been developed in years past. The unswerving goal of mental health research is to develop and refine clinical treatments as well as preventive interventions that are based on an understanding of specific mechanisms that can contribute to or lead to illness but also can protect and enhance mental health.

Mental health clinical research encompasses studies that involve human participants, conducted, for example, to test the efficacy of a new treatment. A noteworthy feature of contemporary clinical research is the new emphasis being placed on studying the effectiveness of interventions in actual practice settings. Information obtained from such studies increasingly provides the foundation for services research concerned with the cost, cost-effectiveness, and “deliverability” of interventions and the design—including economic considerations—of service delivery systems.

Organization and Financing of Mental Health Care. Another of the defining trends has been the transformation of the mental illness treatment and mental health services landscapes, including increased reliance on primary health care and other human service providers. Today, the U.S. mental health system is multifaceted and complex, comprising the public and private sectors, general health and specialty mental health providers, and social services, housing, criminal justice, and educational agencies. These agencies do not always function in a coordinated manner. Its configuration reflects necessary responses to a broad array of factors including reform movements, financial incentives based on who pays for what kind of services, and advances in care and treatment technology. Although the hybrid system that exists today serves diverse functions well for many people, individuals with the most complex needs and the fewest financial resources often find the system fragmented and difficult to use. A challenge for the Nation in the near-term future is to speed the transfer of new evidence-based treatments and prevention interventions into diverse service delivery settings and systems, while ensuring greater coordination among these settings and systems.

Consumer and Family Movements. The emergence of vital consumer and family movements promises to shape the direction and complexion of mental health programs for many years to come. Although divergent in their historical origins and philosophy, organizations representing consumers and family members have promoted important, often overlapping goals and have invigorated the fields of research as well as treatment and service delivery design. Among the principal goals shared by much of the consumer movement are to overcome stigma and prevent discrimination in policies affecting persons with mental illness; to encourage self-help and a focus on recovery from mental illness; and to draw attention to the special needs associated with a particular disorder or disability, as well as by age or gender or by the racial and cultural identity of those who have mental illness.

Chapter 2 of the report was written to provide background information that would help persons from outside the mental health field better understand topics addressed in subsequent chapters of the report. Although the chapter is meant to serve as a mental health primer, its depth of discussion supports a range of conclusions:

1. The multifaceted complexity of the brain is fully consistent with the fact that it supports all behavior and mental life. Proceeding from an acknowledgment that all psychological experiences are recorded ultimately in the brain and that all psychological phenomena reflect biological processes, the modern neuroscience of mental health offers an enriched understanding of the inseparability of human experience, brain, and mind.

2. Mental functions, which are disturbed in mental disorders, are mediated by the brain. In the process of transforming human experience into physical events, the brain undergoes changes in its cellular structure and function.
3. Few lesions or physiologic abnormalities define the mental disorders, and for the most part their causes remain unknown. Mental disorders, instead, are defined by signs, symptoms, and functional impairments.

4. Diagnoses of mental disorders made using specific criteria are as reliable as those for general medical disorders.

5. About one in five Americans experiences a mental disorder in the course of a year. Approximately 15 percent of all adults who have a mental disorder in one year also experience a co-occurring substance (alcohol or other drug) use disorder, which complicates treatment.

6. A range of treatments of well-documented efficacy exists for most mental disorders. Two broad types of intervention include psycho-social treatments—for example, psychotherapy or counseling—and psychopharmacologic treatments; these often are most effective when combined.

7. In the mental health field, progress in developing preventive interventions has been slow because, for most major mental disorders, there is insufficient understanding about etiology (or causes of illness) and/or there is an inability to alter the known etiology of a particular disorder. Still, some successful strategies have emerged in the absence of a full understanding of etiology.

8. About 10 percent of the U.S. adult population uses mental health services in the health sector in any year, with another 5 percent seeking such services from social service agencies, schools, religious, or self-help groups. Yet critical gaps exist between those who need service and those who receive service.

