

Part II: Problems

Chapter 3

DSMDIII Mental Disorders in Children

DSM-III Mental Disorders in Children

INTRODUCTION

The mental health problems of children exist along a continuum. This chapter describes those problems which are considered mental *disorders* among children, as described in the most widely used diagnostic manual in the United States—the third edition of the American Psychiatric Association's *Diagnostic and Statistical Manual*, better known as “DSM-III”¹ (19). Generally, DSM-III defines a mental disorder as:

. . . a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and that is typically associated with either a painful symptom (distress) or impairment in one or more areas of functioning (disability).

A description of the major DSM-III diagnosable disorders in children is important to an analysis of mental health services, because these disorders

make up an intellectual framework by which the mental health professions understand children's mental health problems. It takes on added importance, because, in most cases, an individual must have a DSM-III diagnosable disorder to be eligible for third-party reimbursement for treatment.

For most mental health problems, the etiology is not known (19). However, many DSM-III disorders and other children's mental health problems are often related to environmental stressors such as poverty, parental divorce, and abuse and neglect. Environmental stressors that pose risks to children's mental health are described in chapter 4. Many observers believe that children exposed to such environmental stressors, in addition to children with diagnosable disorders, are in need of preventive or other mental health services discussed in this background paper. Both social and organic causes of mental disorders are continuously under investigation (668), but a comprehensive analysis of causation is beyond the scope of this background paper.

¹At the time this background paper was being prepared, the American Psychiatric Association was revising DSM-III. The new version will be known as DSM-III-R.

THE DSM-III DIAGNOSTIC SYSTEM

A standard diagnostic system provides clinicians and researchers common terms with which to identify patients and thus makes possible sharing of information about similar classes of patients (19). It also allows clinicians and researchers to make use of experience with previous patients in planning and assessing the effectiveness of mental health treatment.

DSM-III provides clearer, more specific criteria for diagnoses than previous taxonomies have, and it bases the diagnoses on descriptive information about disorders rather than on causal factors, about which there is still disagreement. These aspects of DSM-III have been lauded, but criticisms of DSM-III have been raised as well (563). Some critics have objected to labeling children's

mental health problems as “mental disorders” and have been concerned that DSM-III diagnoses would be used as labels to discriminate against children (563). Other criticisms are that DSM-III does not appropriately address mental health problems that do not fit into specific categories and lists specific criteria for diagnosis with little empirical basis for some categories (563).

DSM-III has gained substantial acceptance in the United States. Outside the United States, the ninth edition of the *International Classification of Diseases (ICD-9)*, developed by the World Health Organization, is the standard.

DSM-III differs from ICD-9 and other classification systems in several respects. Among other

things, it is the first widely used system to employ a multiaxial approach to the diagnostic evaluation of patients. The purpose of the multiaxial system of DSM-III is to "ensure that certain information that may be of value in planning treatment and predicting outcome for each individual is recorded" (19). DSM-III has five axes, each of which refers to a specific class of information relevant to a patient's mental health problems (see table 5).

The first three axes constitute the official diagnostic assessment. Axis I is for indicating all mental disorders other than those to be indicated on Axis II. Examples of Axis I disorders are anxiety disorder and major depression. Axis II is for long-standing personality disorders and specific disorders of development in which a child's development lags behind that of his or her peers in a specific area such as reading or arithmetic. A patient can receive multiple Axis I or Axis II diagnoses. Thus, for example, a child could be diagnosed as having an anxiety disorder (Axis I) in addition to a reading disorder (Axis II).

Axis III is used to note physical disorders or conditions that are relevant to understanding or managing a patient's mental health needs. The condition noted can be etiologically significant (e.g., a neurologic disorder associated with dementia) or not. This axis would be used, for example, to indicate juvenile diabetes, an illness that can have implications for the management of mental health care.

DSM-III explicitly recognizes that factors such as environmental stress and previous adaptation can influence the course and treatment of a mental health problem. A comprehensive DSM-III diagnosis includes information on these factors on Axes IV and V. Axis IV is a rating of the severity of any psychosocial stressors connected with the onset of a mental disorder. Examples of such stressors are shown in table 5.

Finally, Axis V is a rating of the patient's highest level of adaptive functioning, a composite of a patient's ability to manage social relations, occupation, and leisure time. Such information is often important in predicting the course of a disorder and in planning treatment (19).

In classifying mental disorders, DSM-III separates the class of disorders that usually first be-

Table 5.—DSM-III's Multiaxial Diagnostic Evaluation System

Official DSM-III Diagnostic Evaluation (Axes I, II, and III)

Mental Disorders^{a,p}

Axis I: All Mental Disorders Not Assigned to Axis II

- Mental disorders not assigned to Axis II (e. g., depression, anxiety disorder, conduct disorder)
- Conditions not attributable to a mental disorder that are a focus of attention or treatment (e.g., academic problem, parent-child problem, isolated acts of child or adolescent antisocial behavior)
- Additional codes (e. g., unspecified mental disorder, no diagnosis on Axis I, no diagnosis on Axis II)

Axis II: Personality Disorders and Specific Developmental Disorders

- Personality disorders (e. g., paranoid personality disorder)^c
- Specific developmental disorders (e. g., developmental reading disorder)

Physical Disorders and Conditions

Axis III: Physical Disorders and Conditions

- Any physical disorders or conditions that are potentially relevant to the understanding or management of the individual (e.g., diabetes in a child with conduct disorder)

Additional Information (Axes IV and V)

Axis IV: Severity of Psychosocial Stressors

- A rating on a scale of 1 (no apparent stressor) to 7 (catastrophic stressor) of the severity of the summed effect of all of the psychosocial stressors judged to have been a significant contributor to the development or exacerbation of the current disorder. Examples of psychosocial stressors that might be considered in the case of a child or adolescent include puberty, change in residence, overtly hostile relationship between parents, hostile parental behavior toward child, insufficient or inconsistent parental control, anomalous family situation (e.g., single parent, foster family), institutional rearing, school problems, legal problems, unwanted pregnancy, insufficient social or cognitive stimulation, natural or manmade disaster. A physical disorder can also be a psychosocial stressor if its impact is due to its meaning to the individual, in which case it would be noted on both Axis III and Axis IV.

