3 EDITION

Introduction to Abnormal Child and Adolescent PSYCHOLOGY

Robert Weis

Los Angeles | London | New Delhi
Singapore | Washington DC | Melbourne

FOR INFORMATION:

SAGE Publications, Inc.
2455 Teller Road
Thousand Oaks, California 91320
E-mail: order@sagepub.com

SAGE Publications Ltd.
1 Oliver's Yard
55 City Road
London EC1Y 1SP
United Kingdom

SAGE Publications India Pvt. Ltd.
B 1/I 1 Mohan Cooperative Industrial Area
Mathura Road, New Delhi 110 044
India

SAGE Publications Asia-Pacific Pte. Ltd.
3 Church Street
#10-04 Samsung Hub
Singapore 049483

Printed in the United States of America

Library of Congress Cataloging-in-Publication Data

Names: Weis, Robert, 1973- author.

Title: Introduction to abnormal child and adolescent psychology / Robert Weis, Denison University.

Description: Third edition. | Los Angeles : SAGE, [2018] | Includes bibliographical references and index.

Identifiers: LCCN 2016044641 | ISBN 9781506339764 (hardcover : alk. paper)

Subjects: LCSH: Child psychopathology. | Adolescent psychopathology.

Classification: LCC RJ499 .W3925 2018 | DDC 618.92/89—dc23
LC record available at https://lccn.loc.gov/2016044641

This book is printed on acid-free paper.

Acquisitions Editor: Abbie Rickard
eLearning Editor: Morgan Shannon
Editorial Assistant: Alexander Louis Helmintoller
Production Editor: Libby Larson
Copy Editor: Megan Markanich
Typesetter: C&M Digitals (P) Ltd.
Proofreader: Dennis Webb
Indexer: Will Ragsdale
Cover Designer: Candice Harman
Marketing Manager: Katherine Hepburn

17 18 19 20 21 10 9 8 7 6 5 4 3 2 1

Culture Matters	Cultural Context
A Pathway to Trouble	Developmental Pathways
Diverging Developmental Paths	Risk and Protective Factors
Malala Yousafzai	A Portrait of Resilience
Kirby	Gene–Environment Correlation
Stubborn Sara	Psychological Assessment
Anna's Secret	Systems of Psychotherapy
Well-Intentioned Dr. Williams	Professional Ethics: Competence
Resentful Rachel	Professional Ethics: Consent
Risky Renae	Professional Ethics: Confidentiality
Margaret's Mournful Mother	Professional Ethics: Conflicts of Interest
The Family Who Got Rid of the "R-Word"	Intellectual Disability (Down Syndrome)
Silent Sam	Global Developmental Delay
Obsessed With Food	Intellectual Disability (Prader-Willi Syndrome)
Tough Love	Fetal Alcohol Spectrum Disorder
Kylie and Thomas	Autism Spectrum Disorder
Alex	Autism Spectrum Disorder With Intellectual Disability
Benji	Autism Spectrum Disorder Without Intellectual Disability
Cody's Problems With Language Acquisition	Language Disorder (Late Language Emergence)
Bernadette's Problems With Expression	Language Disorder (Specific Language Impairment)
Same Disorder, Different Problems	Speech Sound Disorder
Davis's Stuttering	Childhood-Onset Fluency Disorder
Willem's One-Sided Conversation	Social (Pragmatic) Communication Disorder
Waiting to Fail	Specific Learning Disorder
Rafe, Ricky, and RTI	Response to Intervention
The Energizer Bunny	Attention-Deficit/Hyperactivity Disorder, Combined Presentation
Well-Behaved Brandy	Attention-Deficit/Hyperactivity Disorder, Predominantly Inattentive Presentation
Davidson's Escape	Oppositional Defiant Disorder
Making Mom Miserable	Conduct Disorder
Callous Cade	Conduct Disorder With Limited Prosocial Emotions

