8 Resilience and Disruptive, Impulse Control, and Conduct Disorders of Childhood

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Introduction

The disruptive, impulse control, and conduct behavior disorders (DICCBDs) of childhood comprise attention-deficit hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), kleptomania, pyromania, intermittent explosive disorder, and conduct disorder (CD) (APA, 2013). These conditions are among the most commonly treated in mental health settings, with epidemiological studies suggesting that between 3% and 16% of all youth meet the diagnostic criteria for at least one, if not two or more, of these conditions (Tistarelli et al., 2020; Loeber et al., 2000; Eiraldi et al., 1997; for reviews, see Ringer (2020), Goldstein and Goldstein (1998), Barkley (1998)). These disorders can cause children and adolescents to behave angrily or aggressively toward people or property. They may have difficulty controlling their emotions and exhibit rule- and law-breaking behaviors (Puiu et al., 2018). As with the two versions of this chapter appearing in the first and second editions of this volume, the primary focus will be on ODD, ADHD, and CD as they occur with much a greater frequency in the childhood and adolescent populations. Additionally, as much of the literature cited in those versions is still very relevant today, it will be included with updated citations as needed.

An estimated 6% of children are affected by ODD or CD (Christenson et al., 2018). Each year, an estimated 2.7% of children and adults in the United States are affected by intermittent explosive disorder (Coccaro & McCloskey, 2019). Kleptomania and pyromania are rare, affecting 1% or fewer of people in the United States (Allely, 2019).

The angry, aggressive, or disruptive behaviors of people with these disorders are more extreme than typical behaviors. These behaviors:

- Are frequent
- Are long-lasting
- Occur across different situations
- Cause significant problems

One difference between these disorders and many other mental health conditions is that with disruptive disorders, a person's distress is focused outward and directly affects other people. With most other mental health conditions, such as depression and anxiety, a person's distress is generally directed inward toward themselves.

These disorders begin in childhood or adolescence and are more common in males than females. Several factors make it more likely that a person will exhibit a DICCBD, including harsh parenting, physical or sexual abuse, or parents

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with a history of addiction or problems with law enforcement.

These conditions have traditionally been referred to as "externalizing disorders" as opposed to "internalizing disorders" such as anxiety, depression, or learning disabilities. The former disorders are disruptive and disturb the immediate environment and are easily visible to the observer. Symptoms and impairments of the latter are not as often observed nor are environments as disrupted by affected children and adolescents. Furthermore, there is a growing body of the literature suggesting that the incidence and prevalence of these disorders is increasing (Fairman et al., 2017).

Given that the behavior of children with DICCDBs is rarely viewed as benign by parents, teachers, and community professionals, it is not surprising that these conditions comprise patterns of impulsive, hyperactive, aggressive, and defiant behaviors. These pose a significant adverse risk to a host of outcome variables in late adolescent and young adult years. In fact, even a single DICCBD compromises the probability of positive life adjustment in young adulthood. A combination of DICCBDs (e.g., ADHD and CD; ODD and CD) addresses significant adverse outcomes in major life domains, including school, family, health, vocation, and even activities such as driving (Uchida et al., 2017; Goldstein, 2002; Barkley & Gordon, 2002). DICCBDs may also act catalytically, reducing a child's opportunity for normal life adjustment by precipitating a cascade of adverse outcomes into adulthood.

A small percentage of children with ADHD and CD and an even greater percentage of children with ODD alone manage to transition and adjust reasonably well into young adulthood (Uchida et al., 2017; Teeter-Ellison, 2002). Thus, if a specific risk such as chronically demonstrating a DICCDB significantly contributes to adverse outcome, and current treatment efforts for DICCDB demonstrate that symptoms can be managed but symptom relief in the long term does not appear to significantly alter the adult outcomes of these conditions, then researchers and clinicians must identify and understand those variables within the child, immediate family, and community that predict better outcomes (Goldstein & Brooks, 2022). Thus, there has been an interest in studying resilience processes in children with DICCDBs. If a group of children suffering from one or more DICCBDs can be identified, who demonstrate the ability to transition successfully into the late adolescent and young adulthood years, then perhaps the lessons learned from studying these youth can generate a treatment protocol for those thoughts, feelings, behaviors, experiences, attitudes, and opportunities to enhance resilience in a group of children whose adult outcomes have been demonstrated to be significantly more risk-filled than those of others. Particularly for youth with DICCBDs, an increasing body of the literature operating from a developmental pathway model has demonstrated that a number of childhood variables can be used to predict the risk of adult problems as well as identifying insulating or protective factors that reduce risks and increase the chances of a satisfactory transition into adult life (for review see Goldstein and Brooks (2022), Katz (1997)). As a field, researchers of DICCBD are slowly beginning to examine these protective factors. Although much is known about the risk factors, for the time being, there are only limited data available about protective factors; however, it is quite likely that those factors that insulate and protect children from other psychiatric conditions affect those with DICCBDs as well. Thus, living in an intact household, above the poverty level, with parents free of serious psychiatric problems and consistent in their parenting style and available to their children when needed appear to be among the most powerful factors predicting resilience in all children as well as in those with DICCBDs (for review see Goldstein and Brooks (2011, 2022), Goldstein and Goldstein (1998)).

In long-term follow-up studies, at least 70–80% of adolescents with a childhood diagnosis of ADHD or another DICCBD continue to meet the diagnostic criteria for at least one DICCBD, with at least 60% reporting impairing symptoms but fewer meeting the diagnostic criteria during the adult years (for review see Ramos-Olazagasti et al. (2018), Ingram et al. (1999)). These authors suggest that the decrease in preva-

lence is in part due to the developmental nature of the diagnostic protocols for DICCBDs. Over the past 40 years, the prognosis for individuals with ADHD in adulthood, for example, appears to be influenced by the severity of their symptoms, comorbid conditions, level of intellectual functioning, family situations such as parental pathology, family adversity, socioeconomic status (SES), and treatment history (for review see Goldstein (2002)). These variables are likely predictive for other DICCBDs as well.

