

Classification and Developmental Psychopathology

CHAPTER QUESTIONS

- Why is understanding the basic research on children's and adolescents' emotional and behavioral functioning important to clinical assessment?
- How are classification and assessment related?
- What are some of the models used for the classification of the emotional and behavioral functioning of children and adolescents?
- What are some of the advantages and dangers of classification?
- What are some of the most important implications of the basic research in the field of developmental psychopathology for the clinical assessment of children and adolescents?

SCIENCE AND ASSESSMENT

A basic assumption underlying the writing of this text is that, to be competent in the clinical assessment of children and adolescents, much more knowledge is required than being able to simply administer tests, this being the easier part. Many other crucial areas of expertise are necessary for appropriately selecting the tests to be administered and for interpreting them after administration. One such area of expertise was the focus of the previous chapter: an understanding of the science of measuring psychological constructs. However, a more basic level of knowledge is needed for using measurement theory appropriately. That is, one must have a thorough understanding of the nature of the phenomenon being measured before determining the best method for measuring

it. In particular, the constructs of interest discussed in this chapter are the emotional and behavioral functioning of youth. The first hint at the importance of this basic understanding of psychological constructs was made in the previous chapter on psychometrics. It should have become clear that good psychometric properties are not absolutes. They depend on the nature and characteristics of the *specific* psychological construct being assessed. For example, childhood depression is frequently characterized by multiple episodes of depression interspersed with periods of normal mood (Kovacs, 2001). Therefore, high stability estimates over lengthy time periods should not be expected. In fact, if such stability occurs, then one is measuring something that is not an episodic depression.

In addition to appropriately utilizing psychometric theory, understanding the nature of the phenomenon to be assessed is crucial to almost every aspect of a clinical assessment, from designing the assessment battery and selecting the tests, to interpreting the information, and communicating it to the child and parent. For these reasons, science and clinical practice are inextricably linked. There are many areas of basic research that enhance an assessor's ability to conduct psychological evaluations, but we have selected two that we feel are the most critical to the clinical assessment of children and adolescents. First, a thorough understanding of the theories that guide the different models of classification are necessary because the framework used to define and classify psychological functioning determines how one designs and interprets an assessment battery. Secondly, the clinical assessment of children must be conducted in the broad context of developmental psychopathology.

Developmental psychopathology refers to an integration of two scientific disciplines: child development and child psychopathology. The integration rests on the basic assumption that the most appropriate way to view the emotional and behavioral functioning of children,

both normal and problematic, is within a comprehensive framework that includes the influence of developmental processes (Rutter & Garmezy, 1983). A noted developmental psychopathologist, Judy Garber, summarized her views on this field as being "concerned with both the normal processes of change and adaptation, and the abnormal reactions to stress or adversity, as well as the relationship between the two" (Garber, 1984, p. 30). Thus, developmental psychopathology is a framework for understanding children's emotions and behaviors that has many implications for the assessment process.

It is beyond the scope of this book to provide an intensive and exhaustive discussion of classification theories, or the many important findings in the field of developmental psychopathology. Instead, this chapter illustrates the criticality of these two knowledge areas to the assessment process, and also provides a basic framework for applying this knowledge to the assessment of children and adolescents. The discussion that follows highlights some of the issues in both areas that we feel have the most relevance to the assessment process.

CLASSIFICATION

Classification refers to the process of placing psychological phenomena into distinct categories according to some specified set of rules. There are two levels of classification. One level of classification is the method of determining when a psychological functioning is abnormal, deviant, and/or in need of treatment, while the second level of classification is the method of distinguishing among the different dimensions or types of psychological functioning. Thus, clinical assessment is considered partly, as a process of classification. It involves (1) determining whether some areas of psychological functioning

in a child and adolescent are pathological and need treatment and (2) determining the types of pathology that may be present. Alternatively, according to Achenbach (1982) “assessment and classification are two facets of what should be a single process: assessment aims to identify the distinguishing features of individual cases; taxonomy (classification) is the grouping of cases according to their distinguishing features” (p. 1). Therefore, understanding the issues involved in classification is essential to clinical assessment.

The first issue involves acknowledging that any classification system of psychological functioning will be imperfect. Psychological phenomena do not fall into specific categories of normal and abnormal, or into clear, non-overlapping dysfunction types. This seems to be especially true with children; there is often no clear demarcation of when a dimension of behavior should be considered normal and when it should be considered pathological. Further, there is often a high degree of overlap among the various forms of psychopathology in children. Finally, any classification system is only as good as the research used to create it. As the research advances, so should the classification system.

Therefore, any system of classification is bound to be imperfect. Due to this imperfection, many experts have argued against the need for any *formal* classification system. Instead, they argue that psychological functioning should be assessed and described idiosyncratically for each individual person. That is, each person is a unique individual whose psychological functioning should simply be described in ways that maintain this uniqueness without comparing it with that of other individuals or fitting it into artificial categories. This argument has an intuitive appeal given the complexity of human nature. However, there are several compelling arguments for the need for *good* classification systems, in spite of the fact that even the best system will be imperfect.

The Need for Classification Systems

Communication

The main purpose of classification systems is to enhance communication among professionals (Blashfield, 1984; Quay, 1986). A classification system defines the rules by which psychological constructs are defined. In the absence of such a system, psychological constructs are defined by idiosyncratic rules developed by each professional, and one cannot understand the terminology used by a professional unless the rules employed in defining the terms is understood. For example, the term *depression* is a psychological construct that has several meanings in the psychological literature on children. It can refer to Major Depressive Episodes, as defined by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition-Text Revision (*DSM-IV-TR*; APA, 2000). In contrast, it can also refer to elevations on a rating scale of depression (Curry & Craighead, 1993), or to a set of responses on a projective technique (Exner & Weiner, 1982). The concept of masked depression is used to describe the belief that many childhood problems (e.g., hyperactivity, enuresis, learning disabilities) are the result of an underlying depressive state (Cytryn & McKnew, 1974). Not surprisingly, each of these definitions identifies a different group of children.