9. Gaps also exist between optimally effective treatment and what many individuals receive in actual practice settings.

10. Mental illness and less severe mental health problems must be understood in a social and cultural context, and mental health services must be designed and delivered in a manner that is sensitive to the perspectives and needs of racial and ethnic minorities.

11. The consumer movement has increased the involvement of individuals with mental disorders and their families in mutual support services, consumer-run services, and advocacy. They are powerful agents for changes in service programs and policy.

12. The notion of recovery reflects renewed optimism about the outcomes of mental illness, including that achieved through an individual's own self-care efforts, and the opportunities open to persons with mental illness to participate to the full extent of their interests in the community of their choice.

Mental Health and Mental Illness Across the Lifespan

The Surgeon General's report takes a lifespan approach to its consideration of mental health and mental illness. Three chapters that address, respectively, the periods of childhood and adolescence, adulthood, and later adult life beginning somewhere between ages 55 and 65, capture the contributions of research to the breadth, depth, and vibrancy that characterize all facets of the contemporary mental health field.

The disorders featured in depth in Chapters 3, 4, and 5 were selected on the basis of the frequency with which they occur in our society, and the clinical, societal, and economic burden associated with each. To the extent that data permit, the report takes note of how gender and culture, in addition to age, influence the diagnosis, course, and treatment of mental illness. The chapters also note the changing role of consumers and families, with attention to informal support services (i.e., unpaid services), with which many consumers are comfortable and upon which they depend for information. Persons with mental illness and, often, their families welcome a proliferating array of support services—such as self-help programs, family self-help, crisis services, and advocacy—
that help them cope with the isolation, family disruption, and possible loss of employment and housing that may accompany mental disorders. Support services can help to dissipate stigma and to guide patients into formal care as well.

Mental health and mental illness are dynamic, ever-changing phenomena. At any given moment, a person's mental status reflects the sum total of that individual's genetic inheritance and life experiences. The brain interacts with and responds—both in its function and in its very structure—to multiple influences continuously, across every stage of life. At different stages, variability in expression of mental health and mental illness can be very subtle or very pronounced. As an example, the symptoms of separation anxiety are normal in early childhood but are signs of distress in later childhood and beyond. It is all too common for people to appreciate the impact of developmental processes in children, yet not to extend that conceptual understanding to older people. In fact, people continue to develop and change throughout life. Different stages of life are associated with vulnerability to distinct forms of mental and behavioral disorders but also with distinctive capacities for mental health.

Even more than is true for adults, children must be seen in the context of their social environments—that is, family and peer group, as well as that of their larger physical and cultural surroundings. Childhood mental health is expressed in this context, as children proceed along the arc of development. A great deal of contemporary research focuses on developmental processes, with the aim of understanding and predicting the forces that will keep children and adolescents mentally healthy and maintain them on course to become mentally healthy adults. Research also focuses on identifying what factors place some at risk for mental illness and, yet again, what protects some children but not others despite exposure to the same risk factors. In addition to studies of normal development and of risk factors, much research focuses on mental disorders in childhood and adolescence and what can be done to prevent or treat these conditions and on the design and operation of service settings best suited to the needs experienced by children.

For about one in five Americans, adulthood—a time for achieving productive vocations and for sustaining close relationships at home and in the community—is interrupted by mental illness. Understanding why and how mental disorders occur in adulthood, often with no apparent portents of illness in earlier years, draws heavily on the full panoply of research conducted under the aegis of the mental health field. In years past, the onset, or occurrence, of mental illness in the adult years, was attributed principally to observable phenomena—for example, the burden of stresses associated with career or family, or the inheritance of a disease viewed to run in a particular family. Such explanations now may appear naïve at best.

