., an abusive partner).[17] The difficult behavior and social disruption caused by children with oppositional defiant disorder can have adverse effects on the mental health of their parents.[18] Parent training teaches parents to be more positive and less harsh in their discipline style. Media-based parent training (e.g., watching a video) has been shown to be effective with results continuing one year after the intervention.[19] In a randomized study, investigators found that applying parent training to both the child and parent is superior to training aimed solely at the parent, supporting the generally agreed-upon principle that therapies are more effective when both parent and child are involved.[20]

Multisystemic therapy is a term for a community-based intervention that explicitly attempts to intervene in multiple real-life settings (e.g., home, school). Studies support the evidence behind multisystemic therapy, but there are limitations in the ability to generalize findings.[13]

Collaborative problem-solving interventions seek to facilitate joint problem solving, rather than to teach and motivate children to comply with parental demands. This model encourages parents and children to identify issues and to use cognitive approaches to resolve the conflict to the mutual satisfaction of both parties. Collaborative problem solving appears to be at least as effective as parent training.[21]

Pharmacologic Treatment

Several studies have found that medicines used in the treatment of ADHD, such as methylphenidate (Ritalin), atomoxetine (Strattera), and amphetamine/dextroamphetamine (Adderall), are effective in the treatment of ADHD with coexisting oppositional defiant disorder.[22-24] According to these studies, stimulants reduced the symptoms of both ADHD and oppositional defiant disorder symptoms. There are also two small studies that show the effectiveness of clonidine (Catapres) in treating children with ADHD and oppositional defiant disorder, either as monotherapy or as augmentation to medical therapy.[25,26] Studies have not demonstrated that stimulants reduce the symptoms of oppositional defiant disorder when ADHD is absent.

Prevention

There is evidence that programs for preschool children (e.g., Head Start) reduce delinquency and, by inference, oppositional defiant disorder.[13] In elementary school-age children, the greatest evidence on prevention supports parent management strategies. Researched programs include the Triple P-Positive Parenting Program and Incredible Years parenting series. Both of these use self-directed, multimedia, parenting and family support strategies to prevent severe behavioral problems in children by enhancing the knowledge, skills, and confidence of parents. These programs are most appropriate for parents whose children appear to be at risk of developing emotional and/or behavioral problems. School-based programs that focus on antibullying, antisocial behavior, or peer groups can also be effective prevention approaches.[27]

Family physicians should suspect oppositional defiant disorder when parents report an excessively argumentative, defiant, and hostile school-age child. Oppositional defiant disorder is common in children with ADHD, and use of the validated instruments mentioned in this article for the assessment and diagnosis of ADHD can help physicians to identify oppositional defiant disorder. Suspicion for oppositional defiant disorder should be raised when known risk factors (e.g., family history of oppositional defiant disorder/conduct disorder, ADHD, low socioeconomic status) are present. Formal diagnosis may require referral to a children's psychologist or psychiatrist.

Children with oppositional defiant disorder are best served by referral to a professional who is skilled and knowledgeable in evidence-based therapies for these children, although finding such professionals can be challenging. A physician's ability to locate particular resources for a child will depend on the family's insurance, financial resources, and motivation, as well as the availability of such resources in their community. There is no single best way to connect a child to the best services for him or her, and it is often prudent to explore multiple avenues to find the optimal available services. A physician's knowledge of oppositional defiant disorder,

Table 4. Evidence-Based Questions for Assessing Likelihood of Meeting DSM-IV Criteria for Oppositional Defiant Disorder

Has your child in the past three months been spiteful or vindictive, or blamed others for his or her own mistakes? *(Any "yes" is a positive response.)*
How often is your child touchy or easily annoyed, and how often has your child lost his or her temper, argued with adults, or defied or refused adults' requests? *(Two or more times weekly is a positive response.)*
How often has your child been angry and resentful or deliberately annoying to others? *(Four or more times weekly is a positive response.)*

NOTE: *A positive response for all three is 91 percent specific for meeting DSM-IV criteria on full interview. Any negative response is 94 percent sensitive for ruling out oppositional defiant disorder.*

DSM-IV = Diagnostic and Statistical Manual of Mental Disorders, *4th ed., rev.*

Information from reference 7.

its typical symptoms, and best available treatments can allow the physician to serve as a patient advocate, to connect families with services, and to provide families with educational materials and online resources.

The Authors

S. SUTTON HAMILTON, MD, is associate director of the Underwood-Memorial Hospital Family Medicine Residency Program in Woodbury, N.J. He received his medical degree from the University of Pittsburgh (Pa.) School of Medicine, and completed a family medicine residency at Franklin Square Hospital Center in Baltimore, Md., and a faculty development fellowship at the University of Cincinnati (Ohio).

JOHN ARMANDO, LCSW, is a behavioral scientist at the Underwood-Memorial Hospital Family Medicine Residency Program. He earned his master of social service degree at the Bryn Mawr (Pa.) College Graduate School of Social Work and Social Research.

Address correspondence to S. Sutton Hamilton, MD, Underwood-Memorial Hospital, Family Medicine Residency Program, 75 West Red Bank Ave., Woodbury, NJ 08096 (e-mail: HamiltonS@umhospital.org). Reprints are not available from the authors.

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