Thus, simply saying that a child exhibits depression does not communicate much to another professional unless there is further explanation on how this classification was made. On the contrary, if one states that the child meets the criteria for Major Depression according to the *DSM-IV-TR* system, then a classification is said to be made using a system with clearly defined rules. Also, another professional will then have a clear idea of how depression is defined, even if he or she does not agree with the *DSM-IV-TR* system. However, this communication requires precision in the use

of terms. In this example, using the term *Major Depression* would be misleading, and actually impair the communication, if the term was used without ensuring that the *DSM-IV-TR* criteria were met (e.g., based on responses from a projective technique).

Documentation of Need for Services

Classification systems allow for the documentation of the need for services. This encompasses documenting the need for special educational services for a child, determining the need for mental health services within a given catchment area, attempting to determine appropriate staffing patterns within an institution, or documenting the need for services to third-party payers (e.g., insurance companies). These uses of the classification systems have been the most controversial because the imperfections inherent in the existing systems can lead to very deleterious outcomes for many people. For example, a child can be denied services by a school or payment for the services by an insurance company can be denied if the child's problems do not fit into the classification system being used. Unfortunately, the task of documenting need is inextricably linked to classification because it requires some method of differentiating between those in need of services and those that are not in need of services. The solution is not to eliminate the classification systems, but instead (1) to develop better systems of classification that more directly predict the need for services and (2) to educate other professionals on the limitations of the classification systems, so that they can be used more appropriately for documenting the need for services.

Dangers of Classification

Due to the reasons already stated, it is generally accepted that explicit classification systems are needed. However, users of the

classification systems must be aware of the dangers and limitations of such systems. Because clinical assessment is a process of classification, the clinical assessor must be especially cognizant of these issues. Many of these dangers can be limited if classification systems are used appropriately. Therefore, in the discussion that follows, we have tried to not only outline the dangers of classification but also to present practices that minimize or eliminate potentially harmful effects.

Because psychological phenomena, and the persons they represent, do not fall neatly into categories, one loses information by attempting to fit people into arbitrary categories. People within the same category (e.g., Major Depression) share certain characteristics (e.g., depressed mood, loss of interest in activities, disturbances in sleep, impaired concentration), but there also exist many differences among persons within a category (e.g., the number of depressive episodes, whether the depression started after the death of a relative). The shared characteristics should provide some important information about the persons in the category (e.g., prognosis, response to treatment), else the classification becomes useless. However, given the loss of information inherent in any classification grouping, classification should not be considered the only information necessary for an adequate case conceptualization. Instead, any classification, whether it is a diagnosis or an elevation on a behavior rating scale, should be one part of a larger description of the case. This approach allows one to take advantage of the positive aspects of formal classification (e.g., enhanced communication); yet, it acknowledges the limits of such systems and integrates classification into a broader understanding of the case. In this book, case studies that illustrate this approach are provided. In each case, diagnoses or other methods of classification are integrated into a more complete clinical description of the child being assessed.

A second danger of classification systems is that they foster the illusion of a clear break between normal and psychopathological functioning. For example, if the classification is based on an elevation on a rating scale (over a T-score of 70), it gives the illusion of a dramatic difference between children with T-scores of 69 (not classified) and children with T-scores of 70 (classified). Stating that this is an illusion does not imply that all psychological traits are on a continuum with normality, because some are clearly not. For example, in Jerome Kagan's work with behaviorally inhibited children, there seem to be a number of qualitative differences between children with behaviorally inhibited temperament and those without this temperament (Kagan & Snidman, 1991). However, if one was using a measure of behavioral inhibition with some cut-off for classifying inhibition (e.g., a T-score of 65), there may be some children close to this threshold (e.g., T-scores of 60–64) who were not classified due to imperfections in the measurement technique (Ghiselli, Campbell, & Zedeck, 1981). Therefore, whether the illusion of a clear break is due to a normally distributed trait or due to measurement error, it is still an illusion.

A third danger of classification is the danger of stigmatization associated with the psychological labels, often the end result of classification. How strong the effect of labeling is on psychological functioning is not clear from research. There is no evidence to suggest that the act of labeling creates significant pathology through a self-fulfilling prophesy. However, it is also clear that labels can affect how others, either lay persons (e.g., Snyder, Tanke, & Berscheid, 1977) or clinicians (Rockett, Murrie, & Boccaccini, 2007), interact with children who have been diagnosed with certain mental health problems. Given this potential danger, classificatory terms (labels) should be used cautiously and only when there is a clear purpose for doing so

(e.g., when it influences treatment considerations). Also, when such terms are used, great efforts should be made to clearly define the meaning of the term to avoid misinterpretations. And, finally, terms should be worded to emphasize the classification of a psychological construct and not classification of the person. For example, it is better to use the phrase “a child with conduct disorder” rather than stating “a conduct disordered child”.

Evaluating Classification Systems

Thus far, we have argued that classification systems are necessary despite the potential dangers and misuses. However, this is only the case for good classification systems. If a classification system tells little about a person, then nothing is gained in terms of communication, and all the dangers (e.g., loss of information, stigmatization) are maintained. Therefore, it is essential to critically evaluate any system of classification and, even within a system, to evaluate the individual categories.

As discussed in the previous chapter, while illustrating the association between classification and assessment, one finds that evaluation of classification systems is similar to the evaluation of assessment and procedures, in general. Specifically, the primary considerations for evaluating a system are its reliability and the validity of interpretations derived from it (Quay, 1986). In terms of reliability, a user of a system must be able to make classifications consistently, such as over short time periods (test-retest reliability) or between two independent users who make the classification (interrater reliability). In order for classification systems to be reliable, the rules of classification must be simple and explicit. However, reliability is important primarily because it limits the validity of a classification system. Therefore, the validity of a system is of paramount importance. Classification

must allow for some valid interpretations to be made. That is, classification must mean something. It should tell something about the causes of the child's emotional or behavioral problems or the likely course of the problems. Most importantly, it should tell whether the child needs treatment, and if so, what type of treatment.