Contemporary studies of the brain and behavior are racing to fill in the picture by elucidating specific neurobiological and genetic mechanisms that are the platform upon which a person's life experiences can either strengthen mental health or lead to mental illness. It now is recognized that factors that influence brain development prenatally may set the stage for a vulnerability to illness that may lie dormant throughout childhood and adolescence. Similarly, no single gene has been found to be responsible for any specific mental disorder; rather, variations in multiple genes contribute to a disruption in healthy brain function that, under certain environmental conditions, results in a mental illness. Moreover, it is now recognized that socioeconomic factors affect individuals' vulnerability to mental illness and mental health problems. Certain demographic and economic groups are more likely than others to experience mental health problems and some mental disorders. Vulnerability alone may not be sufficient to cause a mental disorder; rather, the causes of most mental disorders lie in some
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combination of genetic and environmental factors, which may be biological or psychosocial.

The fact that many, if not most, people have experienced mental health problems that mimic or even match some of the symptoms of a diagnosable mental disorder tends, ironically, to prompt many people to underestimate the painful, disabling nature of severe mental illness. In fact, schizophrenia, mood disorders such as major depression and bipolar illness, and anxiety often are devastating conditions. Yet relatively few mental illnesses have an unremitting course marked by the most acute manifestations of illness; rather, for reasons that are not yet understood, the symptoms associated with mental illness tend to wax and wane. These patterns pose special challenges to the implementation of treatment plans and the design of service systems that are optimally responsive to an individual’s needs during every phase of illness. As this report concludes, enormous strides are being made in diagnosis, treatment, and service delivery, placing the productive and creative possibilities of adulthood within the reach of persons who are encumbered by mental disorders.

Late adulthood is when changes in health status may become more noticeable and the ability to compensate for decrements may become limited. As the brain ages, a person’s capacity for certain mental tasks tends to diminish, even as changes in other mental activities prove to be positive and rewarding. Well into late life, the ability to solve novel problems can be enhanced through training in cognitive skills and problem-solving strategies.

The promise of research on mental health promotion notwithstanding, a substantial minority of older people are disabled, often severely, by mental disorders including Alzheimer’s disease, major depression, substance abuse, anxiety, and other conditions. In the United States today, the highest rate of suicide—an all-too-common consequence of unrecognized or inappropriately treated depression—is found in older males. This fact underscores the urgency of ensuring that health care provider training properly emphasizes skills required to differentiate accurately the causes of cognitive, emotional, and behavioral symptoms that may, in some instances, rise to the level of mental disorders, and in other instances be expressions of unmet general medical needs.

As the life expectancy of Americans continues to extend, the sheer number—although not necessarily the proportion—of persons experiencing mental disorders of late life will expand, confronting our society with unprecedented challenges in organizing, financing, and delivering effective mental health services for this population. An essential part of the needed societal response will include recognizing and devising innovative ways of supporting the increasingly more prominent role that families are assuming in caring for older, mentally impaired and mentally ill family members.

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CHAPTER 3

CHILDREN AND MENTAL HEALTH

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Spanning roughly 20 years, childhood and adolescence are marked by dramatic changes in physical, cognitive, and social-emotional skills and capacities. Mental health in childhood and adolescence is defined by the achievement of expected developmental cognitive, social, and emotional milestones and by secure attachments, satisfying social relationships, and effective coping skills. Mentally healthy children and adolescents enjoy a positive quality of life; function well at home, in school, and in their communities; and are free of disabling symptoms of psychopathology (Hoagwood et al., 1996).

The basic principles for understanding health and illness discussed in the previous chapter apply to children and adolescents, but it is important to underscore the often heard admonition that "children are not little adults." Even more than is true for adults, children must be seen in the context of their social environments, that is, family, peer group, and their larger physical and cultural surroundings. Childhood mental health is expressed in this context, as children proceed through development.

Development, characterized by periods of transition and reorganization, is the focus of much research on children and adolescents. Studies focus on normal and abnormal development, trying to understand and predict the forces that will keep children and adolescents mentally healthy and maintain them on course to become mentally healthy adults. These studies ask what places some at risk for mental illness and what protects some but not others, despite exposure to the same risk factors.