There is a broader literature available concerning the absence of certain negative phenomena in predicting outcomes. For example, Herrero et al. (1994) demonstrated that females may experience less risk of adverse outcome with disruptive behavior disorder (DBD) simply due to their gender. Subtype differences in ADHD, specifically children with the inattentive type, may also reduce risks. The absence of impulsive behaviors appears to predict better outcomes. In fact, it has been hypothesized that problems with self-control characteristic of all three of the DICCBDs may be the best predictors of future adult outcomes into young adulthood when evaluating young children (for review, see Barkley (1997)).

Not surprisingly, aggressive behavior in general, a diagnostic characteristic of ODD and CD as well as a common consequence of ADHD, has been found to predict outcomes in adulthood (Robson et al., 2020; Girard et al., 2019; Loney et al., 1983). Emotional lability has also been highly correlated with aggression (Hechtman et al., 1984). It is also likely that within the symptom listing for DICCBDs, some may hold stronger positive or negative predictive power. Research employing algorithms with these conditions has slowly begun to identify the presence or absence of certain symptoms as not only predictive of conditional presence but also addressing outcomes (Goldstein & Brooks, 2022; Mota & Schachar, 2000).

This chapter will provide an overview of DICCBDs, diagnostic symptoms, definitions, and prevalence. We will provide an overview of risk and resilience factors that may contribute to the acquisition and exacerbation of these conditions over time. This chapter will conclude with a proposed set of guidelines for clinicians.

Overview

Over the past half century, multiple longitudinal and retrospective studies have demonstrated that youth exhibit two broad dimensions of disruptive behaviors (Ogundele, 2018). The first dimension presents for many children at a young age and is characterized by a trinity of inattentive, hyperactive, and impulsive behaviors. Over the last 100 years, this trinity, first described by George Still (1902) as a disorder of defective moral control, has been described by various labels attesting to hypothesized cause (minimal brain dysfunction) or key symptom (hyperactivity or inattention) but is increasingly recognized as not so much a behavioral disorder but one of faulty cognitive functioning (Barkley, 1997). The second dimension of disruptive behavior falls under two distinct groups. The first, a group of oppositional and aggressive behaviors, has consistently been found to be distinct from the second group of covert behaviors (Fergusson et al., 1994; Frick et al., 1993; Quay, 1986). Overt behaviors include, but are not limited to, fighting, disobedience, tantrums, destruction, bullying, and attention-seeking. The second set of covert behaviors include, but are not limited to, theft without confrontation of the victim, choice of bad companions, school truancy, running away, lying, and loyalty to delinquent friends (Loeber & Schmaling, 1985; Achenbach et al., 1989). Two aspects of this dimension have traditionally been thought to be strongly influenced by experience but likely also find their roots in genetic vulnerability. Furthermore, overt behaviors can be divided into those that are nondestructive, such as simply resisting adult authority, and those that are aggressive toward others and destructive of property. Covert behaviors can be further divided into those that are destructive but do not confront victims, such as vandalism, and those that are nondestructive, such as truancy or running away from home (Lahey et al., 1990b).

Within DICCBDs, ADHD has consistently been found to be distinct from ODD and CD (for review, see Barkley (1998), Goldstein and Goldstein (1998), Hinshaw (1987)). DICCBDs can also be clearly distinguished from internalizing disorders such as depression and anxiety (Taylor et al., 1986). ODD and CD appear to be distinct, although the two disorders may well overlap in a number of behaviors such as mild aggression and lying. The onset of ODD in comparison to that of CD appears to be earlier. Children manifesting CD before age 10 appear to have a much worse prognosis than those demonstrating symptoms after that time (Moffitt, 1990; Patterson et al., 1989). Although some children demonstrate the onset of CD and ODD simultaneously, the most serious symptoms of CD, including vandalism, repeatedly running away, truancy, shoplifting, breaking and entering, rape, assault, and homicide, generally emerge at a later age than do symptoms of ODD.

It can be easily argued that the DICCBDs fall on a continuum from mild to severe, beginning with ADHD and then progressing through to ODD and CD. Although not all children with ADHD develop ODD and CD, a significant percentage of youth with CD have histories of ADHD. The younger a child progresses to CD, the more adverse their outcome (Biederman et al., 1996a; Campbell, 1991). Furthermore, boys experiencing CD in comparison to those with only ODD scored lower on tests of intelligence, came from families of lower socioeconomic status, and had a history of greater conflict with school and judicial systems (Robins, 1991). Boys with CD demonstrated the strongest family history of antisocial personality, a problem that could reflect a combination of family, environment, and shared family genetics.

Diagnostic Overview

ADHD

ADHD is described as a "persistent pattern of inattention and/or hyperactivity" more frequent in severity than is typical of children in a similar level of development (APA, 2013). Some symptoms must have been apparent before the age of 7 years, although many children are diagnosed at later ages after symptoms have been observed for several years. Impairment must be present in at least two settings and interfere with developmentally appropriate functioning in social, academic, or work setting. Assessment of impairment has been an increasing focus in making the diagnosis of ADHD (Fortes et al., 2020), yet it still remains unclear how to best define a critical threshold for sufficient impairment to meet diagnostic thresholds (Arildskov et al., 2021). ADHD appears more common in males than females, a problem that may or may not be a function of the Diagnostic and Statistical Manual of Mental Disorders (DSM) field studies and/or differences in prevalence and presentation (Goldstein & Gordon, 2003). ADHD is characterized by developmentally inappropriate, often limited, attention span and/or hyperactivity and impulsivity. Six of nine inattentive symptoms must be present to confirm the inattentive aspect of the disorder. The DSM-5 (2013) did not delineate these symptoms by importance. As noted, research employing algorithms has found that some symptoms may in fact demonstrate better negative or positive predictive power than others (Mota & Schachar, 2000). The inattentive symptoms include failing to pay close attention to details, problems with sustained attention, not listening when spoken to directly, failing to complete tasks, difficulty with organization, avoiding or reluctant to engage in tasks requiring sustained mental effort, losing things, being easily distracted, and forgetful in daily activities.