Models of Classification

So far, our discussion of classification systems has been on issues that transcend any single type of classification system. The uses of a system, the dangers inherent in classification, and the methods of evaluating systems are all pertinent, irrespective of the model on which a system is based. However, there are several different theoretical models on which a classification system can be based. A *model* is a specific framework for viewing classification, such as whether abnormal behavior is viewed as a statistical deviance ("Is this level of functioning rare in the general population?") or in terms of its functional impairment ("Does it affect a person's adaptive functioning?"). The theoretical model of a system will determine the rules of classification. As will become evident, the different types of assessment techniques discussed in this book were designed to provide information about the different models of classification. The following sections will review two general models of classification that have strongly influenced the classification of children and adolescents, and have had a major influence on the types of assessment procedures that have been developed.

Medical Models

The first major model of classification, the medical model, was largely derived from clinical experience with disturbed children and adolescents (Achenbach, 1982; Quay, 1986). In this type of classification, a diag-

nostic entity is assumed to exist, and the system defines the characteristics that are indicative of this diagnosis. The approach is called a *medical model* approach because it assumes there is a disease entity, or a core deficit, which is the disorder. It then defines the symptoms that are indicative of the presence of the disorder.

There are two primary characteristics of the medical model approach to classification. First, because of the emphasis on a core deficit, medical model systems differ dramatically depending on the theory or theories used to define the deficits considered to underlie the psychological disorders. That is, medical model systems are strongly influenced by the theory of abnormal behavior espoused by the system, such as psychodynamic theories or biological theories. Second, because of the emphasis on a pathological core (e.g., the disease entity), medical model systems typically make sharp distinctions between disordered and non-disordered individuals. There is typically an underlying assumption that there are qualitative differences between individuals with and without a disorder.

Multivariate Approaches

The second major approach to classification that has been extremely influential in the clinical assessment of children has been labeled the multivariate statistical (Quay, 1986) or the psychometric approach (Achenbach, 1982). In this approach, multivariate statistical techniques are used to isolate interrelated patterns of behavior. Therefore, unlike the clinically derived syndromes that are defined by theory and clinical observations, behavioral syndromes are defined by the statistical relationship between behaviors or their patterns of covariation. In this approach, behaviors form a syndrome if they are highly correlated with each other, and there is no necessary assumption of a pathological core to underlie the symptoms, as is the case in medical models of classification.

TABLE 3.1 An Example of a Multivariate Classification System

Externalizing			Internalizing		
Inattention	HI/ODD	CD	Social Anxiety	Depression	SAD/Fears
Disorganized	Interrupts others	Fights	Timid/shy	Sad	Upset over separation
Distractible	Stubborn	Spreads rumors	Not self-confident	Low energy	Worried about parent
Forgetful	Loud	Bullies	Nervous in groups	Anhedonia	Afraid to leave house
Sloppy/messy	Noisy	Steals			
Daydreams	Talks a lot	Lies			

NOTE: Dimensions are based on a series of exploratory and confirmatory factor analyses of caretaker ratings of 1,358 children and adolescents of ages 4–17 (Lahey et al., 2004). Behaviors listed are just examples and not the complete list of items used in the factor analyses. *HI* hyperactivity-impulsivity, *ODD* oppositional defiant disorder, *CD* conduct disorder, *SAD* separation anxiety disorder.

In addition to being based on statistical covariation, the psychometric approach is also different from medical models of classification because it emphasizes quantitative distinctions rather than qualitative distinctions. Once behavioral syndromes are isolated through statistical analyses, a child's level of functioning along the various dimensions of behavior is determined. Behavioral syndromes are conceptualized along a continuum, from normal to deviant. Interpretations are typically made by comparing an individual case to a representative normative sample, and choosing some level of functioning as being so rare in the average population that it should be considered deviant. Classifications are thus based on how a child falls into a certain dimension of functioning (e.g., anxiety/withdrawal) relative to some comparison group (e.g., compared to other children of the same age group).

In Table 3.1, we provide an example of a multivariate approach to the classification of childhood emotional and behavioral functioning reported by Lahey et al. (2004). This system was based on a series of exploratory and confirmatory factor analyses

of caretaker ratings of 1,358 children and adolescents of ages 4–17. It shows six dimensions of behavior that can be subsumed under two broad dimensions of Externalizing and Internalizing problems.

Classification in the Future: An Integration of Medical and Multivariate Approaches

These two basic approaches to classification are important for clinical assessment because the design of assessment instruments is often consistent with one of these basic approaches. More importantly, the interpretation of assessment instruments is basically a process of classification. Therefore, it is often guided by these models or some variation of them. The clinical assessor should be aware of the issues involved in the classification generally, and the advantages and disadvantages of these two models of classification specifically, to aid in the interpretation of assessment measures.

Research has indicated that both the medical and the multivariate models have

flaws that make their exclusive use problematic (see Quay, 1986). For example, the dependence of medical model approaches on theory has led to many “disorders” being created with little support from research. Also, the medical model approach, with its emphasis on qualitative distinction, masks a continuum with normality that seems most appropriate for understanding many dimensions of functioning. In contrast, the multivariate approach with its dependence on statistical analyses in the absence of clear theory has resulted in syndromes that are hard to generalize across samples and with different sets of symptoms. Also, while some psychological phenomena in children and adolescents are best conceptualized on a continuum with normality, there are others that may fit with more qualitative distinctions (e.g., Kagan & Snidman, 1991; Lahey et al., 1990) and are not captured well by the multivariate approach.

As a result, future classifications should look towards an integration of the approaches. For example, clinical diagnoses can be improved by conducting multivariate analyses to see if the covariation of symptoms for the diagnosis is supported (e.g., Frick, et al., 1993; Lahey et al., 2004). However, there are other ways in which the correspondence between statistically derived syndromes and the clinically derived diagnoses can be explicitly tested (e.g., Eiraldi, Power, Karustis, & Goldstein, 2000), thereby improving the validity of both the approaches and leading to classification systems that accommodate the diverse nature of psychological constructs. In the following section, we provide an overview of one of the most commonly used classification systems, the *Diagnostic and Statistical Manual of Mental Disorders*, which is published by the American Psychiatric Association. Although initially this system of classification was based largely on a medical model system of classification, more recent revisions have attempted

to capture the best characteristics of the two major classification approaches.

Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV; APA, 1994 & DSM-IVTR; APA, 2000)

The *DSM* approach to defining psychiatric disorders has undergone dramatic changes in its many revisions since its first publication in 1952. The biggest change came with the publication of its third revision in 1980. In the first two editions, the definition of disorder was clearly based on a medical model approach to classification. The definition assumed an underlying pathological core, and the conceptualization of the core was largely based on psychodynamic theory. In the third edition, there was an explicit switch from a medical model view of disorders and a dependence on the psychodynamic theory. In the third and subsequent editions, a functional approach of viewing disorders was used in which mental disorders were defined as “a clinically significant behavioral or psychological syndrome or pattern that occurs in an individual and is typically associated with present distress (e.g., a painful symptom) or disability (i.e., impairment in one or more important areas of functioning), or with a significantly increased risk of suffering, death, pain, disability, or important loss of freedom.” (p. xxxi, American Psychiatric Association, 2000).

Another major change in the third edition, also maintained in subsequent revisions, is an increase in the level of specificity with which disorders are defined. In the first two editions of the manual, disorders were often poorly defined, leading to problems of obtaining high levels of reliability in the diagnostic classifications (Spitzer & Cantwell, 1980). In contrast, later revisions include

more detailed diagnostic definitions with explicit symptom lists, which have led to an increase in the reliability of the system (e.g., Spitzer, Davies, & Barkley, 1990). To illustrate this change, the *DSM-II* (APA, 1968) definition of Hyperkinetic Reaction of Childhood is contrasted with the analogous *DSM-III-R* definition of

Attention-Deficit Hyperactivity Disorder in Box 3.1.

As a result of these changes, the most recent revision of the manual (*DSM-IV*; APA, 1994) has characteristics of both the medical and multivariate models of classification. For example, its functional approach to defining disorders, which does

Box 3.1

A Comparison of *DSM-II* and *DSM-III-R* Diagnostic Criteria

DSM-II: Hyperkinetic Reaction of Childhood (Adolescence)

This disorder is characterized by over-activity, restlessness, distractibility, and short attention span, especially in young children; the behavior usually diminishes in adolescence. If this behavior is caused by brain damage, it should be diagnosed under the appropriate non-psychotic *organic brain syndrome*.

DSM-III-R: Attention-Deficit Hyperactivity Disorder

Note: Consider a criterion met only if the behavior is considerably more frequent than that of most people of the same mental age.

- A. A disturbance of at least 6 months during which at least eight of the following are present:
1. Often fidgets with hands or feet or squirms in seat
 2. Has difficulty remaining seated when required to do so
 3. Is easily distracted by extraneous stimuli
 4. Has difficulty awaiting turn in games or group situations
 5. Often blurts out answers to questions before they have been completed
 6. Has difficulty following through instructions from others (not due to oppositional behavior or failure of comprehension), e.g., fails to finish chores
 7. Has difficulty sustaining attention in tasks or play activities
 8. Often shifts from one uncompleted activity to another
 9. Has difficulty playing quietly
 10. Often talks excessively
 11. Often interrupts or intrudes on others, e.g., butts into other children's games
 12. Often does not seem to listen to what is being said to him or her.
 13. Often loses things necessary for tasks or activities at school or at home (e.g., toys, pencils, books, assignments)
 14. Often engages in physically dangerous activities without considering possible consequences (not for the purpose of thrill seeking), e.g., runs into street without looking
- B. Onset before the age of 7.
- C. Does not meet criteria for a Pervasive Developmental Disorder.

SOURCES: *Diagnosis and Statistical Manual of Mental Disorders, Second Edition*, American Psychiatric Association, 1967 and *Diagnosis and Statistical Manual of Mental Disorders, Third Edition, Revised*, American Psychiatric Association, 1987. Reproduced with permission of the publisher.

not assume a pathological core, is consistent with the multivariate approach to classification. Also, many of the disorders are based, at least in part, on the patterns of symptom covariation, which is the hallmark of multivariate models (e.g., Frick, et al., 1994). In contrast to the multivariate approach, *DSM-IV* definitions classify disorders into discrete categories, which is more consistent with the medical model approach, although many of the cut-offs were empirically determined rather than being based purely on theoretical considerations (Lahey, et al., 1994).

One of the major changes in *DSM-IV* from its predecessors is the emphasis on users having access to the basic research underlying the various diagnostic categories. For example, in the manual, each disorder is initially introduced by summarizing the current research on its basic characteristics, associated features like age, gender, and cultural trends, prevalence, course, and familial pattern (APA, 1994). These introductory descriptions were enhanced in a later version of the manual: the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (*DSM-IV-TR*; American Psychiatric Association, 2000).

In this revision, no changes were made to the basic structure and diagnostic criteria for the individual disorders, nor were any disorders added or deleted. Instead, work groups were formed to identify any errors or omissions in the introductory material for each disorder, and to provide additional material to enhance the description of the disorders and their basic characteristics, if these could be justified by a review of the relevant research. In addition, the publication of the *DSM-IV* and *DSM-IV-TR* were accompanied by the publication of a number of edited volumes called "*DSM-IV* Source Books" (e.g., Widiger et al., 1994) that provide more extended reviews of the research that led to the diagnostic criteria

included in these manuals. As such, these most recent revisions of the *DSM* have tried to enhance the ability of users of this system to gain access to the research findings related to the disorders included in the manual.

DSM-IV maintained the multi-axial system of classification that was initiated in *DSM-III*. As discussed previously in this chapter, a major disadvantage of any classification system is its inability to capture all relevant dimensions of a person's functioning within a single given category or diagnosis. For a broader view of classification, *DSM-IV* specifies several dimensions of functioning (axes) that are relevant to understanding a person's functioning. Specifically, Axis I (Clinical Disorders) and II (Personality Disorders/Mental Retardation) are fairly typical of other classification systems and comprise the major categories of mental disorders. Box 3.2 provides a summary of the Axis I and Axis II diagnoses that are most relevant for children and adolescents. However, *DSM-IV* includes three other dimensions on which a child can be classified. Axis III allows the system user to indicate any physical disorder that is potentially relevant for the understanding or managing of a case. Axis IV allows for a reporting of the psychosocial and environmental stressors that may affect the diagnosis, treatment, and prognosis of mental disorders in Axes I and II. Axis V provides a scale to indicate the highest level of adaptive functioning (psychological, social, and occupational/educational) that is currently being exhibited or the highest level of adaptive functioning that has been exhibited within the past year. Clearly, this multi-axial approach of *DSM-IV* is not sufficient to take the place of an adequate case formulation. However, it highlights the need to place diagnoses in the context of many other important aspects of a person's psychological functioning.