In addition to studies of normal development and of risk factors, much additional research focuses on mental illness in childhood and adolescence and what can be done to prevent or treat it. The science is challenging because of the ongoing process of development. The normally developing child hardly stays the same long enough to make stable measurements. Adult criteria for illness can be difficult to apply to children and adolescents, when the signs and symptoms of mental disorders are often also the characteristics of normal development. For example, a temper tantrum could be an expected behavior in a young child but not in an adult. At some point, however, it becomes clearer that certain symptoms and behaviors cause great distress and may lead to dysfunction of children, their family, and others in their social environment. At these points, it is helpful to consider serious deviations from expected cognitive, social, and emotional development as "mental disorders." Specific treatments and services are available for children and adolescents with such mental disorders, but one cannot forget that these disorders emerge in the context of an ongoing developmental process and shifting relationships within the family and community. These developmental factors must be carefully addressed, if one is to maximize the healthy development of children with mental disorders, promote remediation of associated impairments, and enhance their adult outcomes.

The developmental perspective helps us understand how estimated prevalence rates for mental disorders in children and adolescents vary as a function of the degree of impairment that the child experiences in association with specific symptom patterns. For example, the MECA Study (Methodology for Epidemiology of Mental Disorders in Children and Adolescents) estimated that almost 21 percent of U.S. children ages 9 to 17 had a diagnosable mental or addictive disorder associated with at least minimum impairment (see Table 3-1). When diagnostic criteria
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Table 3-1. Children and adolescents age 9–17 with mental or addictive disorders, combined MECA sample, 6-month (current) prevalence*

<table>
<thead>
<tr>
<th>Disorder</th>
<th>(%)</th>
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<tr>
<td>Anxiety Disorders</td>
<td>13.0</td>
</tr>
<tr>
<td>Mood Disorders</td>
<td>6.2</td>
</tr>
<tr>
<td>Disruptive Disorders</td>
<td>10.3</td>
</tr>
<tr>
<td>Substance Use Disorders</td>
<td>2.0</td>
</tr>
<tr>
<td>Any Disorder</td>
<td>20.9</td>
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Disorders include diagnosis-specific impairment and Child Global Assessment Scale ≤70 (mild global impairment)

Source: Shaffer et al., 1996a

required the presence of significant functional impairment, estimates dropped to 11 percent. This estimate translates into a total of 4 million youth who suffer from a major mental illness that results in significant impairments at home, at school, and with peers. Finally, when extreme functional impairment is the criterion, the estimates dropped to 5 percent.

Given the process of development, it is not surprising that these disorders in some youth are known to wax and wane, such that some afflicted children improve as development unfolds, perhaps as a result of healthy influences impinging on them. Similarly, other youth, formerly only “at risk,” may develop full-blown forms of disorder, as severe and devastating in their impact on the youth and his or her family as are the analogous conditions that affect adults. Characterizing such disorders as relatively unchangeable underestimates the potential beneficial influences that can redirect a child whose development has gone awry. Likewise, characterizing children with mental disorders as “only” the victims of negative environmental influences that might be fixed if societal factors were just changed runs the risk of underestimating the severity of these conditions and the need for focused, intensive clinical interventions for suffering children and adolescents. Thus, the science of mental health in childhood and adolescence is a complex mix of the study of development and the study of discrete conditions or disorders. Both perspectives are useful. Each alone has its limitations, but together they constitute a more fully informed approach that spans mental health and illness and allows one to design developmentally informed strategies for prevention and treatment.

Normal Development

Development is the lifelong process of growth, maturation, and change that unfolds at the fastest pace during childhood and adolescence. An appreciation of normal development is crucial to understanding mental health in children and adolescents and the risks they face in maintaining mental health. Distortions in the process of development may lead to mental disorders. This section deals with the normal development of understanding (cognitive development) in young children and the development of social relationships and temperament.