Six of nine hyperactive–impulsive symptoms must be met to confirm the hyperactive–impulsive aspect of the disorder. Hyperactive symptoms include fidgeting, having trouble remaining seated, demonstrating inappropriate activity, difficulty engaging in leisure activities quietly, acting as if driven by a motor, and talking excessively. Impulsive symptoms include blurting out answers before questions have been completed, difficulty waiting for one's turn, and interrupting others. If in fact ADHD represents failure to develop effective self-discipline as evidenced by impulsive

behaviors, then 3 of 18 symptoms reflecting this phenomenon may well be a problem (Barkley, 1997). Diagnosis is made by confirming six or more symptoms in the inattention domain, hyperactivity–impulsivity domain, or both. An individual may qualify for ADHD inattentive type, hyperactive–impulsive type, or combined type. It is important to note that the diagnosis (Part D) requires that there must be "clear evidence of clinically significant impairment in social, academic or occupational functioning."

ODD/CD

In the DSM-5, ODD is described as a recurrent pattern of negativistic, defiant, disobedient, and hostile behavior toward authority figures. This pattern of behavior must have lasted for at least 6 months and be characterized by frequent occurrence of at least four of the following: loss of temper, arguments with adults, defiance or refusal to comply with adults' requests or rules, deliberately doing things that annoy people, blaming others for personal failings, touchiness, anger, resentment, spite, or vindictiveness. In the DSM-5, CD is described as a "repetitive and persistent pattern of behavior in which the basic rights of others or major age-appropriate societal norms or rules are violated." ODD reflects an enduring pattern of negativistic, hostile, and defiant behaviors in the absence of serious violation of societal norms and the rights of others. Thus, children with ODD argue with adults, lose their temper, and are quick to anger. They frequently defy reasonable requests or rules and deliberately annoy others. They tend to blame others for their mistakes.

CD appears to reflect an enduring set of behaviors that evolve over time. It is characterized most often by significant aggression and violation of the rights of others. The average age of CD is younger in boys than in girls. Boys may meet the diagnostic criteria for CD if it is going to develop by 12 years of age, whereas girls often reach 14–16 years before a diagnosis is made. Three or more of the following behaviors must occur within a 12-month period with at least one present in the past 6 months for youth to qualify for a diagnosis of CD: bullying, threatening, or intimidating others, initiating physical fights, using a weapon that causes serious harm, stealing with confrontation of the victim, physically cruel to others, physically cruel to animals, forcible sexual activity with others, lying to avoid obligations, staying out overnight without permission, stealing items of nontrivial value, deliberately engaging in fire-setting with the intention of causing harm, deliberately destroying others' property, running away from home overnight at least twice, truancy from school, and burglary. The diagnostic protocol for CD includes two different types, namely, child-onset and adolescent-onset. These are largely based on the classification system identified by Moffitt (1993). Moffitt utilized a developmental approach to distinguish between individuals who engage in temporary versus persistent antisocial behavior. Life-course-persistent individuals were thought to demonstrate risk factors such as neuropsychological abnormalities and poor home environments, contributing to their difficulty. Individuals classified as adolescent-limited did not demonstrate these risk factors and had no prior engagement in antisocial behavior.

The life-course-persistent pattern might well equate with the juvenile court characterization of delinquency. To test her dual trajectory theory, Moffitt examined a birth cohort of over 1000 children in New Zealand for trends in parents, teachers, and self-reported antisocial behaviors biennially from ages 3 to 15 years. In all, 5% of the sample accounted for nearly 70% of stability in crime across time. Despite these efforts at delineation, there continues to be little consensus as to the distinction between CD as a clinical diagnosis and delinquency as a legal/societal description.

DICCBDs and Delinquency

There is little consensus in defining delinquency as a condition distinct from CD. In fact, most professionals and lay persons use the terms CD, delinquency, and even anti-social behavior inter-

changeably. However, in a legal sense, a delinquent is defined as someone who breaks the law, and this applies to youth as well as adults. Tremblay (2003) suggests that the term "delinquent" should be used to describe youth in studies that specifically focus upon legal issues. He suggests three classes of delinquent behaviors from a legal perspective: (1) vandalism and theft with or without confrontation of a victim; (2) physical, verbal, or indirect aggression, predatory or defensive; and (3) status offenses of underage youth (e.g., consuming alcohol prior to the age of 21). Aggression alone has not always been found to predict delinquency (Anderson et al., 1989). These authors suggest that delinquency is best predicted when aggression is accompanied by peer rejection and other problems, many of which are present in most youth with ADHD. In young children, a combination of aggression and social problems appears to be predictive of later drug abuse and duress (Kellam et al., 1983). Rose et al. (1989) suggested that early antisocial behavior predicts more than the single well-established developmental path that ends in delinquency. Early signs of DBD among a preschool population, including tantrums, defiance, and overactivity, predicted the diagnosis of a DBD by mid-childhood in 67% and later delinquency (Campbell & Ewing, 1990). These risks are further fueled by substance abuse (Najman, 2019).