Axis V: Highest Level of Adaptive Functioning Past Year

- A rating on a scale of 1 (superior) to 5 (poor) of an individual's highest level of adaptive functioning (for at least a few months) during the past year. Adaptive functioning is a composite of social relations, occupational/academic functioning, and use of leisure time.

^aMental disorders are disorders for which the manifestations are primarily behavioral or psychological; physical disorders are disorders for which the manifestations are not primarily behavioral or psychological.

^bA person may have multiple diagnoses on Axes I and II—0.9., one diagnosis on Axis I and one diagnosis on Axis II, or multiple diagnoses within Axis I or Axis II.

^cThe diagnosis of a personality disorder is generally reserved for adults, although the manifestations of personality disorders may appear in childhood or adolescence.

SOURCE: Adapted from American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 3d ed. (Washington, DC: 1980).

come evident in infants, children, or adolescents from several other major classes of disorders that are not generally restricted to children (see table 6). For heuristic purposes, DSM-III groups mental disorders that usually manifest themselves in

Table 6.—Children's Mental Disorders Listed in DSM-III^a

MENTAL DISORDERS THAT ARE USUALLY FIRST EVIDENT IN INFANCY, CHILDHOOD, OR ADOLESCENCE	
Intellectual Disorders	
<i>Mental retardation</i>	
Mild mental retardation, moderate retardation, severe mental retardation, unspecified mental retardation	
Developmental Disorders	
<i>Pervasive developmental disorders (PDDs)</i>	
Infantile autism (onset before 30 months of age), childhood-onset pervasive developmental disorder (onset after 30 months of age and before 12 years of age)	
<i>Specific developmental disorders (SDDs) (Axis II of DSM-III)</i>	
Developmental reading disorder (dyslexia), developmental arithmetic disorder, developmental language disorder (expressive type or receptive type), developmental articulation disorder, mixed specific developmental disorder, atypical specific developmental disorder	
Behavior Disorders	
<i>Attention deficit disorder (ADD)</i>	
ADD with hyperactivity, ADD without hyperactivity	
<i>Conduct disorder</i>	
Undersocialized, aggressive; undersocialized, nonaggressive; socialized, aggressive; socialized, nonaggressive; atypical	
Emotional Disorders	
<i>Anxiety disorders of childhood or adolescence</i>	
Separation anxiety disorder; avoidant disorder of childhood or adolescence; overanxious disorder	
<i>Other disorders of infancy, childhood, or adolescence</i>	
Reactive attachment disorder of infancy; schizoid disorder of childhood or adolescence; elective mutism; oppositional disorder; identity disorder	
Physical (Psychophysiological) Disorders	
<i>Stereotyped movement disorders</i>	
Transient tic disorder, chronic motor tic disorder, Tourette's disorder, atypical tic disorder, atypical stereotyped movement disorder	
<i>Eating disorders</i>	
Anorexia nervosa, bulimia, pica	
<i>Other disorders with physical manifestations</i>	
Stuttering, enuresis (repeated involuntary voiding of urine), encopresis (repeated voluntary or involuntary defecation in inappropriate places), sleepwalking disorder, sleep terror disorder	
OTHER MENTAL DISORDERS THAT MAY AFFECT CHILDREN^b	
<i>Organic disorders (e.g., delirium, dementia, alcohol intoxication, barbiturate intoxication)</i>	
<i>Substance use disorders—sometimes occur in teens</i>	
Abuse of or dependence on any of five classes of substances; alcohol, barbiturates, opioids, amphetamines, and cannabis	
Abuse of any of three classes of substances: cocaine, phencyclidine (PCP), and hallucinogens	
Dependence on tobacco	
Other, mixed, or unspecified substance abuse (e.g., glue sniffing)	
Dependence on a combination of substances (e.g., heroin and barbiturates, amphetamines and barbiturates)	
<i>Schizophrenic disorders (e.g., disorganized, catatonic, paranoid, or undifferentiated type)—onset is usually in late adolescence or early adulthood</i>	
<i>Schizophreniform disorder</i>	
<i>Affective disorders</i>	
Major depression (single episode, recurrent)—can occur at any age, including infancy	
<i>Anxiety disorders</i>	
Phobic disorders:	
Social phobia—often begins in late childhood or early adolescence	
Simple phobia (e.g., of animals, heights, school, water)—age at onset varies, but fear of animals almost always begins in childhood	
Anxiety states:	
Panic disorder—often begins in late adolescence	
Generalized anxiety disorder	
Obsessive compulsive disorder—usually begins in adolescence or early adulthood, but may begin in childhood	
Post-traumatic stress disorder—can occur at any age	
<i>Somatoform disorders (e.g., somatization disorder, conversion disorder, psychogenic pain disorder, hypochondriasis)</i>	
<i>Psychosexual disorders</i>	
Gender identity disorders:	
Transsexualism	
Gender identity disorder of childhood	
Paraphilias (e.g., exhibitionism, sexual masochism)	
Other psychosexual disorders (e.g., ego-dystonic homosexuality)	
<i>Factitious disorders</i>	
<i>Disorders of impulse control not elsewhere classified (e.g., kleptomania, pyromania)</i>	
<i>Adjustment disorder—may begin at any age</i>	
<i>Personality disorders (Axis II of DSM-III)</i>	
Although the symptoms of personality disorders may manifest themselves in adolescence or earlier, the diagnosis of a personality disorder (e.g., paranoid personality disorder, schizoid personality disorder, histrionic personality disorder, antisocial personality disorder) is generally reserved for adults. Some personality disorders in adults have a relationship to corresponding diagnostic categories for children or adolescents:	
<i>Disorders of childhood</i>	<i>Personality disorders</i>
Schizoid disorder of childhood	Schizoid personality disorder
Avoidant disorder of childhood	Avoidant personality disorder
Conduct disorder (undersocialized, aggressive)	Antisocial personality disorder
Oppositional disorder	Passive-aggressive personality disorder
Identity disorder	Borderline personality disorder