Theories of Development

Historically, the changes that take place in a child’s psyche between birth and adulthood were largely ignored. Child development first became a subject of serious inquiry at the beginning of this century but was mostly viewed from the perspective of mental disorders and from the cultural mainstream of Europe and white America. Some of the “grand theories” of child development, such as that propounded by Sigmund Freud, grew out of this focus, and they unquestionably drew attention to the importance of child development in laying the foundation for adult mental health. Even those theories that resulted from the observation of healthy children, such as Piaget’s theory of cognitive development, paid little attention to the relationship between the development of the “inner self” and the environment into which the individual was placed. In contrast, the interaction of an individual with the environment was central to the school of thought known as behaviorism.

Theories of normal development, introduced in Chapter 2, are presented briefly below, because they form the basis of many current approaches to understanding and treating mental illness and mental health problems in children and adults. These theories
have not achieved the broader objective of explaining how children grow into healthy adults. More study and perhaps new theories will be needed to improve our ability to guide healthy child-rearing with scientific evidence.

Development Viewed as a Series of Stages
Freud and the psychoanalyst Erik Erikson proposed a series of stages of development reflecting the attainment of biological objectives. The stages are expressed in terms of functioning as an individual and with others—within the family and the broader social environment (particularly in Erikson’s theories) (see Chapter 2). Although criticized as unscientific and relevant primarily to the era and culture in which they were conceived, these theories introduced the importance of thinking developmentally, that is, of considering the ever-changing physical and psychological capacities and tasks faced by people as they age. They emphasized the concept of “maturation” and moving through the stages of life, adapting to changing physical capacities and new psychological and social challenges. And they described mental health problems associated with failure to achieve milestones and objectives in their developmental schemes.

These theories have guided generations of psychodynamic therapists and child development experts. They are important to understand as the underpinnings of many therapeutic approaches, such as interpersonal therapy, some of which have been evaluated and found to be efficacious for some conditions. By and large, however, these theories have rarely been tested empirically.

Intellectual Development
The Swiss psychologist Jean Piaget also developed a stage-constructed theory of children’s intellectual development. Piaget’s theory, based on several decades’ observations of children (Inhelder & Piaget, 1958), was about how children gradually acquire the ability to understand the world around them through active engagement with it. He was the first to recognize that infants take an active role in getting to know their world and that children have a different understanding of the world than do adults. The principal limitations of Piaget’s theories are that they are descriptive rather than explanatory. Furthermore, he neglected variability in development and temperament and did not consider the crucial interplay between a child’s intellectual development and his or her social experiences (Bidell & Fischer, 1992).

Behavioral Development
Other approaches to understanding development are less focused on the stages of development. Behavioral psychology focused on observation and measurement, explaining development in terms of responses to stimuli, such as rewards. Not only did the theories of the early pioneers (e.g., Pavlov, Watson, and Skinner) generate a number of valuable treatments, but their focus on precise description set the stage for current programs of research based on direct observation. Social learning theory (Bandura, 1977) emphasized role models and their impact on children and adolescents as they develop. Several important clinical tools came out of behaviorism (e.g., reinforcement and behavior modification) and social learning theory (cognitive-behavioral therapy). Both treatment approaches are used effectively with children and adolescents.

Social and Language Development
Parent-Child Relationships
It is common knowledge that infants and, for the most part, their principal caretakers typically develop a close bond during the first year of life, and that in the second year of life children become distressed when they are forcibly separated from their mothers. However, the clinical importance of these bonds was not fully appreciated until John Bowlby introduced the concept of attachment in a report on the effects of maternal deprivation (Bowlby, 1951). Bowlby (1969) postulated that the pattern of an infant’s early attachment to parents would form the basis for all later social relationships. On the basis of his experience with disturbed children, he hypothesized that, when the mother was unavailable or only partially available