In 2001, Moffitt and Caspi attempted to identify the childhood risk factors for life-course-persistent delinquency. Their results with the same 1000 individuals found that males and females classified as life-course-persistent delinquents were highly similar on most risk factors and had significantly higher levels of risk factors than their adolescence-limited peers. With regard to childhood risk factors, life-course-persistent individuals demonstrated significantly a greater risk for 21 of the 26 factors measured. In contrast, the risk factors reported by adolescence-limited individuals were similar to those by their comparison peers with no history of juvenile court involvement on all but one of the factors measured. Thus, youth who exhibit rule violations that are limited to their adolescent years tended to have fewer pathological histories, personality problems, reading problems, inadequate parenting, and broken attachments and relationships than life-course-persistent delinquents. Although Moffitt and others (Moffitt et al., 2002; White et al., 2001) refer to both adolescence-limited and life-course-persistent youth problems as delinquency, it would appear that the latter group certainly provides a better working definition of the community's perception of the chronic, recurrent antisocial behaviors exhibited by delinquents. White et al.'s (2001) extension of Moffitt's work demonstrated that delinquents manifested higher disinhibition, impulsivity, and parental hostility and lower harm avoidance and less intact family structure than nondelinquents.

Perhaps, a distinction between CD and delinquency should also focus upon persistence. CD, based upon DSM-5 field studies, tends to have an average length of duration of 3 years. That is, most youth meeting the CD criteria recover within this period of time. CD may thus equate with Moffitt's conceptualization of adolescence-limited delinquency. It should be noted, however, that receiving a diagnosis of CD is not a benign phenomenon over time. Associations between parents and teachers report of conduct problems at age 8, and psychosocial outcomes at age 18 report elevated rates of educational underachievement, juvenile offending, substance abuse/dependence, and mental health problems even after adjusting for social disadvantage, attention problems, and intelligence quotient (IQ) (Fergusson & Lynskey, 1998). Furthermore, maternal communication/problem-solving skills and family variables (e.g., marital status, maternal depressed mood, and interparental conflict) during early adolescence, both independently and interactively, predict severe delinquent behaviors during early adulthood (Klein & Forehand, 1997).

Developmental Course

The greatest comorbidity for DICCBDs may be with each other rather than other psychiatric conditions. Comorbidity may in fact reflect the dif-

ferentiation in what begins as unitary pattern of disruptive symptoms. For example, Bauermeister (1992) generated factor analytical data suggesting that at 4–5 years of age, disruptive symptoms appear to fall on a single dimension.

ADHD

ADHD appears to develop relatively early in childhood before the other DBDs present. The majority of children with ADHD are identified within their first year of school. Early signs of inattention, hyperactivity, and impulsivity in children quickly cause impairment in multiple settings, leading to problems with social relations, self-esteem, and underachievement (Barkley et al., 1990). Interpersonal difficulties with peers, adults, and family members often result in rejection and subsequent social neglect due to the inappropriate pattern of behavior resulting from an impulsive manner of dealing with thoughts, feelings, and others (Jiang et al., 2019; Milich & Landau, 1981; Milich et al., 1982). Problems with language impairment may further contribute to poor interpersonal relations, school achievement, and developing self-regulatory patterns of behavior (Cantwell et al., 1981; Cantwell & Baker, 1977, 1989). In a vicious cycle, isolation from peers due to the combined effects of ADHD and its impact on the normal course of development as well as other adversities leads to reduced opportunities to develop appropriate social interaction, self-esteem, coping skills, academic progress, and likely resilience processes (Brooks, 1998). The academic performance and achievement problems in youth with ADHD have been reported to be well over 50% (Fischer et al., 1990; Semrud-Clikeman et al., 1992). Poor persistence and limited motivation (Milch, 1994), organizational deficits (Zentall et al., 1993), careless mistakes (Teeter, 1998), and noncompliant behavior (Weiss & Hechtman, 1993) have all been implicated as contributing to the pervasive scholastic problems experienced by youth with ADHD. Problems with independent seat work, school performance, deficient study skills, poor test-taking, disorganized notebooks, desks, and reports, and lack of attention to lectures and group discussions are consistent themes for youth with ADHD (DuPaul & Stoner, 2003). This pattern of impairment results in a variety of negative consequences in the social arena (Coie et al., 1982), poor test performance (Nelson & Ellenberg, 1979), impaired working memory (Douglas & Benezra, 1990), and poor overall success in school (DuPaul & Stoner, 2003). As Teeter-Ellison (2002) notes, an inability to persist and be vigilant interferes with classroom behavior, especially when tasks are repetitive or boring. These difficulties, unfortunately, present early and in particular when classroom expectations require sustained attention, effort, and goal directedness. Many children with ADHD, as Teeter-Ellison notes, are "exquisitely attuned to the fact that they are not performing up to their peer group, that they are not meeting the expectations of important adults in their lives and that they are not well liked by their peers" (p. 10). This cycle, described by others (for review, see Goldstein and Goldstein (1990)), creates increased vulnerability, limiting opportunities for youth with ADHD to develop resilient qualities. Self-doubt and lack of confidence, combined with academic, social, and avocational (e.g., sporting activities) failure, impede self-esteem, increasing vulnerability to conditions such as depression and anxiety. By late elementary, many youth with ADHD may disengage from the learning environment as a means of avoiding failure, choosing instead patterns of inappropriate behavior, preferring to be labeled misbehaving rather than "dumb" (Brooks, 1991). Because elementary experience provides the basic foundational skills necessary to learn, including basic achievement, study, test-taking, and organizational skills, many youth with ADHD enter the middle school years ill-prepared for the increasing demands of autonomy required by the upper grades. This then fuels their problems leading to a cycle of increased risk for drop outs, school failure, academic underachievement and significant risk in transitioning successfully into adulthood (Cherkasova et al., 2021; Barkley & Gordon, 2002; Barkley et al., 1990).

