Oppositional Defiant Disorder (ODD)

Disruptive, Impulse–Control, and Conduct Disorders
- Oppositional Defiant Disorder
- Intermittent Explosive Disorder
- Antisocial Personality Disorder
- Pyromania
- Kleptomania
- Other Specified Disruptive, Impulse–Control, and Conduct Disorder
- Unspecified Disruptive, Impulse–Control, and Conduct Disorder

DSM–V Review: Diagnostic Criteria
- Four+ symptoms for at least 6 months:
  - Pattern of angry/irritable mood, includes:
    - Often loses temper,
    - Often touchy or easily annoyed,
    - Often angry and resentful.
  - Argumentative/defiant behavior, includes:
    - Argues w/authority figures or adults,
    - Actively defies or refuses to comply w/requests from authority figures or w/rules,
    - Deliberately annoys others,
    - Often blames others for his/her mistakes or misbehavior.
  - Vindictiveness, includes:
    - Spiteful or vindictive at least twice within the past six months.

DSM–V: Diagnostic Criteria Cont’d
- For children < 5 years, the behavior should occur on most days for a period of at least 6 months.
  - 5 + y/o, the behavior should occur at least once per week for at least 6 months.
- Frequency and intensity of the behaviors are outside normative range
  - Including: developmental level, gender, and culture.
- Behavior associated with distress:
  - Individual or others in his or her immediate social context or,
  - Impacts negatively on social, educational, occupational, or other important areas of functioning.
- Do not occur exclusively during the course of a psychotic disorder, substance use, depressive, or bipolar disorder and criteria are not met for disruptive mood dysregulation disorder.

Mild, Moderate and Severe Specifications

Symptoms Displayed
- Angry/irritable
  - Temper,
  - Easily annoyed,
  - Resentful.
- Argumentative/defiant behavior
  - Argues w/mom
  - Defying mom
  - Refusing to comply w/requests from mom
  - Refuses to comply with mom
  - Deliberately annoyed mom \( \rightarrow \) elbowing her on plane
  - Blames mom for misbehaviors \( \rightarrow \) “you jabbed me first”
- Vindictiveness
  - Spiteful or vindictive

Secondary Features (ref)
- Low self-esteem (or overly inflated self-esteem)
- Mood lability
- Low frustration tolerance
- Swearing
- Precocious use of alcohol, tobacco, or illicit drugs
- Conflict with parents, teachers, and peers
DSM-V: Associated and Secondary Features

- ODD is associated with increased risk of other mental disorders during childhood AND adulthood beyond the effects of CD (Burke et al., 2005).
  - Approximately 1/3 children → CD (Hamilton & Armando, 2008)
  - Approximately 40% → Anti-Personality Disorder (Hamilton & Armando, 2008)
- Associated suicide attempts
- Increased risk for adjustment as adults
  - Academic failure,
  - Antisocial behavior,
  - Rejection by peers,
  - Low self-esteem,
  - Impulsive-control problems,
  - Substance abuse,
  - Anxiety, and
  - Depression.
- Impairments in emotional, social, academic, and occupational adjustment.
  - Parents, teachers, supervisors, peers, and romantic partners.

Prevalence & Course

Prevalence:
- 2-16%

Course:
- Onset usually before age 8 and not later than early adolescence
- Onset is gradual, occurring over course of months or years
- Developmental antecedent to CD; however, many children with ODD do not go on to develop CD

Prevalence Rates

National Comorbidity Survey Replication (Knick, Knudin, Hirogi, & Kessler, 2007)

- Estimated lifetime prevalence: 10.2%
- Gender comparison for lifetime prevalence:
  - Males: 11.2%
  - Females: 9.2%
  - Difference is not statistically significant
- Age comparison for lifetime prevalence:
  - 10-24 age range: 13.4%
  - >24: 7.5-10.1%

Onset and Course

National Comorbidity Survey Replication (Knick, et al., 2007)

- Median age-of-onset: 12 years old
  - Self-reported onset begins at age four and steadily increases into late adolescence
- Median duration: 6 years, varies little by sex or age
- Offset: Usually occurs before age 18
  - Early onset of ODD, mood, anxiety, impulse-control, and substance use disorders → longer duration with ODD

Strengths and Limitations

National Comorbidity Survey Replication (Knick, et al., 2007)

Limitations:
- Use of retrospective self-report data
- Diagnosis of ODD relied on a single informant (self)