^aAlthough this list does include the more common children's mental disorders, it is not exhaustive. Furthermore, only selected disorders are discussed in the text of this background paper.

^bDisorders in these classes are primarily adult diagnoses but may occur among children.

infancy, childhood, or adolescence into five general categories based on the aspect of functioning that is most disturbed: intellectual, developmental, behavioral, emotional, and physical (psychophysiological). Examples of disorders in several of these categories are severe mental retardation, developmental reading disorder, undersocialized aggressive conduct disorder, reactive attachment disorder of infancy, chronic motor tic disorder, anorexia nervosa, encopresis, and enuresis.

In addition to the class of disorders that usually first become evident in children, several broad classes of mental disorders discussed in DSM-III may affect children. These classes and examples of disorders that may affect children are shown in table 6. Such disorders include substance use disorders, affective disorders such as major depression, various anxiety disorders, and adjustment disorder. Following DSM-III's heuristic for disorders that usually manifest themselves early in a person's life, substance use disorder is discussed in this background paper under behavior disorders, and depression and anxiety disorder under emotional disorders. Because it stems directly from an environmental stressor and can take various forms, adjustment disorder is discussed separately.

Any given child may have more than one DSM-III disorder, and disorders may involve problems across general categories. Furthermore, disturbances in one area are likely to have secondary

effects on other areas of functioning. Thus, for example, a child with a specific developmental disorder will often have problems with behavior and emotions as a result.

Patterns of disturbance vary widely across diagnostic categories. Disturbances present different clinical patterns, pose different consequences for children and their families, impinge on different settings in varying ways, and require different treatments. Furthermore, mental disorders may vary in severity. In some cases, for example, childhood phobias are mild and transient; children often overcome such phobias in the course of development. In other cases, however, childhood phobias involve severe impairment and interfere in significant ways with a child's development (553). Beyond a certain level, the severity of a disorder must usually be assessed separately from the DSM- diagnosis.

Several children's mental disorders within broad general categories are discussed below. The discussion is not exhaustive. The purpose is to give the reader a basic understanding of the range of childhood disorders, along with some information on their prevalence and their consequences for children. Most of the childhood disorders are reviewed, but a few are omitted in the interest of space because they are rare, their consequences are relatively less severe than those of other disorders, or because the disorders that are discussed sufficiently illustrate the broad category.

INTELLECTUAL DISORDERS

The only DSM-III mental disorder that primarily involves intellectual impairment is mental retardation, although secondary intellectual deficits are often involved in other disorders. Inclusion of mental retardation as a DSM-III mental disorder on Axis I has provoked concern.

One critical article (563) notes that mental retardation is primarily defined by a lowered level of intellectual functioning and thus differs from other disorders, which are characterized by abnormal types of functioning. Advocates for mentally retarded children seek to avoid any prejudice against this population stemming from the asso-

ciation of mental retardation with mental disorders (422). When mental retardation is discussed in this background paper, it is because of its inclusion in DSM-III or because many mentally retarded children have mental health treatment needs.

Mental retardation is defined as significantly subnormal intellectual ability that leads to deficits in functioning. In DSM-III, the criterion denoting intellectual ability in the mentally retarded range is a score on a standardized intelligence (IQ) test of 70 or below (although some flexibility on the IQ is allowed). IQ tests are standardized tests

with a mean of 100 and a standard deviation of 15. A score of 70 is two standard deviations below the mean and places mentally retarded children in the bottom 2 percent of children intellectually.

There are an estimated 6 million mentally retarded persons in the United States; the range of intellectual impairment in these individuals is wide. The American Association on Mental Deficiency has identified four broad levels of mental retardation based on IQ: mild, moderate, severe, and profound (257). These levels are intended to correspond to the individual's capability for adaptive functioning and the degree to which training will result in independent functioning. In general, the more retarded an individual is, the less independence he or she can be expected to gain from training and the more supervision he or she will need for self-care, work, and social relationships. At the extreme, profoundly retarded individuals require a highly structured setting with continuous care. With adequate training, however, many mentally retarded individuals can function independently.

Most mentally retarded children—about 80 percent—are mildly retarded. Approximately 12 percent of retarded children are moderately retarded, 7 percent severely retarded, and 1 percent profoundly retarded (19).