Erica's Emerging Alcohol Problem	Alcohol Use Disorder
Erica's Treatment	Alcohol Use Disorder
Concerned About Dad	Separation Anxiety Disorder
Reticent Russell	Selective Mutism
Mary and Man's Best Friend	Specific Phobia
Erin's Social Anxiety	Social Anxiety Disorder
Heart Attack at Age 16	Panic Disorder
Planning for an Emergency	Agoraphobia (With Panic Disorder)
Tammie's Sleepless Nights	Generalized Anxiety Disorder
Doing Things "Just Right"	Obsessive–Compulsive Disorder
Survivor's Guilt	Posttraumatic Stress Disorder
Fleeing Syria	Posttraumatic Stress Disorder in a Preschool-Age Child
Anaclitic Depression	Reactive Attachment Disorder
Kayla's Story	Physical Abuse
Unhappy Family	Sexual Abuse
Words Can Hurt, Too	Psychological Abuse
Lost Boy	Child Neglect
Mood Problems and Meltdowns	Disruptive Mood Dysregulation Disorder
Hannah Misunderstood	Major Depressive Disorder
Bad Genes	Persistent Depressive Disorder (Dysthymia)
Energetic Emily	Bipolar I Disorder
Mixed Mood Max	Bipolar I Disorder With Mixed Features
Mina's Macabre Visions	Schizophrenia (Adolescent-Onset)
Caroline's Conversations	Schizophrenia (Childhood-Onset)
Perfectly Normal	Anorexia Nervosa
Ants!	Binge Eating Disorder
Eye of the Beholder	Bulimia Nervosa and Culture
No Sleepovers	Enuresis

Additional case studies and discussion questions are available to instructors.
Visit abnormalchildpsychology.org.

Now is an exciting time to learn about abnormal child psychology. The field of child psychopathology is rapidly changing. The study and practice of abnormal child psychology began when Lightner Witmer established the first psychological clinic for children in 1896. However, some of the most exciting developments in the field have emerged in the past two decades. For example, the theoretical perspective of developmental psychopathology has shaped the way professionals view children's development (and maldevelopment) across time and from multiple perspectives. Technical advances in clinical neuroscience and neuroimaging have allowed us to better appreciate the genetic and biological underpinnings of childhood disorders. There is also greater importance on evidence-based treatments and the dramatically increased use of psychotropic medications for children with behavioral and social–emotional problems. Changes in the demographic and socioeconomic makeup of the United States also prompt us to view children's development within broader social and cultural contexts.

Most recently, the past 4 years have seen the publication of the new *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5*; American Psychiatric Association, 2013), Dante Cicchetti's edited volumes of *Developmental Psychopathology,* and advances in the National Institute of Mental Health (NIMH) Research Domain Criteria (RDoC) initiative for the classification and conceptualization of mental disorders. Even the Society of Clinical Child and Adolescent Psychology's creation of the website www.effectivechildtherapy.org is a sign that our field is rapidly changing.

Now is a particularly exciting time for students. There is so much for them to explore! Students can ask relevant, novel questions almost immediately. Important questions such as the following require answers: Why is autism spectrum disorder (ASD) more commonly diagnosed today compared to only 10 years ago? Why are adolescent girls more likely than boys to become depressed? What's the best way to help physically abused children? The field needs curious, motivated students with a solid understanding of psychological science and research methods to ask, and begin to answer, these questions and many more.

There is also much work to be done applying psychological science and evidence-based treatments to help children and families in need. Students often find themselves on the front lines of treatment. Some students work in residential treatment facilities with disruptive adolescents. Others serve as behavior therapists for children with developmental disabilities. Still other students volunteer with at-risk youths; they may tutor children with learning disabilities, serve as Big Brothers or Big Sisters to disadvantaged children in their communities, or facilitate after-school groups for children in high-risk neighborhoods. There is no shortage of people who want to help children in need; the difficulty is finding individuals who are willing to use scientific principles and evidence-based practices to help them. The field desperately needs bright, empathic students who are willing to devote their professional lives to help children, using the principles of psychological science.

This book provides an introduction to students interested in abnormal child and adolescent psychology, child psychopathology, children with special needs, or otherwise exceptional children. It adopts a developmental psychopathology approach to understanding youths with behavioral, cognitive, and social–emotional problems. The developmental psychopathology perspective examines the emergence of child and adolescent disorders over time, pays special attention to risk and protective factors that influence developmental processes and trajectories, and examines child psychopathology in the context of typical child development.

This book has four overarching goals: (1) to introduce students to the principles of developmental psychopathology; (2) to help students appreciate the importance of integrating psychological science with real-world clinical practice; (3) to emphasize the need for evidence-based interventions for children and families; and (4) to be relevant to students' lives.

The first goal of this book is to introduce students to the principles of developmental psychopathology and to show how this perspective can aid our understanding of childhood disorders. Children's problems are multiply determined and constantly changing. The best understanding of these problems requires us to integrate research from many disciplines and to apply this information to children and families in specific developmental and sociocultural contexts. Beginning students can find this task overwhelming. However, the developmental psychopathology perspective allows us to appreciate the complexity of children's development over time and across contexts, without oversimplifying the research literature or making the field too daunting for students.