Strengths:
- First to provide an estimate of lifetime prevalence of ODD
- New data on the persistence of ODD

Prevalence Rates

British Child Mental Health Survey (Maughan, Rowe, Menez, Goodman, & Meltzer, 2004)

Gender Differences (based on diagnostic procedure):
- Males: 3.2% met diagnostic criteria
- Females: 1.4% met diagnostic criteria
- Significantly more common in males

Differential Reporting:
- Parents did not report significant gender differences
- Teacher reports did report significant gender differences
Age Trends

• Constant from age 5 to 10, then linear decrease in late childhood and adolescent years (same for both genders)

Genetics/Neurobiological Traits
Etiology - Biological

Genetics
Twin studies evidence for moderate genetic influence, but environment very important
Likely inherit risk factors
Sensitivity to alcohol
Temperament
Irritability
Impulsivity
Sensation seeking
Antisocial bias

Genetics

Twin Studies of ODD

<table>
<thead>
<tr>
<th>Study</th>
<th>Age</th>
<th>N Twins</th>
<th>ODD Assessment</th>
<th>Male-Male</th>
<th>Female-Female</th>
<th>Heritability Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virginia Eaves et al. (1997)</td>
<td>9-16</td>
<td>1,252</td>
<td>Interview DSM-III-R symptom count</td>
<td>0.65</td>
<td>0.59</td>
<td>MZ: 23/23, DZ: 22/22</td>
</tr>
<tr>
<td>Minnesota S.A. Moffitt, Craig, McGue, &amp; Iacono (2001)</td>
<td>10-12</td>
<td>753</td>
<td>Interview DSM-III-R symptom count</td>
<td>0.69</td>
<td>0.50</td>
<td>M: 39, F: 39</td>
</tr>
<tr>
<td>Missouri Cronk et al. (2002)</td>
<td>11-13</td>
<td>1,958</td>
<td>Interview DSM-IV symptom count</td>
<td>0.82</td>
<td>0.45</td>
<td>M: 60, F: 51</td>
</tr>
</tbody>
</table>

Note: ODD = oppositional defiant disorder; MZ = monozygotic; DZ = dizygotic; M = males; F = females. Heritability estimate in percentage of variance in risk due to genetic factors. Combined report is self-report and mother report combined. Unweighted M = 51 and weighted M = 60 from independent samples with multiple estimates from the same sample averages.

DSM–V: Prevalence

• Prevalence: 1–11%, avg. of 3.3%.
• More prevalent in families in which child care is disrupted by a succession of different caregivers or families in which harsh, inconsistent, or neglectful child-rearing practices are common.
• Rate depends on age and gender of child.
• Somewhat more prevalent in males prior to adolescence.

DSM–V: Onset and Course

• First symptoms usually appear during preschool and behaviors are frequent during preschool and adolescence.
  Important to evaluate intensity and frequency vs. normative levels.
• ODD often precedes development of CD.
  Childhood–onset type of conduct disorder.
  Many children and adolescents with ODD do not subsequently develop CD.
• Course: 3 years
• Manifestations of ODD across development are consistent.

DSM–V: Risk and Prognostic Features

Temperamental

• Temperamental: problems in emotional regulation predictive of ODD.
  • High levels of emotional reactivity, poor frustration tolerance → angry/irritable moods.
  • Related to abnormality of the amygdala and prefrontal cortex (PFC).
Neurobiological markers:
- Lower heart rate and skin conductance reactivity, reduced basal cortisol reactivity, abnormalities in the PFC and amygdala.
- Reduced basal cortisol reactivity associated with higher rates of aggression and with poor social relationships (Booth, Granger, & Shirtcliff, 2008).
- PFC regulation of behavior, cognition, and attention (Arsten, 2006).
- Amygdala emotion regulation.

May not be specific to oppositional defiant disorder, also similar in conduct disorder.

Disrupted by a succession of different caregivers or families in which harsh, inconsistent, or neglectful child-rearing practices are common.

Associated w/distress in the individual or others in his/her immediate social context.
  - Could impact negatively on social, educational, occupational, or other areas of functioning.

Often justify their behaviors as a response to unreasonable demands/circumstances.
  - Do not consider themselves as being angry, oppositional, or defiant difficulty to disentangle relative contribution of the individual with the disorder to problematic interactions i.e.: Hostile parenting ODD or ODD Hostile parenting?