Organic causation is not believed to be a factor in most mental retardation. Only about 25 percent of the incidence of mental retardation is attributable to organic causes (36); moderate, severe, and profound retardation are nearly always associated with organic brain damage. For 75 percent of mental retardation, almost all mildly retarded, however, there is no evidence of organic causation. How this type of mental retardation is caused is not well understood, but it is thought to stem from environmental causes, genetic causes, or a combination of the two.

Neurologically based impairments in coordination, vision, or hearing are often associated with mental retardation (19). Mentally retarded children are also three to four times more susceptible

to other mental disorders than children in the general population (19), especially to other disorders that may have a neurological basis like stereotyped movement disorder and attention deficit disorder with hyperactivity (ADD-H) (19). They are at increased risk for problems with speech, language, and academic and social adjustment. Mental retardation can lead to stress, depression, and other emotional disturbances through several means. The parents of some mentally retarded children may reject or overprotect them (538), or mentally retarded children may gain awareness of their deficiencies, leading to low self-esteem and depression (538).

Further, mental retardation limits the number and quality of supportive relationships that children can form and limits their flexibility in solving problems; as a consequence, there is an increased likelihood that retarded children will be frustrated and adopt poor strategies for managing their lives. Institutionalized retarded children frequently manifest atypically heightened levels of dependency that are not attributable to cognitive level alone (730). The social environment of retarded children is apparently critical; whether they are institutionalized, placed in a community setting, or raised at home can affect their mental health. Similarly, their mental health can be enhanced by receiving education and training adapted to their abilities.

Care and training of the mentally retarded is generally handled by a special service system separate from the system that treats the emotionally or behaviorally disturbed. Moreover, it is not generally conceptualized by practitioners as mental health treatment. For these reasons, interventions specific to mental retardation are excluded from Parts 111 and IV of this background paper. The discussion of disorders, environmental risk factors, and services applies to mentally retarded children only insofar as such children have concomitant mental health problems. Because concomitant mental health problems are common in mentally retarded children, however, mental health treatment is an important part of the service needs of this population.

DEVELOPMENTAL DISORDERS

Developmental disorders are characterized by deviations from the normal path of child development. Such disorders can be either pervasive, affecting multiple areas of development, or specific, affecting only one aspect of development. Like mental retardation, developmental disorders pose multiple problems for a child. Pervasive developmental disorders (PDDs) severely limit children's ability to function independently, while specific developmental disorders (SDDs) can greatly impede children's education and development of social relations.

Pervasive Developmental Disorders (PDDs)

Children with a PDD experience severe deviations from normal development in a number of spheres. Primarily, these deviations are manifested in cognitive and intellectual functioning, language development, and social relationships. PDDs identified in DSM-III are infantile autism and childhood-onset PDD. DSM-III terms such as infantile autism or childhood-onset PDD have generally superseded older labels such as childhood schizophrenia or childhood psychosis.

Children with a PDD manifest a gross lack of interest in others and have problems relating, even to family members. They may appear oblivious to family members or caretakers walking in the room, as if they were inanimate. They often use language in bizarre ways—i.e., echoing what they are told, using phrases with their own private meaning or using the pronoun “you” to refer to themselves. Also, they often insist on the preservation of sameness in their environments and display odd finger movements or postures. PDD children vary in terms of specific symptoms (712), but they all share marked impairment. PDDs are relatively rare, but they affect somewhere between 50,000 and 100,000 children in the United States, approximately 1 per every 1,000 children (712).

The intellectual functioning of children with PDDs varies. Many of the children with a PDD are mentally retarded, and the majority are below average in intelligence. In extremely rare cases, children with a PDD have brilliant isolated

skills, such as the ability to memorize train schedules or play musical instruments, although they may not be toilet trained or able to use language to communicate. The vast majority of children with a PDD require special educational programs, and many parents need professional consultation or training to deal with these difficult children (712).

In most cases, parents are able to care for PDD children at home, although home care can become increasingly difficult as the children become older (712). PDD is usually chronic, and the majority of affected individuals are permanently unable to function independently. Autistic adults are found in the same placements as adults who are mentally retarded or schizophrenic: hospitals, long-term residential treatment centers, boarding houses, and often their families' homes.

At one time, it was thought that the parents of PDD children rejected them or withdrew from them in such a way as to lead to disturbance in their development (58). Such ideas have generally been discredited. Studies indicate that there are no personality or other differences between parents of PDD children and other parents (97, 424). It is now suspected that PDD is related to impairment in neurochemistry or neuroanatomy.

Specific Developmental Disorders (SDDs)

Children with SDDs have difficulty with specific skills underlying learning, but their overall development is within normal ranges. DSM-III identifies several types of SDDs according to the particular skill which is impaired—e.g., developmental language disorders, developmental reading disorder (i. e., dyslexia), and developmental arithmetic disorder (19). In children with an SDD, the development of one of these specific skills is well below the average for the particular child's grade level. All SDDs combined are estimated to affect 3 to 5 percent of the school age population (41), although as much as 10 percent of the adult population is thought to have significant difficulties with reading, possibly related to an underlying disorder.

There are two forms of developmental language disorders: receptive type and expressive type. In the receptive type, children have trouble understanding spoken language; in the expressive type, children understand what they hear and know what they want to say, but have difficulty recalling and arranging the words necessary to speak. Developmental articulation disorder refers to pronunciation difficulties with English sounds such as “s” and “th,” leading children to appear as if they are using “baby talk” (19). Developmental reading disorder and developmental arithmetic disorder are diagnosed when reading or arithmetic skills are impaired relative to expectations for a child’s age, and neither deficits in intelligence nor schooling are deemed responsible.