Box 3.2**A Summary of DSM-IV Axes I and II Diagnoses Relevant to Children and Adolescents**

<i>Intellectual</i>	Mental Retardation	<i>Emotional</i>	Bipolar Disorders (I & II)*
<i>Learning</i>	Mathematics Disorder		Cyclothymia*
	Disorder of Written Expression		Adjustment Disorder with Depressed Mood*
	Reading Disorder	<i>Identity</i>	Gender Identity Disorder of Childhood
	Language and Speech Expressive Language Disorder		Reactive Attachment Disorder of Infancy or Early Childhood
	Mixed Receptive-Expressive Language Disorder	<i>Physical (Eating)</i>	Anorexia Nervosa*
	Phonological Disorder		Bulimia Nervosa*
	Stuttering		Pica
	Selective Mutism		Rumination Disorder
<i>Motor Skills</i>	Developmental Coordination Disorder	<i>Physical (Motor)</i>	Tourette's Disorder
<i>Pervasive Developmental</i>	Autistic Disorder		Chronic Motor or Vocal Tic Disorder
	Rhett's Disorder		Transient Tic Disorder
	Childhood Disintegrative Disorder		Stereotypic Movement Disorder
	Asperger's Disorder	<i>Physical (Elimination)</i>	Encopresis
<i>Behavioral</i>	Attention-Deficit Hyperactivity Disorder		Enuresis
	Oppositional Defiant Disorder	<i>Physical (Somatic)</i>	Somatization Disorder*
	Conduct Disorder		Conversion Disorder*
<i>Emotional (Anxiety)</i>	Separation Anxiety Disorder		Pain Disorder*
	Generalized Anxiety Disorder*		Hypochondriasis*
	Panic Disorder*		Body Dysmorphic Disorder*
	Agoraphobia*		Adjustment Disorder with Physical Complaints*
	Social Phobia*	<i>Psychosis</i>	Schizophrenia*
	Obsessive Compulsive Disorder*		Alcohol (Amphetamine, Cannabis, etc.) Dependence*
	Post-Traumatic Stress Disorder*	<i>Substance-Related Disorders</i>	
	Adjustment Disorder with Anxious Mood*		
<i>Emotional (Mood)</i>	Major Depression*		
	Dysthymia*		

*Denotes disorders that have the same criteria for children and adults.

NOTE: The selection of disorders most relevant to children and adolescents and the grouping of disorders were made by the authors and not by DSM-IV.

DEVELOPMENTAL PSYCHOPATHOLOGY

As mentioned earlier, the overriding principle of developmental psychopathology is that children's emotional and behavioral functioning must be understood within a developmental context (Rutter & Garmezy, 1983). Therefore, it follows that the *assessment* of children's emotional and behavioral functioning must also be conducted within a developmental framework. Such themes as understanding behavior in a developmental context and conducting assessment within a developmental framework are broad principles that have several important specific implications for the assessment process.

Developmental Norms

First, a developmental approach recognizes that a child's emotional and behavioral functioning must be understood within the context of developmental norms. To be specific, there are numerous behaviors of children that are common at one age, but relatively uncommon at others. For example, bedwetting is quite common prior to age 5, and even at age 5, it is present in 15–20% of children (Doleys, 1977; Walker, Milling, & Bonner, 1988). Similarly, childhood fears tend to be quite common, and the types of fears that are most common show a regular progression with child development (Campbell, 1986). For example, separation anxiety is not uncommon in infants toward the end of the first year of life (Bowlby, 1969), whereas fears of the dark and imaginary creatures are quite common in preschool and school-age children but decrease in prevalence with age (Bauer, 1976).

These are just a few of the many development-related changes in the prevalence of specific child behaviors. Knowledge of

these developmental changes in behavior is crucial to clinical assessment because the same behavior may be developmentally appropriate at one age but indicative of pathology at another. Therefore, assessment of children and adolescents must allow development-based interpretations. The critical nature of these interpretations implies that selection of assessment techniques must be based, at least in part, on the availability of age-specific norms. Further, given the rapid developmental changes experienced by children and adolescents, comparisons must be made within fairly limited age groups. Whereas for adults using a comparison group that spans the ages from 25 to 35 may be justifiable, a comparison group for children that spans the ages 5–15 would be meaningless, given the many changes in development that are subsumed within this period. Because the normative information provided by an assessment instrument and the appropriate use of norm-referenced information by the assessor are critical components to the clinical assessment of children, these issues are discussed in great detail throughout this book.

Developmental Processes

Unfortunately, many assessors believe that simply comparing the assessment information with age norms is all that is needed to take a developmental approach to child and adolescent assessment. This is a much too limited view of development, and how can it be applied to understanding both normal and pathological outcomes in children. A developmental approach is a "process-oriented" approach. Put simply, this means that any developmental outcome, be it a normal personality dimension or a problematic behavioral pattern, is the end result of an interaction of numerous inter-related maturation processes (e.g., socio-emotional, cognitive, linguistic, biological).

This process-oriented approach has several important implications for how assessors conceptualize what they are trying to assess and how they go about doing it.

First, given the interrelated nature of the maturation processes, this approach recognizes that a focus on any single type of developmental process will provide only a limited, and sometimes misleading, understanding of a child's psychosocial functioning. For example, understanding the family environment of a child with behavioral problems will only provide a limited perspective on how these behavioral problems developed without considering the child's temperament, which may make the child more difficult to raise. Such transactional relations among developmental processes necessitate that an assessor design batteries that assess the many different types of processes and take into consideration the potential transactional relations among these processes when interpreting the testing results.