Higher rate of substance use disorders.
  - Is typically associated with the development of CD

ODD higher in samples of children, adolescents, and adults with ADHD.
  - Shared temperamental risk factors.

Risk for development of anxiety disorders and major depressive disorder.
  - Defiant, vindictive, & argumentative symptoms carry most risk CD
  - Angry-irritable mood symptoms emotional disorders.

DSM-V: Risk and Prognostic Features

Genetic and physiological

Environmental

 DSM–V: Risk and Prognostic Features

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DSM–IV–TR to DSM–V Changes in Diagnostic Features

Symptoms are relatively the same.
  - DSM–V more specific: spiteful or vindictive at least twice within the past 6 months.
  - Distinguishes the age-specific behavioral criteria.
  - Before and after 5 years of age criteria.

DSM–IV–TR:
  - Criteria D: Criteria are not met for Conduct Disorder, and, if the individual is age 16 years or older, criteria are not met for Antisocial Personality Disorder

Classified in different categories.

Diagnostic Description

Recurrent pattern of developmentally inappropriate levels of negativistic, defiant, disobedient and hostile behavior toward authority figures.
  - Including actively defying or refusing to comply with adult rules and requests, frequent temper outbursts, and excessive arguing
  - (Anderson et al., 1986; Dumas and LaFrenier, 1993; Dumas et al., 1995; Lytton, 1990; Rey et al., 1988; Schacher and Wachsman, 1990; Stormchack et al., 1997)

Arguing with adults, losing one's temper, and angry or intentionally annoying behavior (Dick et al., 2005).
Diagnostic Onset and Course

- Early childhood (Dick et al., 2005)
- Children with ODD often are diagnosed with CD when they reach adolescence (Dick et al., 2005)
  - Not all individuals with CD have had a previous diagnosis of ODD.
  - 3x as likely to develop CD (Lahey, McBurnett, & Loeber, 2000).
  - Lahey–Loeber Model of comorbidity:
    - Only children with ADHD who also exhibit comorbid ODD will develop CD. Then later develop APD (Loeber et al., 2006).

Risk and Prognostic Features

- Temperament:
  - Predictive of externalizing behavior problems by late childhood (Sanson and Prior, 1999).
  - Negative emotionality
  - Intense/reactive responding
  - Inflexibility
  - Temperamental difficulties may interact with psychosocial early life risk factors
  - Low income → Maternal depression, social stress, and support and home environment (Shaw et al., 2001).

Risk and Prognostic Features Cont’d

- Community Factors:
  - Community disorganization, drug availability, presence of neighborhood adults involved in crime (Herrenkohl et al., 2000)
  - Exposure to violence and exposure to racial prejudice (Hawkins et al., 1998)
- Unemployment (Fergusson et al., 1997),
- Neighborhood violence (Guerra et al., 1995)
- Family poverty and children’s aggression (among white children alone) (Guerra et al., 1995)
- Low income (Shaw et al., 2001) and Duration of poverty (McLoyd, 1998)
- Coercive parenting behaviors (Patterson, 1984; Eddy et al., 2001; Stormshak et al., 2000)
- Low parental warmth and involvement → Oppositional child behavior (Stormshak et al., 2000)
- Child abuse (Dodge et al., 1995)
  - Demonstrated social processing deficit → conduct problems
- Association with deviant peers (Elliott and Mennis, 1996; Keenan et al., 1999; Simons et al., 1999):
  - Initiation of delinquent behavior in boys
  - For girls, more common with an early onset of pubertal maturation (Stattin and Magnusson, 1990)
- Peer Rejection → conduct problems and aggressive responding
  - Peer rejection → Conduct problems
  - Cole and Dodge, 1998; Cole and Lenox, 1994; Dodge et al., 1990; Bolger and Patterson, 2001
- Prenatal smoking (Landgren et al., 1998; Hill et al., 2000)
- Prenatal maternal alcohol use (Hill et al., 2000)
- Maternal viral illness (Mellins et al., 2006)
- Parental separation (Fergusson et al., 1994; Sullivan et al., 1995)
- Early deprivation (Zeanah et al., 2005)
- Adoption (Sullivan et al., 1995)
- Unemployment (Fergusson et al., 1997),
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Patterson’s Model

- Based on the Coercion theory.
- Patterson hypothesized that aggressive behavior develops in families when parents use coercion as the primary mode for controlling their children.
- A child who has received abundant negative reinforcement for aversive behaviors and little positive reinforcement for appropriate behaviors
  - Likely to encounter major difficulties in academic and peer settings middle childhood.
- Parental failure to discipline, which is thought to be a major determinant for increases in antisocial child behavior.