SDD children are prone to school failure. Difficulties in learning are often compounded by secondary mental health problems, including school behavior problems, aggression or delinquency outside of school, anxiety and depression, and

poor relationships with peers (41,576). The perceptual skills that are essential for learning to read, spell, write, and do arithmetic may also be important in social interactions and in establishing and maintaining social relationships (82,426).

In some cases, SDD children may have to endure the frustration and anger of parents and teachers who do not recognize their learning disability or understand how to help them. In such situations, parents or teachers may ascribe the child’s failure to laziness or stubbornness. In certain cases, behavioral problems may partially cause the learning difficulty (576), but in other cases, emotional or behavioral problems stem from the breakdown in a child’s education that is the consequence of having a learning disorder. Such secondary effects create additional obstacles to learning and reinforce a child’s classroom failure (132). Many SDD children drop out of school in their teens (79).

BEHAVIOR DISORDERS

Behavior disorders are a set of problems in which a child’s distress or disability is a function of his or her overt behavior. Since the central characteristics of these disorders are behaviors that disturb or harm others, the child’s social environment plays a large part in whether that child will be identified as having behavior disorders and influences the course of these disorders. Some researchers and clinicians maintain that the nature of behavior disorders and the life history of affected children are especially dependent on the children’s experience with social systems, such as the family, neighborhood, and school.

Attention Deficit Disorder (ADD)

Children with ADD are unable to maintain focused activity for more than a brief period and continually initiate new activities. Most children with ADD also suffer from hyperactivity, continual movement that is especially disruptive in structured group situations like a classroom. These children are diagnosed as having ADD with hyperactivity (ADD-H). In addition, there is a 50-

to 80-percent overlap between ADD-H and some SDDs (462).

Schoolchildren with ADD may have great difficulty concentrating or inhibiting impulses to leave their seat and move around during class time. They may continually call out in class or push ahead of others in lines because they cannot tolerate waiting. Since the ability to maintain attention is essential to learning, children with ADD often have serious academic problems. Further problems may arise from the stress the child and school experience in dealing with the primary problem. Like SDD children, ADD children suffer from the frustration and poor self-image caused by not learning, the stigma of lagging behind their class, and the anger and frustration of parents and teachers. ADD children are prone to anxiety, depression, and social withdrawal (426), and typically have problems developing and maintaining friendships. The severity of ADD varies greatly across children (556). Some children are able to compensate for their difficulty with little interference in their lives, while others are so se-

verely affected that they cannot tolerate normal school programs.

ADD children often exhibit aggressiveness or stubbornness and are prone to temper tantrums (439). Aggressiveness and impulsivity may be primary components of ADD, or they may be secondary consequences of the frustration and humiliation felt by a learning-disordered or hyperactive child. In addition, aggressiveness may arise from the struggle with teachers trying to deal with ADD children in the classroom.

An important factor in ADD is the ability of children's families and schools to tolerate and manage their behavior (470). Although it is unlikely that social factors cause hyperactivity, negative responses from the social environment toward these children are often an additional burden.

The outcome of ADD in adolescence and adulthood varies greatly. Some children seem to "outgrow" ADD, while others continue to suffer from ADD into adolescence and adulthood. In some cases, hyperactivity ends or attenuates in adolescence, but problems with distractibility or impulsivity often remain. As they grow to be adolescents and adults, hyperactive children have an increased risk of academic and behavioral problems, substance abuse, school failure, and contact with the legal system (62,306,435,441,692).

The causes of ADD are not well understood. It was once believed that ADD stemmed from prenatal or perinatal brain injury. But there is no evidence for the existence of brain damage among most affected children, and the difference between hyperactive and normal children in the birth process and infancy does not explain the existence of these disorders (556). Neurological differences between hyperactive children and normal children are plausible, but they may not reflect pathology so much as the general variation in cognitive abilities and temperament in children. Other research has implicated food additives, allergies, and environmental toxins as causal agents for hyperactivity (176,461), although such evidence is, at present, only suggestive.

Conduct Disorder

Children with conduct disorder exhibit a pattern of behavior that violates social norms, often harming others. Such children have a history of either infringement of the rights of others, or violations of the law, or both. Their pattern of misconduct includes behaviors such as fighting, vandalism, stealing, lying, rule-breaking, and running away from home. An ongoing history of misbehavior differentiates conduct disorders from the normal mischief of adolescence.

Conduct disorders are often first defined as problems by the legal system. Despite some overlap, however, conduct disorder is not the same as "juvenile delinquency." Conduct disorder is a psychiatric term describing a longstanding pattern of misbehavior, whereas delinquency is a legal term applied to minors convicted of an offense. Many children incarcerated in juvenile justice facilities would not be diagnosed as having conduct disorder, primarily because their behavior does not comprise a pattern. The extent to which juvenile crime is associated with actual conduct-disordered adolescents is unknown.

Children with conduct disorders differ in the degree to which they are socialized and capable of forming attachments to others, but there is controversy about whether differences in socialization constitute distinct types of conduct disorders (19). Some believe that adolescents who have good family and peer relationships, who have a reasonable sense of self, and whose delinquency primarily reflects neighborhood and peer group influence probably do not truly have a mental disorder (9). The antisocial behavior of such adolescents may be largely directed at those outside their gang or family.

Some children with conduct disorders are unable to form friendships or extend themselves to others in any way. These undersocialized behavior-disordered children relate to others in exploitive and egocentric ways. They are also likely to have experienced problems with conduct from an early age, when they would normally have de-

veloped the capacity to relate to others. Conduct disorders that begin prior to age 13 are particularly pernicious. Early onset often leads to serious consequences for both children with conduct disorders and people around them.