Second, the process-oriented developmental approach recognizes that the same developmental process (e.g., a permissive rearing environment) may result in different outcomes (e.g., some children who are creative, others who are dependent, and others who are antisocial), leading to a concept called "multifinality". The complementary concept is "equifinality" and refers to the possibility that the same outcome (e.g., antisocial behavior) can result from very different developmental processes among individuals (e.g., very strong emotional reactivity leading to strong, angry and aggressive reactions or weak emotional reactivity leading to problems in the experience of empathy and guilt). The implications for the assessment process are that the assessors need to expect that the same personality pattern or psychopathological condition may result from very different processes across individuals, and assessment batteries need to be designed to assess these "causal pathways."

This, in fact, may be one of the most critical concepts in a developmental psychopathological approach to assessment because it places the assessment process in the important role of uncovering the unique causal pathway that leads to a child's current functioning so that interventions can be better tailored to the unique needs of the child (see, e.g., Frick, 2006).

Third, how the various processes unfold over development leads to specific "tasks" that may make certain behaviors more likely to occur at certain points in development. These unique demands, or "developmental tasks," lead to many of the age-related changes in children's emotions and behaviors discussed previously. Comparing a child's behavioral or emotional functioning to the developmental norms can help determine whether the child's functioning is deviant compared to other children who are experiencing similar developmental demands. However, simply comparing a child's behavior to developmental norms and determining whether or not the child's functioning is deviant compared to other children of the same age does not allow the assessor to determine whether (1) the child's problems should be considered an exaggeration of the normal maturational processes operating at that development stage or (2) the child's problems should be considered as a qualitative deviation from normal development (i.e., not consistent with the specific demands of that developmental stage), with the latter often being indicative of a more severe pathological process.

These two different interpretations of deviations from developmental norms can be illustrated in the assessment of conduct problems in children and adolescents. Research has documented an increase in the acting-out behavior for both boys and girls that coincides with the onset of adolescence (e.g., Offord, et al., 1989). The first implication of this finding is that the assessment of adolescent

conduct problems should be based on a comparison with the adolescent norms, so that age-specific deviations can be determined. However, to interpret these age-specific deviations, it is also helpful to realize that an increase in acting-out behavior in adolescence is consistent with the identity formation process outlined in Erik Erikson's psychosocial theory of personality development (Erikson, 1968). Specifically, Erikson characterizes adolescence as a time when youths are struggling with the development of an individual identity, one that is separate from their parents. Rebellion and questioning of authority are manifestations of adolescents' rejection of parental and societal values, as they struggle to develop their unique identity. Understanding this process allows for an additional interpretation when one documents deviations from age norms. If a youth exhibits developmentally deviant levels of conduct problems for the first time in adolescence, the conduct problems may be best conceptualized as an exaggeration of a normal developmental process (e.g., identity development). In contrast, a preadolescent child who exhibits deviant levels of conduct problems is showing a behavior that seems more qualitatively different from what is expected from normal developmental processes. It may, therefore, be an indication of more severe pathology. This is consistent with research, indicating that conduct problems that have onset in adolescence are more likely to be transient, whereas conduct problems with a prepubertal onset tend to be more severe and chronic (Moffitt, 2003).

Stability and Continuity

Issues regarding the stability of childhood behavioral and emotional functioning are important from a developmental perspective

to psychopathology. These complex issues have important implications for the assessment process. The basic issue of stability is not unique to the assessment of children and adolescents, but has been a long-standing controversy in psychological assessment throughout the life span. For example, many have questioned the concept of personality, because it implies a consistency of behavior over place and time that is often not apparent in human behavior (Mischel, 1968). This issue is more relevant to children than adults because childhood behavior seems to be less stable over time and situation, making the concept of personality in children even more controversial. Our view of the debate, which is similar to the view of many other theorists (e.g., Buss, 1995; Martin, 1998), is that the concept of personality can be useful if conceptualized appropriately, but dangerous if viewed wrongly.

For example, many measures of children's behavior or other aspects of personality show much less stability in children than do analogous constructs in adults. Specifically, Roberts and DelVecchio (2000) reported a meta-analysis of 152 longitudinal studies assessing the average stability of personality traits in different age groups over a 6–7-year period. They reported that the average stability coefficient for children and adolescents was 0.31, compared to 0.54 for young adults, 0.64 for middle-aged adults, and 0.75 for adults over the age of 50. These findings are not surprising given the rapid developmental changes that occur in childhood. However, the findings have important implications for the interpretation of personality measures in children. Specifically, interpretations of dispositional characteristics must be made cautiously in children so that there is no implication of strong stability over time, unless data are available to support such an interpretation. Given that the data are lacking in most cases, the term *personality* may be misleading for many domains of child behavior.

Although we feel that this caution is warranted, there are also several ways in which this general statement must be qualified. First, there is clearly some continuity in children's behavior, and the degree of stability (or instability) seems to be dependent on the domain of behavior being assessed. For example, research generally indicates that externalizing behaviors (e.g., hyperactivity, aggression, antisocial behavior) tend to be more stable over time than internalizing behaviors (e.g., fears, depression) (e.g., Frick & Loney, 1999; Ollendick & King, 1994). Therefore, interpretations of the stability of behavior must be dependent on the dimension of behavior that is of interest.

In addition, aggregates of behaviors (behavioral domains) tend to be more stable than discrete behaviors. For example, Silverman and Nelles (1989) reported on the 1-year stability of mothers' reports of fears in their children between the ages of 8 and 11. Over the 1-year study period, there was only a 10% overlap between Time 1 and Time 2 in the ten specific objects or situations that mothers reported as eliciting the most fear in their children. However, the correlation between the absolute number of fears was quite high. Although the specific types of fears were not stable over the study period, the level of fears was stable. Some have argued that aggregation allows one to pick up generalized response tendencies that are not captured by discrete behaviors (Martin, 1988). However, this increase in stability through the aggregation of behaviors can also be conceptualized from basic measurement theory. It has consistently been shown that increasing the number of items on a measure of a trait also increases its reliability (Ghiselli et al., 1981). Hence, the increased stability may be a function of a more reliable method of measurement.