The preponderance of these data argues strongly that symptoms of ADHD, in particular failure to develop what can be referred to as self-discipline, dramatically reduce positive outcomes and thus opportunities to demonstrate resilience in the face of these adversities (Brooks & Goldstein, 2009). Unfortunately, this pattern continues and intensifies in the adolescent years. What is most disturbing about the increasing body of research about ADHD in the adolescent years is the growing evidence of the widespread effects of ADHD on all aspects of academic, interpersonal, behavioral, emotional, and daily living activities. Up to 80% of youth carrying a diagnosis of ADHD continued to demonstrate clinically significant symptoms into their adolescent years (Barkley et al. (1990), Biederman et al. (1996a), Weiss and Hechtman (1993)). Even early studies examining outcomes found only a significant minority (between 20% and 30%) of children with ADHD followed into their adolescent years, demonstrating limited differences from controls. In all, 70% of a cohort followed up for over 20 years demonstrated significant academic, social, and emotional difficulties relative to their ADHD (Hechtman, 1999). The literature over the past 35 years suggests that adolescents with ADHD demonstrate significantly greater-than-expected presentation of comorbid disorders that during the adolescent years also appear to influence the development of adverse personality styles (e.g., antisocial or borderline personality disorder). Furthermore, adolescents with ADHD demonstrate signs of social disability and appear at significantly greater risk for mood, anxiety, disruptive, and substance abuse disorders in comparison to boys without social disability (Morris et al., 2020; Greene et al., 1997). In this 4-year longitudinal study of boys with ADHD, the presence of social disability predicted poor social and psychiatric outcomes including substance abuse and conduct disorder. The authors concluded that assessing social function in adolescents with ADHD is critical to their treatment. Once again, ADHD is demonstrated to strip away or limit the potential to develop critical, resilient phenomena. These include the ability to connect and maintain satisfying reciprocal relationships with others, achieve in school, and maintain mental health to facilitate resilience (Brooks & Goldstein, 2001).

ODD/CD

Not surprisingly, with ODD and CD, less serious symptoms tend to precede moderate symptoms, which precede the presentation of more serious symptoms. Preschoolers demonstrate a single disruptive pattern of behavior often composed of oppositional and mild, aggressive behaviors (Achenbach et al., 1987). These findings are consistent with the developmental view that ODD usually precedes the onset of CD. The risk of onset of CD was found to be four times higher in children with ODD than in those without (Cohen & Flory, 1998). Multiple authors have investigated developmental pathways of these patterns of behavior, identifying three often parallel pathways as (1) overt, (2) covert, and (3) authority conflict (Kelly et al., 1997; Loeber et al., 1988, 1997). On the overt pathway, minor aggression leads to physical fighting and finally violence. On the covert pathway, minor covert behaviors such as stealing from home often lead to property damage (e.g., fire-setting) and then to moderate to serious forms of recurrent status and criminal behavior. On the authority conflict pathway, problems progress from stubborn behavior to defiance and authority avoidance (e.g., truancy and running away). Youth often start down this pathway well before age 12, though it is not well understood whether aggression in preschoolers in and of itself significantly increases the risk to precede down one of these pathways (Nagin & Tremblay, 1999).

Prevalence

When DSM symptoms are used epidemiologically, an incidence rate of up to 15% is found for ADHD. In a study of nearly 500 children evaluated on an outpatient basis at a children's hospital, 15% received a diagnosis of ADHD based on a comprehensive assessment (McDowell &

Rappaport, 1992). Field studies for the DSM-IV identified nearly 9% of the population as meeting at least one of the diagnostic subtypes of ADHD (Applegate et al., 1997). Unfortunately, the DSM-5 field trials documented lower diagnostic reliability than past field trials and the general research literature, resulting in substantial criticism of the DSM-5 diagnostic criteria (Chmielewski et al., 2015).

When a careful analysis is conducted, the rate of ADHD most likely falls between 3% and 6% (for reviews, see Goldstein and Goldstein (1998)). A higher incidence of ADHD as well as other DICCBDs occurs in lower socio-economic families. A variety of additional life variables appear to affect the prevalence of ADHD as well as other DICCBDs. For example, among adopted or foster families, the incidence of ADHD has been found to be twice as high as that among other children (Molina, 1990).

Few studies have generated consistent prevalence data for ODD or CD as a function of age. Epidemiological studies estimating the occurrence of CD in the general population vary from just over 3% of 10-year-olds (Rutter et al., 1970) to almost 7% of 7-year-olds (McGee et al., 1984). Based on a review of the existing literature, Kazdin in 1987 suggested a range of 4–10% for CD. The rate of ODD in the general population has been reported to be equally high (Anderson et al., 1987). Oppositional, negativistic behavior may be developmentally normal in early childhood. However, epidemiological studies of negativistic traits in nonclinical populations found such behavior in 16–22% of school-age children (Loeber et al., 1991). Although ODD may begin as early as 3 years of age, it typically does not begin until 8 years of age and usually not later than adolescence. In boys ages 5–8, fighting, temper tantrums, disobedience, negativism, irritability, and quickness to anger appear to decrease with increasing age. MacFarlane et al. (1962) found similar decreases with age for both sexes in the prevalence of lying, destructiveness, negative behaviors, and temper tantrums. The greatest decline in these problems appeared to take place during the elementary years. Tremblay (1990) reported a decline in oppositional behavior in boys, particularly between the first and second grades. Anderson et al. (1987) report that mothers' ratings of aggressive behavior decreased between the ages of 5 and 11 years in children without a reported history of psychiatric problems. In contrast, teacher-rated aggression scores for this same group increased for children with histories of psychiatric problems. Certain covert disruptive behaviors such as alcohol and drug use as well as various forms of theft appear to increase from late childhood to adolescence (Loeber & Schmaling, 1985). Lying, interestingly enough, appears to present at all age levels (Achenbach & Edelbrock, 1981). Furthermore, there is little doubt that prevalence varies as diagnostic criteria change. For example, when comparing the revised third edition of the DSM with the original third edition of the ADHD criteria, the revised criteria were found to identify 14% more children than the original criteria identified (Lahey et al., 1990a). Lahey et al. (1990a) concluded that boys are more likely to meet the criteria for DSM definitions of CD than their female counterparts.