Although disorders of conduct are defined by a pattern of inappropriate behaviors, such disorders are often accompanied by considerable personal suffering, and children with conduct disorders usually have low self-esteem, despite outward bravado (19). These children often experience mental health problems such as depression, anxiety, or substance abuse, and/or have academic problems (19,565). Even when they are able to form significant relationships, the relationships may be fraught with conflict (432). It should also be noted that the occurrence of hyperactivity and conduct disorder overlaps considerably (624).

Estimates of the prevalence of conduct disorder vary greatly because of the use of different definitions of the disorder and different sources of data. In addition, the prevalence of conduct disorder varies depending on sociological variables such as low income and poor housing (703). General population surveys estimate the prevalence at 5 to 15 percent, but such surveys often use less stringent criteria than DSM-III (432). A further problem is that such surveys fail to distinguish between socialized and undersocialized children (432).

The course of conduct disorder depends greatly on social as well as individual factors (19). Gang-related delinquency, for example, depends on such factors as youth employment rates. Most children with conduct disorders, particularly those able to form relationships, are able to stop their misbehavior as they mature (546). Others may continue illegal behavior for financial gain, but function adequately otherwise. Many children with conduct disorders, however, continue their inappropriate behavior into adulthood and maintain a life centered around criminal behavior. They continue to have problems with social relationships, and many suffer in adulthood from alcoholism, drug dependence, or depression (544). These tend to be the children whose delinquency starts early and who have committed a greater number and variety of antisocial acts (544).

Many theories for explaining the development of conduct disorder implicate child-rearing practices. The parents of undersocialized, aggressive children are believed not to have formed a loving parental attachment to the infant. Many parents of children with conduct disorders are alcoholic or have a history of antisocial behavior (544,545). Often, children who develop conduct disorders are unwanted or unplanned. As the child matures, parents alternate between being uninterested in the child and being overly protective (432). Other theories suggest biological and genetic components to undersocialized conduct disorder (544).

Substance Abuse and Dependence

Drug and alcohol abuse are sometimes viewed as diseases separate from mental health problems. In terms of etiology and implications, however, substance abuse may be similar to other mental health difficulties. The implications of substance abuse for children and adolescents are particularly severe. Substance abuse broadly disrupts a young person's functioning, can cause distress and long-term disability, and can lead to or exacerbate conflict in family and peer relationships. Chronic drug and alcohol use can also harm academic and job performance. Legal problems arise both from actions carried out under the influence of drugs or alcohol and from buying, possessing, and selling drugs or alcohol. Several substances, such as alcohol, barbiturates and sedatives, opiates, and amphetamines, can, with frequent use, lead to chemical dependence.

Substance abuse is correlated with problems such as psychological distress (483), life stress (156), low school achievement (321), running away from home (160), parental drug use (547), and perceived lack of involvement by parents (483). Substance-abusing children are often troubled by anxiety and depressed moods (19). Several studies suggest that many adolescents who use alcohol and drugs heavily were psychologically disturbed as younger children (331,486,615; for conflicting evidence, 338). School learning problems and aggressive or antisocial behavior as a child are good predictors of later drug use, especially if they are associated with difficulties

in relationships (338). Available evidence suggests that interventions aimed at treating substance abuse and dependence must also deal with the multitude of other mental health problems with which abusers are also afflicted (63).

Identifying substance abuse as a type of mental disorder is useful because it draws attention to the mental health implications of abusing chemical substances. Substance abuse in adolescents,

however, is frequently associated with other mental disorders discussed in this chapter, including conduct disorder, ADD, and SDD. Substance use and abuse by children also illustrates the complexity of identifying discrete mental health problems and separating disorders from normal development. Considerable evidence suggests that substance use, and occasional abuse, is currently “a ‘normal’ developmental reality” among adolescents (369).

EMOTIONAL DISORDERS

Several children’s mental disorders have their most noticeable effect on a child’s emotional state. The severity of children’s emotional problems varies widely. To represent a diagnosable mental disorder, however, an emotional problem must be accompanied by considerable impairment of a child’s ability to function.

Anxiety Disorders

In children with anxiety disorders, excessive fearfulness and symptoms associated with fear interfere with a child’s functioning. Anxiety-disordered children may experience muscular tension, have somatic complaints without physical basis, and experience repeated nightmares. Children with anxiety disorders may be preoccupied with unrealistic dangers and may avoid fear-producing situations to the point of stubbornness or tantrums.

Anxiety disorders that are especially associated with childhood or adolescence include separation anxiety disorder, avoidant disorder of childhood, overanxious disorder, and certain phobic disorders (19). Children with separation anxiety are afraid to be away from their parents, from home, or from familiar surroundings. They avoid a variety of normal activities and, in some cases, refuse to go to school. They may cling to parents and develop physical complaints when separation is about to occur; if separated, they become fearful, sometimes to the point of panic. Separation anxiety may lead children to have morbid fears about their parents’ death, or difficulty sleeping if family members do not stay with them. This disorder often waxes and wanes during childhood years, usually increasing in response to stress.

Avoidant disorder of childhood or adolescence is similar in many ways to separation anxiety disorder, except that the focus of the problem is contact with strangers rather than separation from loved ones. These disorders rarely last beyond adolescence.