In the book, I wanted to go beyond merely describing each disorder. I also wanted to introduce students to the multitude of factors that cause children's problems. Potential etiologies are numerous and complex. To help students organize the research literature, I present each disorder across five broad levels of analysis:

Genetics and epigenetics (e.g., behavioral and molecular genetics research)
Biology (e.g., brain structure and functioning, hormones, neuroimaging studies)
Psychological processes (e.g., the interplay between children's thoughts, feelings, and actions)
Interpersonal relations (e.g., parent–child attachment, family functioning, peer relationships)
Social–cultural context (e.g., children's ethnicity, socioeconomic status [SES], and neighborhood)

The causes of childhood disorders can be analyzed at each of these levels. However, the most complete accounts of child psychopathology usually involve interactions across multiple levels of analysis and across time. In reading this book, I hope students will see that the field of abnormal child psychology is interdisciplinary and complex.

I also wanted to convey the value and interdependence of psychological research and human service. Psychological research and clinical practice are not separate professional endeavors. On the contrary, effective clinical work draws upon existing psychological research, while the most meaningful psychological research is often inspired by clinical practice.

Two features of this text will help students apply psychological science to children and families in need. First, the book includes detailed case studies for each major disorder. These case studies are based on real clients (with names and other identifying information altered) to show the complex nature of children's problems. Students are encouraged to use information in the text to develop hypotheses regarding the causes of each child's disorder and to develop possible plans for treatment. Second, sections titled Research to Practice provide transcripts of therapy sessions that illustrate how evidence-based treatments might be implemented with real children and families.

I hope that these case studies and transcripts bring to life my descriptions of the various disorders, their causes, and treatments. I also hope these case studies allow students to focus their attention on children and families, rather than on disorders.

My third goal was to provide students with an understanding of evidence-based treatments. These treatments include psychosocial and pharmacological interventions as well as primary (universal) and secondary (indicated) prevention techniques. To the extent possible, I try to provide a detailed description of each form of therapy so that students can appreciate both the theory behind the intervention and how the treatment plays out in clinics, hospitals, and schools. Then, I briefly review the efficacy and effectiveness of each form of treatment and limitations in the research literature.

My goal is not to teach students how to conduct therapy. Instead, I hope these vivid descriptions of treatment will help students draw connections between the causes of each disorder and the methods used to treat them. Such connections will help students integrate material within chapters and across disorders. I also hope that my emphasis on evidence-based treatments will help students become better consumers of psychological services. Unfortunately, there are too many interventions available to children and families that lack empirical support and too few evidence-based treatments accessible to families most in need. Perhaps this book will help students discriminate between therapies grounded in science versus well-intentioned treatments that lack empirical support.

Finally, I wanted to show students *why* an understanding of child psychopathology and its treatment might be important to them. Most students will not become psychologists or counselors. However, all students have multiple opportunities

to influence the lives and developmental outcomes of children and adolescents. Some students will become physicians, nurses, teachers, librarians, day care providers, occupational or recreational therapists, or other professionals who have immediate, frequent contact with children. Other students will volunteer as coaches, tutors, or mentors in schools or the community. Most students will become parents and have the primary responsibility of raising the next generation of youths. Although few students will become mental health professionals, all can rely on psychological science and critical thinking to make informed decisions about the welfare of our families, schools, neighborhoods, and society.

The third edition of this book offers all of the features instructors and students expected from the second edition, including the following:

A focus on the principles of developmental psychopathology and the understanding of childhood disorders across multiple levels of analysis
Comprehensive coverage of all *DSM-5* childhood disorders, their causes, and evidence-based treatments
Complete *DSM-5* diagnostic criteria for each disorder
Detailed case studies and therapy transcripts that help students apply empirical evidence and theories to children and families in specific contexts
Extensive discussion of the ways age, gender, and ethnicity can affect the diagnosis, etiology, and treatment of childhood disorders
Critical-thinking exercises that encourage students to analyze, apply, and synthesize information from the text
Ancillary materials for students (e.g., flash cards, practice quizzes) and instructors (e.g., PowerPoint presentations, test banks, videos) to support learning and teaching

The text is organized developmentally in which disorders that typically emerge in infancy and early childhood are presented first, followed by disorders most commonly seen in later childhood, adolescence, and emerging adulthood. Specifically, it includes five parts:

Part I: Evidence-Based Research and Practice

This section introduces students to developmental psychopathology (Chapter 1), reviews major theories of child development and maldevelopment across multiple levels of analysis (Chapter 2), and provides an overview of psychological assessment (Chapter 3) and treatment (Chapter 4).

