

Conduct Disorder and Its' Complexities--Prevalent, Thorny, Multi-faceted and Mysterious

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Conduct Disorder (CD): Definition

- DSM 5: A repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated, as manifested by the presence of at least three of the following 15 criteria in the past 12 months from any of the categories below, with at least one criterion present in the past 6 months:

CD Definition 2

- Aggression to people and animals
 - often bullies or intimidates others
 - often initiates physical fights
 - has used a weapon that can cause serious harm
 - physically cruel to people
 - physically cruel to animals
 - stolen while confronting victim
 - forced sexual activity

CD Definition 3

- Destruction of property
 - Fire-setting with intent to cause serious harm
 - Other serious property destruction
- Deceitfulness or theft
 - breaking and entering
 - lying and conning
 - non-trivial stealing without confrontation

CD Definition 4

- Serious violations of rules
 - often stays out at night despite parental prohibition beginning prior to age 13
 - has run-away from home overnight at least twice or once without returning for lengthy period
 - often truant beginning prior to age 13

Subtypes of Conduct Disorder

- DSM-II
 - un-socialized aggressive reaction
 - runaway reaction
 - group delinquent
- DSM-III
 - aggressive vs. non-aggressive
 - socialized vs. un-socialized

CD Subtypes 2

- DSM III-R
 - solitary aggressive type
 - group type
- DSM IV and V
 - childhood onset type (prior to age 10)
 - adolescent onset type (absent criteria before 10)
- Other
 - Covert vs. Overt Type

CD Subtypes 3

- Other Continued

- Specifiers DSM 5 “With limited pro-social emotions”
- High vs. Low Callousness (High Callous had higher IQ)—Frick
- ICD-10: Combination categories reflecting co-morbid conditions: depressive type, hyperkinetic type
- Restraint and Distress: Steiner
 - Patients with low restraint and low distress have a poorer prognosis and patients with high restraint with low distress may be more explosive.

Epidemiology

- Very common disorder:
- 1.5-15% (1.5-3.5% using interview methods)
- Gender distribution: Male:Female 3-5:1
- Some evidence of increased rates in recent years
- Peak rate of onset in late childhood to early adolescence

Epidemiology 2

- Childhood onset mostly male with worse prognosis and more aggression.
- Adolescent onset CD has more even sex ratio. Girls may have more health issues and may have more anxiety/depression as adults. Rates of female CD tend to be low through early childhood and increase at adolescence.
- Relationship to ASPD: only about 40% or less go on to adult ASPD (primarily from childhood onset group).

An Evolutionary Perspective

- Most persons normally motivated for pro-social behavior most of time (social species)
- Anti-social behavior develops over-time as pay-off for anti-social behavior begins to exceed pay-off for pro-social behavior
- Equilibrium models suggest that in a flexible pro-social species at least a few group members could succeed with frequent anti-social conduct.

Evolutionary Perspective 2

- Primary psychopath--the “few members” with substantial reproductive success using anti-social conduct. Always present and strongly heritable though absolute proportion would vary depending on “pay-off” conditions.
- Secondary anti-social--adopts anti-social conduct because more pro-social strategies are relatively un-available—often due to impaired competence.

Etiology-Risk Factors

- Biological Factors

- Genetic liability likely but genetic data stronger in ASPD.
 - Traits with gene linkage include: inattention, hyperactivity, aggressiveness, novelty seeking.
 - Cross situational CD behaviors have strong genetic component—chromosomes 2 and 19 have been implicated.
 - Enhanced rates of s/s variant of serotonin transporter gene
 - Low MAO A activity in some CD patients (found to increase CD risk only in presence of childhood adversity)
- CNS damage CD patients have higher rates of head and face trauma
- Autonomic hypo-arousal (or possibly excessive reactivity with adolescent onset type)
- A disorder of **executive function**: “hot executive” (orbitofrontal, anterior cingulate, amygdala pathways) with or without “cold executive” dysfunction.

Etiology-Risk Factors 2

- Biological factors continued
 - neurohormonal (cortisol, serotonin, testosterone)
 - Diminished salivary cortisol
 - Low CSF 5-HIAA
 - Elevated testosterone (not simple relationship, may reflect dominance behavior primarily)
 - Abnormal prolactin response to d-fenfluramine in impulsive aggressive patients (normal in callous-unemotional)
 - Gender effects
 - Boys with more direct aggression
 - Girls with higher levels of indirect aggression and higher levels of internalizing comorbidity. Poor adult health
 - Difficult temperament
 - Pre-natal toxin exposure—nicotine and FAS