Phobias are irrational anxiety reactions to specific situations or objects leading children to avoid these situations or objects. Common childhood phobias include dog, school, and water phobias (553). Mild phobias are normal and occur among almost half of all children; they are usually outgrown. Phobias in an estimated 0.5 to 1 percent of children, however, can be intense and interfere with the child’s development. Children avoid the feared object to the point of not participating in an important activity or avoiding learning important new behaviors. School phobia is perhaps the most common childhood phobia (553) and can lead to serious educational problems (343).

Childhood Depression

“Depression” can refer to a mood, to a set of related symptoms that occur together, or to a complete psychiatric disorder with characteristic symptoms, course, and prognosis (357). The psychiatric disorder includes both depressed mood and symptoms of impaired functioning such as insomnia, loss of appetite, slowed activity and speech, fatigue, self-reproach, diminished concentration, and suicidal or morbid thoughts (19).

Depression influences concentration, energy level, and confidence; can affect physical health; and is usually associated with a perhaps unrealis-

tically pessimistic view of the world (367). Like other emotional disorders, it has the potential to seriously impair a child's abilities to function in school, with peers, and with family. Depressed children commonly withdraw from social relationships. The low self-regard, hopelessness, and helplessness of depressed adolescents may lead to suicide (93). The amount of mental suffering depressed children undergo can be considerable, although the degree of impairment and length of the depression vary considerably (19).

Many depressed children exhibit behavioral problems that are more longstanding and more alarming to adults than their depression (95). A conduct *or* learning problem may be labeled as the chief disturbance that needs treatment, while their depression is overlooked. Some theorists and researchers have called this "masked" depression, because these behavioral difficulties, in their ability to stir up and distract the child and others, protect the child from experiencing painful, depressed feelings (133). Recent research, however, suggests that with careful questioning, many such children with behavioral problems will reveal pervasive problems with mood as well as behavior (102).

Depressive symptoms specific to children may occur, including anxiety over separation from parents, clinging, and refusal to go to school. Depressed adolescents may react with sulky, angry, or aggressive behavior; problems in school; or substance abuse (19). Estimates of the prevalence of childhood depression are variable as a result of differing criteria used by researchers, differences in the age of children studied, and other differences among the populations examined (333). Estimates range from 0.14 percent (564) to 1.9 percent (332). Among children brought to psychiatric or education-related treatment centers, estimates range as high as 59 percent (505). Available research does not permit an overall conclusion about the incidence and prevalence of childhood depression or about the relationship of childhood depression to other disorders.

The large number and range of theories suggesting the cause of depression are notable. What seems most likely is that psychological, biological, and social causal factors arise together to initiate and perpetuate depression (13). Most models



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It is sometimes difficult to distinguish between common adolescent emotional turmoil and more serious forms of childhood depression and anxiety.

used in explaining how childhood depression develops are borrowed from analyses of adult depression. Studies assessing the applicability of adult models to childhood depression have been conducted only recently. For example, much evidence substantiates the relationship between depression in adults and low concentrations of certain neurotransmitters (biochemical that provide for transmission of impulses across nerve cells). Several studies have found lower levels of the by-products of these neurotransmitters in the urine of children with chronic depressive disorder (428).

Even when children are not clinically depressed, persistent poor mood or symptoms such as insomnia or poor appetite often accompany other childhood disorders or stressful situations or events. Clinicians treating children must often attend to the depressed mood which accompanies demoralization felt in the face of a number of the other disorders, or environmental or medical stressors.

Reactive Attachment Disorder of Infancy

Reactive attachment disorder of infancy, in some severe cases called "failure to thrive," denotes a syndrome in which infants who are receiving inadequate care are poorly developed both emotionally and physically. If the disorder is not treated, it often results in severe physical compli-

cations: malnutrition, starvation, or even death. Case studies also show that failure to thrive can lead to feeding disorders such as obsession with food and food refusal.

Reactive attachment disorder exemplifies the complexity of the origins of childhood mental health problems. DSM-III states: "The diagnosis of Reactive Attachment Disorder of Infancy can be made only in the presence of clear evidence of lack of adequate care" (19). Often, however, the disorder does not arise simply from "bad" parenting, but instead arises from a combination of both complications in an infant's development and emotional difficulties and stress affecting parents (153). Some parents interpret problems in an

infant's feeding or development as rejection. If a parent, as a result, is unable to properly interpret an infant's cues to be fed, the infant will not be fed adequately, and may develop a severe reactive attachment disorder. Parents who have emotional difficulties or are burdened with stress are especially predisposed to such a response. A pattern of similar breakdowns in communication between infants and parents can also lead to difficulties developing emotional attachments between parents and children, and later with the child's developing appropriate autonomy. Yet reactive attachment disorder of infancy can be "completely reversed" by adequate care (19).

PSYCHOPHYSIOLOGICAL DISORDERS

Children's mental disorders that involve a disturbance in some aspect of bodily functioning usually involve a combination of mental and physical factors; hence, these disorders have been called psychophysiological disorders. Psychophysiological disorders include stereotyped movement disorders, enuresis and encopresis, and eating disorders. As described below, the physical manifestations of psychophysiological disorders are diverse. These disorders may place children at great risk, since they pose threats to both physical and mental health.

Stereotyped Movement Disorders

Stereotyped movement disorders are thought to have a primary physical or neurological basis. Nevertheless, such disorders are influenced by the psychological state of the child and are sometimes amenable to behavioral or psychological intervention.