Part II: Developmental Disorders and Disabilities

This section presents neurodevelopmental disorders that typically emerge in early childhood and reflect underlying cognitive problems: intellectual disability (ID) and developmental disorders (Chapter 5), autism spectrum disorder (ASD; Chapter 6), and communication and learning disorders (Chapter 7).

Part III: Disruptive Disorders and Substance Use Problems

This section includes the externalizing disorders attention-deficit/hyperactivity disorder (ADHD; Chapter 8), oppositional defiant disorder (ODD), and conduct disorder (CD; Chapter 9). It also includes a chapter on child and adolescent substance use and substance use disorders (Chapter 10), which often emerge in children with behavior problems.

Part IV: Emotion and Thought Disorders

Most of this section concerns the internalizing disorders: anxiety, obsessive–compulsive disorder (OCD), and related problems (Chapter 11); trauma-related disorders and child maltreatment (Chapter 12); depressive disorders and suicide (Chapter 13); and bipolar disorders (Chapter 14). The final chapter in this section also covers pediatric schizophrenia.

Part V: Health-Related Disorders

The last section includes feeding and eating disorders (Chapter 15) and elimination disorders, sleep disorders, and pediatric health problems (Chapter 16). These disorders reflect an array of health-related problems that illustrate the connection between physical and mental well-being.

Readers of the previous edition will notice four important changes to this structure. First, there is expanded coverage of psychological assessment (Chapter 3) and evidence-based treatment (Chapter 4). There are also new case studies that illustrate the process of assessment and therapy, respectively.

Second, the section on research methods was removed from the chapter on the causes of childhood disorders (Chapter 2) and placed in an appendix. Most students are already familiar with basic research designs and methods; however, students who need a quick refresher can consult this appendix.

Third, the chapters on communication and learning disorders were shortened and combined into a single chapter (Chapter 7). This organization reflects the close relationship between children's communication and learning problems.

Fourth, each chapter is organized thematically into subsections (e.g., 1.1. The Prevalance of Childhood Disorders; 1.2. What Is a "Mental Disorder"?; 1.3. An Introduction to Developmental Psychopathology). Each subsection serves as a module that can be assigned and presented independently. Therefore, instructors can assign specific subsections on specific days or assign only those subjections they find most important to their class.

This edition has new features that will help students learn and apply information and skills presented in the text. Extensive case studies presented in the text are designed to help students organize information about specific disorders by providing them with examples of children with each condition. Instructors also have access to a separate collection of case studies online that they can use to guide lectures or stimulate classroom discussion. Each case study is followed by questions that correspond to material presented in the text. For example, questions typically ask students to assign a DSM-*5* diagnosis for the child, provide a rationale for the diagnosis, identify one or more possible causes for the child's disorder, or describe an evidence-based treatment for the child or family. These case studies, which I wrote specifically for this text, can be used either for class sessions, homework assignments, or exams.

Perhaps the most salient change to this edition is that the text is organized by questions rather than by subheadings. These questions serve three purposes:

> *They focus students' reading*. The questions are essentially learning objectives that are placed immediately before their relevant portion of the text rather than at the beginning of each chapter. Consequently, they help student focus on salient topics regarding the definition, epidemiology, etiology, and treatment of each disorder.
>
> *They motivate students to read*. Interesting, relevant questions prompt students to read the text and find answers. How common are mental disorders? How does a child's gender affect her likelihood of being diagnosed? Do most children with disorders receive treatment? Questions like these spark interest and motivate students to read on.
>
> *They facilitate learning.* Cognitive psychologists have long recognized that taking practice tests and elaborating on one's reading are two of the most effective strategies to promote learning and increase exam performance. On the other hand, the strategies most often used by students (e.g., highlighting, rereading) are least effective (Dunlosky, Rawson, Marsh, Nathan, & Willingham, 2013). The questions allow students to prepare for exams as they read and test their learning by comparing their answers with the section summaries. Students can also use these summaries to quickly review main points prior to class.