Etiology-Risk Factors 3

- Psychosocial factors

- Poverty (may be related to large family size, overcrowding and poor parental supervision)
- Abuse, neglect and positive family attitude of acceptance toward violence and egocentricity
- Persecutory cognitive bias
- Impaired executive function—may be more closely related to co-morbid AD/HD
- Learning disability/low IQ, performance IQ > verbal IQ
- Delinquent peers

Etiology-Risk Factors 4

- Psychosocial variables continued
 - Unsupportive family interactions
 - Families with impaired management of transitions and change
 - Divorce has been associated with development of CD but may be related through intermediate variables of parental ASPD and high levels of parental conflict

Resilience Factors

- High IQ (generally)
- Positive temperament
- Good social skills
- “Islands of competence” outside school
- Positive relationship with at least one supportive adult
- Relationships with pro-social peers

Co-morbidity

- AD/HD: May be important sub-type with combination yielding worse prognosis. These patients tend to be more aggressive and to be more anti-social generally than those with conduct disorder alone. Rates of co-morbidity at about 50%
- Substance abuse: Extremely common affecting 60-80 % of CD youth. Childhood aggression is risk factor for adolescent SA. May reflect temperament as well as direct effects

Co-morbidity 2

- **Mood Disorders**

- Depressive co-morbidity shows variable course. May be relatively independent from CD symptoms. Related to maternal depression, paternal anti-social behavior, and high parent-child conflict. Conduct disordered individual are at increased risk of suicidal behavior.
- Bipolar Disorder: high rate of CD in juvenile bipolar patients. Manic symptoms can directly contribute to anti-social behavior.

Co-morbidity 3

- Psychosis
 - Some patients who subsequently develop schizophrenia have demonstrated years of anti-social and aggressive behaviors prior to developing psychosis. Some evidence of familial link between anti-social behavior and schizophrenia—basis unknown.
- Trauma spectrum disorder
 - Patients often have extensive exposure histories as victims, witnesses, and perpetrators of violence. Elevated risk of PTSD and likely more so among females.
- Anxiety disorders—mixed evidence

Reactive Aggression: A Neurocognitive Model—J. Blair

- Mammalian Threat Circuit (MTC): Medial Nucleus of the amygdala, medial hypothalamus, dorsal half of the periaqueductal gray
- MTC may be inhibited by cortex, especially the medial and orbitofrontal cortices.
- This circuit may be hyperactive (trauma exposure, temperamental endogenous factors)
- There may be impaired inhibitory control of the circuit secondary to damage or co-morbid conditions (Bipolar Disorder, AD/HD, etc)

Neurocognitive Model of Psychopathy— J. Blair

- Amygdala dysfunction associated with reduced threat responsivity (possibly noradrenergic hyposensitivity)
- Results in impairments in emotional learning, particularly as it pertains to affective responses to distress in others.
- Reward based learning is intact.

Conduct Disorder: A Transactional Model

- Underlying biological/temperamental features dispose to behavioral characteristics that then give rise to a range of environmental responses that then provoke further behavioral responses.
- Later in development, the individual may then more actively seek particular environments with which to interact.

Assessment

- Utilize information from multiple sources
- Structured interviews and rating scales
 - DISC
 - CBCL
 - Iowa Conners Aggression Factor
 - Children's Aggression Rating Scale
- Monitor one's own attitude and be aware of counter-transference feelings as these can become intense. Try to avoid therapeutic nihilism.
- Be ready to seek consultation particular if issues of dangerousness become prominent

Treatment

- Psychopharmacology--may be effective for symptoms of aggression and exacerbating co-morbidities (AD/HD, bipolar mood disorder, schizophrenia, etc.)
- Ecologically based multi-modal interventions--Multi-systemic therapy, Functional Family Therapy. Some of these have good empirical support for their effectiveness

Treatment 2

- Inpatient and residential treatment--Acute care may be helpful as crisis response to co-morbid conditions but residential care has more limited overall empirical support.
- However, some more recent promising work derived from DBT/CBT derived interventions such as Mode Deactivation Therapy (J. Apsche)
- Bottom line is that intervention must work to increase the relative value of pro-social behavior and will likely have to focus on multiple contributing factors.

Conclusion

- Conduct disorders represent a complex and heterogeneous family of conditions that share a broad range of contributing factors. May represent a “final common pathway” characterized by a deterioration in the re-enforcing quality of pro-social relative to anti-social behavior.
- Instrumental or predatory aggression and presence of callous/remorseless features (psychopathy) may be particularly negative prognostic features
- Effective treatment planning requires a careful assessment of this range of contributing variables and co-morbidities as well such that the patient experiences more net reward for pro-social relative to anti-social behaviors.