Children with stereotyped movement disorders suffer from tics—sudden, repetitive movements of a particular body part. In a rare form of stereotyped movement disorder, Tourette's syndrome, vocal tics (short grunts, yelps, or other vocal sounds) accompany the body movements (19). Tics are generally involuntary, although they can be suppressed temporarily through concentration

(19,598). In general, they are thought to have an organic basis, yet stress or anticipation can increase their frequency (314,598). Tics may be a transient or chronic problem (19). Although 12 to 24 percent of schoolchildren in surveys have reported having had tics at some time, overall prevalence is unknown because there is no information on how many children have this difficulty at any one time. Children with these disorders suffer considerable embarrassment and are often unable to bring their tics under continual voluntary control. These disorders sometimes disappear in adulthood, but can be lifelong.

Eating Disorders

Disorders involving eating behavior include a varied group of dysfunctions. The most common eating disorders are anorexia nervosa and bulimia, which occur primarily in adolescents. Anorexia is characterized by a refusal to eat, leading to a loss of body weight (literally, "nervous weight loss"). The DSM-III diagnosis of anorexia nervosa applies to those who have lost at least 25 percent of body weight. Individuals with this disorder, typically adolescent girls and young women, starve themselves because of an exaggerated fear that they will be overweight and therefore unattractive.

In extreme cases, children with anorexia nervosa may refuse to eat altogether, even if they are already very thin. Because of the possibility of malnutrition, serious medical illness, or death, anorexia can have serious consequences. Psychological complications such as depression and withdrawal can also result from the starvation involved with anorexia nervosa. These complications often overshadow the original psychiatric problems that led to the eating disorder (620).

Bulimia is, in some respects, the converse of anorexia nervosa. Bulimics, usually adolescents, consume large quantities of food in one sitting ("binge eating"). They often stop only when pain or nausea is too great to continue. Often, bulimics self-induce vomiting or use laxatives, enemas, or diuretics to purge themselves of what they have eaten. Because of the physical insult of this pattern of behavior, bulimia can be associated with physiological disturbance. Although the prevalence of bulimia in adolescents is unknown (19), recent surveys (271,626) indicate an incidence rate of 13 to 67 percent for self-reported binge eating in college populations. Such data suggest that the problem of bulimia is substantial, although it may most frequently appear only as a transient problem. Various adjustment problems often accompany a bulimic disorder, including depression and difficulty with social relationships (322,335,708).

ADJUSTMENT DISORDER

For most DSM-III disorders, a cause is not specified, because in most cases, causes of disorders are as yet unknown (19). Adjustment disorder, however, refers to a pattern of emotional or behavioral difficulties that occurs in response to a stressful event. Stressful events can overwhelm the capacity of children to cope, leading them to develop disabling emotional reactions to the stress or to develop unfortunate ways of trying to cope that create more problems. Stressful events leading to adjustment disorder could include any of a variety of crises such as divorce or acute illness of a parent. Adjustment disorder often remits without treatment, either because the stressful life event has ended or because the child and family have developed new resources equal

Perhaps the most serious eating disorder is the coincidence of the two above disorders, which has been called "bulimarexia" (64). Affecting primarily adolescents, bulimarexia combines obsessive self-denial of food with intermittent binge eating. Casper and her colleagues (105) found that almost half of a sample of patients with anorexia also suffered from bulimia, and that these patients were significantly more obsessional about food, more guilty, more depressed, and more likely to be involved in compulsive stealing.

Enuresis and Encopresis

Enuresis is the diagnostic term for bedwetting and other inappropriate urination, while encopresis is the term for lack of control over defecation. Each of these disorders has relationships to other disorders as well as complicated connections to physiology, environmental factors, and family genetic history. In many cases, physical problems either cause these disorders or predispose children to them (19,596), and there is some evidence that enuresis tends to run in families (19,33). But enuresis and encopresis tend to occur more frequently in disadvantaged families (440), under stressful conditions (19,523), and together with other disorders (565). Enuresis affects 5 to 15 percent of 7-year-olds (565) and encopresis 1 percent of 5-year-olds (19).

to the stress. In vulnerable children and families, however, an adjustment disorder can usher in more serious difficulties.

The main features of adjustment disorder are depressed or anxious moods, antisocial behavior (especially in adolescents), difficulties that infants have in their interaction with their primary caregivers, or inability to work or maintain relationships (19). Thus, adjustment disorder resembles psychiatric disorders such as anxiety disorder or conduct disorder. Adjustment disorder is differentiated from disorders with parallel symptoms on the basis of how long the problem has lasted and whether or not it followed from a stressful event. The diagnosis of adjustment disorder is sometimes

made by child clinicians because they would often rather use the more benign label of adjustment disorder than diagnoses such as conduct disorder

or major depression which imply more pervasive impairment.

CONCLUSION

The five general categories of children's mental disorders discussed in this chapter—intellectual, developmental, behavioral, emotional, and psychophysiological—represent patterns of dysfunctional adaptation in children. Although normal, as well as mentally disordered, children may exhibit symptoms of these disorders, in each case, it is the pattern of pervasive difficulty that leads to the diagnosis. No mental disorder, however well-described by current psychiatric nomenclature, manifests itself in parallel ways across children. Environmental risk factors, to be discussed in chapter 4, can influence both the manifestation and course of children's mental disorders. In addi-

tion, when maladjustment of a child occurs, it does not necessarily take the form of mental disability as defined by psychiatric nomenclature.

The diversity and complexity of children's mental health problems suggests a need for treatment approaches differentiated according to each specific child's needs. In addition, the relationship of many of these problems to normal functioning suggests a need for integrating mental health services with family and school settings in which children function. Subsequent chapters of this background paper consider these topics more explicitly.