Table 8.1, though a number of years old, provides an overview of risk factors that increase the probability of youth receiving a psychiatric diagnosis, including DICCBDs. Although none of these studies assess variability of problems across situations, a consistent set of diagnostic criteria were utilized. Furthermore, educational risk factors including lower cognitive skills, weaker academic self-esteem, lower academic achievement, and school repetition appear to be consistently present in youth at increased risk for emotional and behavioral problems in these studies. Readers will note that many of these risk factors have been identified as those that increase vulnerability and adverse outcomes in studies of resilience in childhood.

Comorbidity

ADHD co-occurs with other DICCBDs as well as multiple other developmental and psychiatric disorders in children to such an extent that authors have suggested subtypes of ADHD to

Table 8.1 Other factors associated with an increased risk for psychiatric disorders

Factor	Risk increased for	
Anderson et al. (1989) (age 11 years)	Lower cognitive abilities	ADD, multiple
	Lower academic self-esteem	Emotional, ADD, [a]multiple
	Lower general self-esteem	Emotional, ADD, multiple
	Poor health	Any
	Poor peer socialization	Multiple
	Family disadvantage	Emotional, ADD
Bird et al. (1988) (ages 4–16 years)	Lower academic achievement	Behavioral, depressed
	Poor family functioning	Depressed
	High life stress	Behavioral, depressed
Velez et al. (1989) (ages 9–19 years)	Family problems	Behavioral
	Repeated school grade	Any
	High life stress	Behavioral, overanxious
Costello (1989) (ages 7–11 years)	Urban (vs. suburban)	Behavioral
	Repeated school grade	Behavioral
	High life stress	Any
	No father in home	Oppositional
Offord et al. (1987) (ages 4–16 years)	Family dysfunction	Any
	Repeated school grade	Behavioral
	Parental psychiatric problems	Somatization (only boys)
	Parent arrested	Conduct and oppositional
	Chronic mental illness	Any (4–11) only for hyperactivity)

Source: Costello (1989). Copyright, 1989. Used with permission of the author and publisher
[a]*ADD* attention deficit disorder

include combinations of ADHD with other DBDs (e.g., ADHD and CD) as well as with internalizing disorders (e.g., ADHD and anxiety) (Jensen et al., 1997). ADHD coexists with other disorders at a rate well beyond chance (Seidman et al., 1995). As described, impulsiveness likely acts as a catalyst, increasing the risk for development of other problems, especially in the face of additional risk factors (e.g., familial, developmental, educational).

Goldstein and Goldstein (1998) posit that certain events instigate or increase the probability that ADHD will be diagnosed. These include individual characteristics such as intellectual functioning, biological predisposition, and physical and psychosocial environments. Events in the school or home then either strengthen or weaken the behavioral symptoms of ADHD. Once ADHD is diagnosed, the risk of depression is increased as a result of social problems, school failure, and, possibly, the side effects of medication. The risk for CD is increased by school and social problems as well as the presentation of antisocial role models, which has been demonstrated as a critical risk factor.

In a review of empirical studies, Biederman et al. (1991) attempted to define the comorbidity of ADHD with other disorders. The authors suggest that the literature supports the considerable comorbidity of ADHD with CD, ODD, mood disorders, anxiety disorders, learning disabilities, and other disorders such as mental retardation, Tourette's disorder, and borderline personality disorder. The qualities of ADHD may act as a catalyst: leave them alone and they may not be terribly aversive; mix them with negative life events or risk factors and they appear to catalytically worsen those events and the impact they have on children's current and future functioning (Goldstein & Goldstein, 1998).

In a community sample of over 15,000 14- to 18-year-old adolescents, Lewinsohn et al. (1994) compared 6 clinical outcome measures with 4 major psychiatric disorders (depression, anxiety, substance abuse, and disruptive behaviors). The impact of comorbidity was strongest for academic problems, mental health treatment utilization, and past suicide attempts; intermediate for measures of role, function, and conflict with parents; and insignificant for physical symptoms. The greatest incremental impact of comorbidity was on anxiety disorders and the least was on

substance abuse. Substance use and disruptive behavior were more common in males and depression and anxiety in females. The effect of comorbidity was not due to psychopathology. The authors conclude as others have that there is a high rate of comorbidity in adolescents referred in clinical practice.

In clinic-referred populations, the comorbidity between ADHD and CD has been reported to be as high as 50% with an incidence of 30–50% reported in epidemiological or comorbidity samples (Szatmari et al., 1989). Children with ADHD and comorbid ODD and CD exhibit greater frequencies of antisocial behavior such as lying, stealing, and fighting than those with ADHD who do not develop the second disruptive comorbid disorder (Barkley, 1998). It has also been suggested that this combined group is at greater risk for peer rejection. These children may be neglected due to their lack of social skills and rejected due to their aggressive behavior. Common sense dictates that the comorbid group is going to require more intensive and continuous service delivery. The comorbid group also holds the greatest risk for later life problems. In fact, it is likely that the co-occurrence of CD with ADHD addresses the significant adult problems a subgroup of those with ADHD appear to develop. As Edelbrock (1989) noted, more predictive of outcomes than severity of ADHD symptoms is the development in children with ADHD of oppositional and aggressive behaviors. Environmental consequences, including parent psychopathology, marital discord, ineffective parenting, parent aggressiveness, and antisocial parent behavior, are better predictors of life outcomes for children with ADHD than the ADHD diagnosis per se. In fact, these factors become highly stable over time and are resistant to change. Data also suggest that the comorbid conditions presenting before age 10 have a much worse prognosis than if the second behavior disorder develops after age 10 (McGee & Share, 1988).