Finally, stability can be affected by whether one is viewing the developmental outcome or the processes that may have

led to this outcome. For example, the type of adjustment problem may be episodic, as in the case of depression, but the factors that led to this problem, such as problems in emotional regulation, may continue even after the depression has remitted and could place the child at risk for other adjustment problems in the future. As such, depression may not appear stable, but the problems in emotional regulation are stable (Keenan, 2000). Again, this illustrates the relevance of the process-oriented approach to assessment that is consistent with the developmental psychopathology framework. This framework illustrates the importance of not simply assessing the developmental outcomes (e.g., psychopathological conditions), but also assessing the various interacting processes that lead to these outcomes.

Situational Stability

Explicit in the developmental psychopathological perspective is a transactional view of behavior. That is, a child's behavior influences his or her context and is also shaped by the context. As a result, one expects a high degree of situational variability in children's behavior based on the differing demands present across situations.

Providing some of the best data on this issue, Achenbach, McConaughy, and Howell (1987) conducted a meta-analysis of 119 studies that reported correlations between the reports of different informants on children's and adolescents' (ages 1^{1/2} to 19 years) emotional and behavioral functioning. The correlations between different types of informants (e.g., parent-teacher) were fairly low, averaging about 0.28. This low correlation is not a good indicator of cross-situational specificity by itself, because reduced correlations could also be due to the individual bias of different informants rather than to actual differences in a child's behavior across settings. However, the mean correlations between

informants who typically observe the child in similar situations (between two parents or two teachers) were generally much higher, averaging about 0.60. The relatively low correlations (0.28 vs. 0.60) across the informant types compared to those within the informant types serve as a more relevant indicator of the high variability in children's behavior across settings.

These findings by Achenbach et al. (1987) were replicated in a later meta-analysis by Renk and Phares (2004). Also, the modest correlation among ratings from different informants may not be limited to only children or adolescents. For example, the average correlation between the adult's ratings of their own personality and the ratings that their spouse make of them only show an average correlation of 0.39 (McCrae, Stone, Fagan, & Costa, 1998). Thus, in general, the correlation between different raters of a person's personality and behavior across different informants appears to be quite modest across the age range. Achenbach et al. (1987) highlight several important implications of these findings to the assessment process. These are summarized in Box 3.3.

In addition, there are several issues on cross-situational specificity that are analogous to those discussed on the stability of childhood behavior. First, like stability, the low correlations across situations may depend on the type of behavior being assessed. Specifically, externalizing problems tend to show higher correlations across informants than internalizing problems (Achenbach et al., 1987; Renk & Phares, 2004). Second, the situational specificity of behavior may be a function of whether or not aggregated domains of behavior are studied, or whether discrete behaviors are studied. For example, Biederman, Keenan, and Faraone (1990) compared the reports of both the parent and teacher on the symptoms of attention deficit disorder (ADD). Individual symptoms showed an average correlation across home and school

settings of about 0.20. In contrast, on a diagnostic level there was a much higher agreement. There was a 90% probability of a teacher reporting enough symptoms to reach a diagnosis of ADD if the child was diagnosed by parents' report. Similar to the findings on stability, this suggests that, although individual behaviors (symptoms) may show a high level of specificity across situations, the broader construct (diagnosis) of aggregated behaviors seems to show greater consistency across situations.

Comorbidities

Comorbidity is a medical term that refers to the presence of two or more diseases that occur simultaneously in an individual. This term has also been applied in the psychological literature to denote the presence of two or more disorders, or two or more problematic areas of adjustment co-occurring within the same individual. There can be several reasons for comorbidity. For example, comorbidity can involve the co-occurrence of two independent disorders, two disorders having a common underlying etiology, or two disorders having a causal relation between themselves (Kendall & Clarkin, 1992). Unfortunately, research in most areas of psychology has not allowed for a clear delineation of the various causes of comorbidity among psychological problems.

Despite this inadequate understanding of the causes of comorbidity, this concept is important for the clinical assessment of children, for it is clear that comorbidity is the rule, rather than the exception, in children with psychological difficulties (Bird, Gould, & Staghezza, 1993). Specifically, children's problems are rarely circumscribed to a single problem area; instead, children tend to have problems in multiple areas of adjustment. For example, in children with severe conduct problems, 50%–90% have a co-occurring ADD, 62% have a co-occurring anxiety disorder, 25% have a learning disability,

Box 3.3**Research Note: Meta-Analysis of Cross-Informant Correlations for Child/Adolescent Behavioral and Emotional Problems**

As noted in the text, Achenbach et al. (1987) conducted a meta-analysis of 119 studies that reported correlations between different informants on children's and adolescents' emotional and behavioral functioning. The meta-analysis included studies that correlated ratings of parents, teachers, mental health workers, observers, peers, and self-report ratings. The overall findings suggested that correlations between different types of informants (e.g., parents and teachers) are fairly low, averaging about 0.28, indicating a high degree of variability in the report of a child's emotional and behavioral functioning across different types of informants. The correlations were higher when calculated between similar informants (e.g., between two parents or between two teachers), averaging about 0.60. This suggests that the low correlations between different informants may be at least partially due to differences in children's behavior in different settings, rather than to idiosyncratic methods of rating behavior across informants.

The authors of this meta-analysis discuss several important implications of their findings to the clinical assessment of children.

1. "The high correlations between pairs of informants who see children in similar settings suggest that data from a single parent, teacher, observer, etc. would provide a reasonable sample of what would be pro-

vided by other informants of the same type who see the child under generally similar conditions" (p. 227).

2. "In contrast, the low correlations between different types of informants suggest that each type of informant provides substantially unique information that is not provided by other informants. The high degree of situational specificity poses a specific challenge to clinical assessments intended to categorize disorders according to fixed rules" (p. 227), such as the *Diagnostic and Statistical Manual of Mental Disorders-Fourth Edition, Revised* (APA, 1994). Such systems specify symptoms that must be judged present or absent, and the low correlations across settings suggest that in most cases the presence or absence will depend on the setting.
3. As a result of the high degree of specificity, clinical assessments of children should obtain information from different informants who see the child in different settings. "In such assessments, disagreement between informants' reports are as instructive as agreement because they can highlight variations in judgments of a child's functioning across situations" (p. 228). In Chap. 15, we discuss the issues involved in deciding how to interpret these variations in reports of a child's or adolescent's emotional and behavioral functioning.