Risk and Prognostic Features

- Genetic influences on behavior (twin studies):
  - Delinquent set of behaviors:
    - Rule-breaking behaviors:
      - 30–79% (Bartels et al., 2003).
      - Girls: 56–72% of variance in rule-breaking accounted by genetic factors.
      - When assessed by both parents: 80% covariance for rule-breaking due to genetics.
    - Aggression:
      - 51–72% (Bartels et al., 2003).
    - Familial negativity and adolescent antisocial behavior:
      - 51%–60% (Pike et al., 1996).
    - Functioning of PFC:
      - Composite genotypes (Nigg et al., 2007).

Genetic Comorbidity

- Genetic correlation between CD and ODD.
  - Joint Construct (Eaves et al., 2000; Nadder, Rutter, Silberg, Maes, & Eaves, 2002).
- Genetic influences contributes to covariation between ADHD and ODD (Dick et al., 2005)
- CD, ADHD, and ODD are largely explained by shared genetic influences (Dick et al., 2005).

Risk and Prognostic Features

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Low salivary cortisol level (van Goozen et al., 1998).

Dopamine transporter, dopamine D4 receptor, noradrenergic alpha-2 receptor (Nigg et al., 2007).

Testosterone and aggression (Pliszka, 1999).

Serotonin and aggression (Clarke et al., 1999; Kruesi et al., 1992).

Regulation of mood and impulsive behavior (Davidson et al., 2000).

Early physical maturation:
- Increased problem behaviors in girls (Graber et al., 1997; Laitinen-Krispijn et al., 1999; Stattin and Magnusson, 1990), but not in boys (Graber et al., 1997).
- "Off-time" in pubertal development:
  - Associated with deviant social status and thus contributes to antisocial behavior (Williams and Dunlop, 1999).
  - Delayed pubertal onset → Estrogen and testosterone administration increased aggression (Finkelstein et al., 1997).

Developmental Pathways of ODD

- Developmental Pathway (Loeber and Stouthamer-Loeber, 1998): Behavioral development of a group of individuals that is different from the behavioral development of another group or other groups of individuals.
- Pathways to serious conduct and delinquent problem behavior:
  - Overt Pathway:
    - Minor aggression to physical fighting and then violence
    - Covert Pathway:
      - Before age 15
      - Minor covert behaviors to property damage (fire setting or vandalism), and then
      - Moderate to serious forms of delinquency
  - Authority Conflict Pathway:
    - Before age 12
    - From stubborn behavior to defiance
    - Authority avoidance
**Prevention** (Burke et al., 2002; Coie and Jacobs, 1993; Loebner and Farrington, 1998):
- Parent-directed component
- Social-cognitive skills training
- Academic skills training
- Proactive classroom management
- Teacher training

Interventions on parenting factors:
- Focus is on multiple domains and needs (Catalano et al., 1998)

**Individual Intervention** (Brestan and Eyberg, 1998):
- Anger control/stress inoculation
- Assertiveness training
- Rational-emotional therapy
- Problem-solving skills training (Kazdin, 1996; Webster-Stratton and Hammond, 1997)
- Moral development interventions (Arbuthnot, 1992)

**Parent and Family Treatment**:
- Parent management training (Brestan and Eyberg, 1998)
- Parent child interaction training (Schultmann et al., 1998)

Integration of universal, targeted, and clinical intervention strategies (Offord et al., 1998)

**Multisystemic Therapy (MST)**

In order to best deal with a youth in trouble, treatment must target the many "systems" that impact the youth:
- Family,
- School environment,
- Friendships and,
- Peer pressures.

Works closely with the parents and child for 3–5 months in their home and community.

- Emphasizes recognized risk factors associated with antisocial behavior.
- Goal-oriented and focuses on helping the caregivers manage and nurture their challenging children more effectively.

**Project LIFT** (Reid et al., 1999)

- Parent training + classroom social skills + playground behavior + systematic communication

**Psychopharmacological Treatment**

- Mood stabilizers,
- Antipsychotics,
- Clonidine,
- Stimulants (Burke, 2002)