After careful reviews of the literature, Loeber et al. (1991) suggest that CD and ODD are strongly and developmentally related but clearly different. Factor analyses indicate that distinct covarying groups of ODD and CD can be identified but that certain symptoms relate to both disorders, particularly mild aggression and lying. As noted, age of onset for ODD is earlier than that for most CD symptoms. Nearly all youth with CD have a history of ODD, but not all ODD cases progress to CD. Interestingly, in some studies, children with ODD demonstrate the same forms of parental psychopathology and family adversity but to a lesser degree than that for CD. Clearly, the age of onset of some CD symptoms, specifically fighting, bullying, lying, and vandalism, suggest that some youth with CD show nearly simultaneous onset of ODD and CD. However, the more serious symptoms of CD such as vandalism, running away, truancy, shoplifting, breaking and entering, rape, and assault appear to emerge at a much later age than ODD symptoms. Biederman et al. (1996b) generated data suggesting two types of ODDs, which appear to have different correlates, course, and outcomes. One type appeared prodromal for CD and the other subsyndromal to CD and not likely to progress into CD in later years. Not surprisingly, the higher risk form of ODD was characterized by a stronger profile of negative, provocative, and spiteful behavior. Recent studies have suggested that little has changed to modify this view (Fairchild et al., 2019; Erskine et al., 2016).

There is an extensive body of the literature suggesting that DICCBDs and anxiety disorders are often comorbid. Loeber and Keenan (1994) found that CD and anxiety disorders are comorbid substantially higher than chance during childhood and adolescence.

Epidemiologically, the overlap between ADHD and depression occurs at a level beyond chance, with some studies suggesting an overlap of nearly 30% (McClelland et al., 1989). While Capaldi (1992) found that CD is likely a precursor to depression in some children, Biederman et al. (1995) questioned the psychiatric comorbidity among referred juveniles with major depression. In a sample of 424 children and adolescents consecutively referred to a psychiatric facility, nearly 40% were identified with a depressive disorder. They had a history of chronic course and severe psychosocial dysfunction. They also demonstrated a high rate of CD, anxi-

ety disorder, and ADHD. In all, 74% with severe major depression and 77% with mild major depression received a diagnosis of ADHD compared to 74% of the psychiatric controls and none of the normal controls. The authors hypothesized that major depression was more likely to be the outcome rather than the cause of co-occurring disorders based on an analysis of the age of symptom onset. In this area as well, little has changed in the past 20 years (Gnanavel et al., 2019).

Risk Factors for Acquisition and Exacerbation

Biological, psychological, and psychosocial factors are all posited to be risk factors for the development of a DBD. Burke et al. (2002) considered genetics, intergenerational transmission, neuroanatomy, neurotransmitters, pre-autonomic nervous system, pre- and perinatal problems, and neurotoxins as biological risk factors for the development of a DBD. Although the evidence is not conclusive, several studies suggest a moderate genetic influence on DICCBDs. Eaves et al. (2000) concluded that there is a high genetic correlation across genders in the liability for ODD and CD.

Several researchers, for example, Lahey et al. (1998), have found that a history of parental antisocial behavior disorders is associated with preadolescent onset of CD. Loeber et al. (1995) concluded that parental substance abuse, low socioeconomic status, and oppositional behavior are key factors in boys' progression to CD. The bidirectional nature of these risks continues to be studied (Usami, 2016).

Biological Factors

Frontal lobe dysfunction has been associated with the increased risk of violent behavior (Pliszka, 1999). Impairments in the functioning of the amygdala are associated with deficits in the reading of social cues, and the connection between the amygdala and prefrontal cortical regions serves to aid in the suppression of negative emotions (Davidson et al., 2000).

Low levels of serotonin in cerebral spinal fluid have been linked to aggression (Kruesi et al., 1990; Clarke et al., 1999). Moffitt et al. (1998) found that in men, metabolites of serotonin in a general population sample of 21-year-olds were related to past-year self-reported and life time court-recorded violence. Burke et al. (2002) concluded that the link between serotonin and aggression reflects a complex relationship between neuroanatomical and neurochemical interconnectivity, executive brain function, and behavioral dysregulation.

Pliszka (1999) reported that individuals with DICCBD experienced general physiological under-arousal. Lower heart rates have been reported to be associated with adolescent antisocial behavior (Mezzacappa et al., 1997) and predictive of later criminality (Raine et al., 1990).

Evidence exists of the contributions of genetic factors to DICCBDs as well as the contributions of prenatal and early developmental exposure to toxins, other perinatal problems, and physical damage to brain structures (Alegria et al., 2016; Burke et al., 2002). Maternal smoking during pregnancy has been found to predict CD in boys (Wakschlag et al., 1997). Pregnancy and birth complications have also been shown to be associated with the development of behavioral problems in offspring (Raine et al., 1997). Environmental toxins such as lead have also been implicated in the development of DBDs. Elevated levels of lead in the bones of children at age 11 are associated with greater parent and teacher ratings of aggressiveness, higher delinquency scores, and greater somatic complaints (Needleman et al., 1996). The psychological substrates of temperament, attachment, neuropsychological functioning, intelligence, academic performance, and social cognition have all been found to influence an individual's propensity to develop a DICCBD. Sanson and Prior (1999) concluded that early temperament (specifically negative emotionality, intense and reactive responding, and inflexibility) is predictive of externalizing behavior problems by late childhood.