SOURCES: Achenbach, T. M., McConaughy, S. H., & Howell, C. T. (1987). Child/adolescent behavioral and emotional problems: Implications of cross-informant correlations for situational specificity. *Psychological Bulletin*, 101, 213–232.

and 50% have substantial problems in peer relationships (see Frick & O'Brien, 1994; Strauss et al., 1988). Similar rates of comorbidity are found in many other types of child psychopathology.

Research attempting to understand comorbidity in childhood psychopathol-

ogy has had a major impact on our understanding of the causes of several childhood disorders (e.g., Hinshaw, 1987). However, comorbidity also has a more immediate impact on the clinical assessment of children and adolescents. In a special issue of the *Journal of Consulting and Clinical*

Psychology (Kendall & Clarkin, 1992), several articles highlighted the unique treatment needs of children with various types of comorbid psychopathological conditions. The high degree of comorbidity and its importance to the design of effective treatment programs makes the assessment of comorbid conditions crucial in the clinical assessment of children and adolescents.

Because of the importance of comorbidity, most clinical assessments of children and adolescents should be comprehensive. Specifically, assessments must cover multiple areas of functioning so that, not only are the primary referral problems assessed adequately, but potential comorbid problems in adjustment are also assessed. In general, the clinical assessment must be designed with a thorough understanding of the high degree of comorbidity present in child psychopathology and the most common patterns of comorbidity that are specific to the referral question.

Practical Implications for Assessment

Although we have tried to summarize some of the major findings in the field of developmental psychopathology that have particular relevance to clinical assessment, sometimes it is difficult to translate research into guidelines for practice. The following is a summary of some of the major implications of the findings discussed in this section applied to the clinical assessment of children and adolescents. These implications are expanded and applied to specific situations throughout this book.

1. A competent assessor needs to be knowledgeable in several areas of basic psychological research to competently assess children and adolescents. In addition to competence in measurement theory, knowledge of developmental processes and basic characteristics of childhood psychopathology is also essential.

2. Children's behaviors and emotions must be understood within a developmental context. Therefore, an important characteristic of assessment instruments for children is their ability to provide developmentally sensitive normative comparisons. On a more general level, appropriate interpretations of test scores, even if they are based on age-specific norms, should be guided by a knowledge of developmental processes, and their effect on a child's behavioral and emotional functioning.
3. Children's behavior is heavily dependent on the contexts in which the child is participating. Therefore, assessments of children must be based on multiple sources of information that assess a child's functioning in multiple contexts. In addition, an assessment of the relevant aspects of the many important contexts in which a child functions (e.g., at school, at home, with peers) is crucial in understanding the variations in a child's behavior across settings.
4. Most assessments of children must be comprehensive. This is necessary because of the need to adequately assess the many important situational contexts that influence a child's adjustment. Children often exhibit problems in multiple areas of functioning that span emotional, behavioral, learning, and social domains. Effective treatments must be based on the unique strengths and weaknesses of the child across these multiple psychological arenas.

CONCLUSIONS

The main theme of this chapter and, in fact, of this entire text, is that appropriate assessment practices are based on the knowledge of the basic characteristics of the phenomena being assessed. As a result, the competent assessor is knowledgeable not only in test administration but is also well versed

in psychometric theory, child development, and childhood psychopathology.

Clinical assessment can be conceptualized as a process of classification. Therefore, understanding the issues involved in classifying psychological functioning is important. Formal classification systems are needed to promote communication between professionals, to utilize research for understanding individual cases, and to document the need for services. However, classification systems can also be quite dangerous if they are poor systems or if they are not used appropriately.

Two models of classification have had a great influence on our understanding and assessment of children's emotional and behavioral functioning: clinically-derived medical models and statistically-derived multivariate models. Understanding the basic assumptions of these approaches to classification, and understanding the advantages and disadvantages of each are important for interpreting the assessment information.

Being knowledgeable about basic research within the field of developmental psychology is also crucial in conducting and interpreting psychological assessments of children and adolescents. This research illustrates the importance of conducting and interpreting assessments within a developmental context, the importance of understanding the stability and situational specificity of children's psychological functioning, and the importance of comorbidity in childhood psychopathology. These research findings have many practical applications to the assessment process; these applications are discussed throughout this text.

CHAPTER SUMMARY

1. To be competent in the clinical assessment of children and adolescents, one must be knowledgeable about the current research base on emotional and behavioral disorders.
2. *Classification* refers to a set of rules that delineates some levels or types of psychological functioning as pathological and places these significant areas of pathology into distinct categories or along certain dimensions.
3. Appropriately developed and competently used classification systems can aid in communication among professionals, in applying research to clinical practice, and in documenting the need for services.
4. Poor classification systems or inappropriately used classification systems can foster an illusion of few differences among individuals within a given category, can foster an illusion of a clear break between normality and pathology, and can lead to stigmatization.
5. Medical model approaches to classification assume an underlying disease entity, and tend to classify people into distinct categories.
6. Multivariate approaches base classification on patterns of behavioral covariation and tend to classify behavior along continuous dimensions, from normality to pathology.
7. The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition Text Revision* (APA, 2000) is one of the most commonly used classification systems with characteristics of both medical model and multivariate approaches.
8. Developmental psychopathology provides a framework for understanding the adjustment of children and adolescents.
9. Based on this framework, assessments must be conducted with a knowledge of age-specific patterns of behavior, with a knowledge of normal developmental processes, and with consideration of issues regarding the stability of behavior over time and across situations.
10. Because research has shown that children with problems in one area of

adjustment typically have problems in multiple areas, most assessments of children need to cover multiple domains of functioning.

11. Because research has shown that children's behaviors are heavily dependent

on the contexts in which they occur, clinical assessments must assess a child across multiple contexts and assess the characteristics of the most important contexts in which a child functions.