Low intelligence is often considered a precursor to DICCBD. However, as Loeber et al. (1991) point out, the issue of the association between CD, ADHD, and IQ is not well understood. Additionally, IQ appears to be related to low achievement and school failure, which are also related to later antisocial behaviors (Farrington, 1995). Moreover, high intelligence does not preclude conduct problems. Boys with psychopathic characteristics, parental antisocial personality disorder, and conduct problems were found to have IQs equivalent to those of controls and higher than those of boys with conduct problems but without psychopathology and parental antisocial personality disorder (Christian et al., 1997).

Psychological and Psychosocial Factors

Several aspects of child rearing practices such as the degree of involvement, parent–child conflict management, monitoring, and harsh and inconsistent discipline have been correlated with children's disruptive or delinquent behaviors (Tistarelli et al., 2020; Fricke, 1994; Wasserman et al., 1996). Coercive parenting behaviors appear to lead to aggressive behaviors in younger girls as well as in boys (Eddy et al., 2001).

Fergusson et al. (1996) reported that harsh or abusive parenting styles, such as sexual or physical abuse, significantly increased the risk of CD. Childhood victimization of boys and girls, including abuse and neglect, is predictive of later antisocial personality disorder (Luntz & Widom, 1994). Peer effects also appear to be importantly related to the potential development and maintenance of DICCBD symptoms. The stability of peer rejection in children identified as having conduct problems is significant (Coie & Dodge, 1998; Coie & Lenox, 1994) and related to aggressive responding (Dodge et al., 1990). Associations with deviant peers appear to lead to the initiation of delinquent behaviors in boys (Elliott & Menard, 1996). Exposure to delinquent peers may enhance pre-existing delinquency (Coie & Miller-Johnson, 2001).

Disruptive behaviors among children are particularly associated with poor and disadvantage neighborhoods (Loeber et al., 1995). Wickström and Loeber (2000) found that the effects of living in public housing countered the impact of any individual protective factor that was present. Specific social and economic risk factors such as unemployment (Fergusson et al., 1997), neighborhood violence (Guerra et al., 1995), family poverty and children's aggression, low SES, and duration and poverty (McLoyd, 1998) are associated with antisocial behaviors. Finally, exposure to daily stressors may add to the risk for DBDs in children and as noted can be exacerbated by life circumstances caused by having a DBD.

Are Some Youth with DICCBD More Resilient Than Others?

The study of the biological bases of resilience remains in its infancy but likely will be found to play a role in predicting outcomes (Hofgaard et al., 2021; Armitage et al., 2021). Traditionally, within DICCBDs, the study of positive outcomes has focused on the reduction of symptom severity over time and the reduction of exposure to significant adverse familial, educational, and environmental phenomena. Yet, there is an increasing interest in studying individuals who suffer from DICCBDs, in particular CD, and manage to transition successfully into adult life despite struggling through adolescence and at times young adulthood. Stories collected by the Office of Juvenile Justice and Delinquency Prevention (Office of Juvenile Justice and Delinquency Prevention, 2000, 2021) exemplify that efforts focusing upon rehabilitation, providing mentors and individual attention, and, most importantly, providing youth with a second chance can and have been demonstrated to be part of the formula that leads to resilience.

Enhancing Resilience in Youth with DICCBDs: Guidelines for Clinical Practice

What are the factors that help some youth and adults bounce back, whereas others become overwhelmed with feelings of helplessness and hopelessness. Some attain success that could have never been predicted by early life circumstances, finding the inner strength to overcome obstacles in their paths. Those who find success are viewed as resilient. Their positive outcome in the face of adversity precisely reflects the scientific studies that have demonstrated positive outcomes in the face of a variety of youth problems, including those related to DICCBDs. A number of chapters in this volume are devoted to developing and applying a clinical psychology of resilience. The remainder of this chapter provides a very brief overview of nine proposed guidelines beyond standard psychology and psychiatry treatments for youth with DICCBDs.

1. Develop strategies with these youth to help them learn to rewrite negative scripts. Negative scripts are those words or behaviors that are followed day after day with predictable negative results.
2. Provide youth with a DICCBD opportunities to develop stress management skills.
3. Take the time to help develop the capacity for empathy in youth with DICCBDs.
4. Teach effective communication through modeling and instruction. Effective communication includes an appreciation for both understanding and seeking to be understood.
5. Help youth with a DICCBD accept themselves without feeling inadequate or like second-class citizens.
6. Facilitate connections to others, including providing opportunities for youth with DBDs to help and serve as teachers for others.
7. Youth with DICCBDs view mistakes as challenges to appreciate and overcome rather than signs of inadequacy.
8. Help every youth with a DICCBD experience success and develop an island of competence, an area of strength in which success is experienced and appreciated by others.
9. Patiently help youth with a DICCBD develop self-discipline and self-control.

Summary

DICCBDs encompass the most common and disruptive childhood symptom composites. Their etiology is biopsychosocial. They affect a wide percentage of children, often present in combination, and are catalytic in fueling a variety of adverse outcomes. DICCBDs act to reduce protective influences, decreasing the opportunity to develop a resilient mindset and a resilient outcome into adulthood. As such, it is not unexpected that one of the many adverse consequences of the recent worldwide coronavirus-19 (COVID-19) pandemic is an increase in the numbers of youth meeting the DICCBD criteria (Bartek et al., 2021). An increasing body of research is providing an understanding of those protective factors that may mitigate and insulate youth with DICCBDs. Efforts at clinically applying the qualities of resilience and strategies to enhance a resilience mindset offer the promise of helping youth with DICCBDs overcome the adverse odds as they transition to adulthood.

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