The third edition also includes expanded coverage on several topics:

> Updated epidemiological information based on new population-wide surveys such as the most recent data from the Autism and Developmental Disabilities Monitoring (ADDM) Network, National Comorbidity Replication Survey and Monitoring the Future (MTF)
> A new section on epigenetics and epigenetic research applied to specific childhood disorders
> Complete coverage of the *DSM-5* conditions and new developments in the National Institute of Mental Health (NIMH) Research Domain Criteria (RDoC) for childhood disorders
> Expanded coverage of psychological assessment and systems of psychotherapy
> Coverage of timely topics such as the effects of lead ingestion or Zika virus exposure on children's cognition or the use of technology to improve the communication skills of children with developmental disabilities
> Expanded coverage of selective mutism in young children
> A new section on the identification, prevention, and treatment of suicide in children and adolescents

This edition also includes new and exciting developments in the research literature. For example, the text includes recent information about disorders that were added to *DSM-5* or experienced major revisions, such as autism spectrum

disorder (ASD), disinhibited social engagement disorder (DSED), disruptive mood dysregulation disorder (DMDD), and binge eating disorder (BED). Not only does the text describe research for all of the new *DSM-5* disorders but it also offers hundreds of new references, published in the past 3 years, on already existing conditions. The third edition is not merely an "updated" version of the previous edition; it expands upon its predecessors by discussing emerging topics and research findings.

To accompany this text, I have created ancillary material for instructors. This material is designed to facilitate lectures, class discussion, and the creation of exams. I hope that this material will allow instructors greater time and flexibility to engage students in the classroom rather than manage the "nuts and bolts" of their courses. The ancillary instructor material includes the following:

- A sample syllabus
- PowerPoint slides for each chapter, including tables and figures from the text
- Online videos to supplement lectures
- A separate set of case studies and discussion questions to prompt class activities and critical thinking
- A test bank that includes multiple-choice, short-answer, and essay questions

Students also have access to online materials including flash cards, videos, and web resources. You can access these resources at www.abnormalchildpsychology.org.

I am grateful to many people for their support and encouragement. First, I am thankful for the professional training and mentorship of Dr. Chris Lovejoy and the faculty at Northern Illinois University, who embody the spirit of the scientist–practitioner tradition. Second, I want to acknowledge three clinician–scholars who have greatly influenced my view of developmental psychopathology and the delivery of psychological services to children, adolescents, and families: Dr. Thomas Linscheid and Dr. Joseph Hatcher of Nationwide Children's Hospital in Columbus, Ohio, and Dr. Terry Kaddatz of St. Michael Hospital in Stevens Point, Wisconsin. Third, I would like to thank my colleagues at Denison University for their collegiality and support for this project. I am especially grateful to my former student, Celeste Erickson, who helped edit this new edition.

I also thank the reviewers of this manuscript, who offered many helpful suggestions in its preparation. They are David L. Carlston, Midwestern State University; Christie Karpiak, University of Scranton; Richard Milich, University of Kentucky; Martin Murphy, University of Akron; Wendy J. Nilsen, University of Rochester; Jill Norvilitis, SUNY College at Buffalo; Elizabeth Soliday, Washington State University, Vancouver; Ric Steele, University of Kansas; and Margaret Wright, Miami University of Ohio.

Finally, I am most indebted to my wife, Jennifer, and three wonderful children, Thomas, Marie, and Anne Catherine. My children were infants and toddlers when the first edition of this book was published, and they are now reaching adolescence. It has been a pleasure helping them along their developmental paths, wherever these paths might eventually lead.

Robert Weis
Denison University
Granville, Ohio

is a licensed clinical psychologist and associate professor of psychology at Denison University, a liberal arts college near Columbus, Ohio. He earned an AB in psychology from the University of Chicago and a PhD in clinical child psychology from Northern Illinois University. He completed his predoctoral and postdoctoral work in clinical child and pediatric psychology at Nationwide Children's Hospital (Ohio) and Portage County Mental Health Center (Wisconsin). At Denison, he teaches courses in introductory psychology, research methods and statistics, abnormal psychology, children with special needs, and assessment and psychotherapy. He also supervises an undergraduate internship in applied psychology. He is the 2016 recipient of the Charles A. Brickman Teaching Excellence Award at Denison. His research interests are in children's mental health program evaluation and learning disabilities. His work has been published in *Psychological Science*, the *Journal of Personality and Social Psychology,* the *Journal of Abnormal Child and Adolescent Psychology, Psychological Assessment,* and *Psychology in the Schools*. When not working, Robert enjoys spending time with his wife, three children, and little dog.

iStockphoto.com/Liderina

After reading this chapter, you should be able to do the following:

- Describe the prevalence of childhood disorders and how prevalence varies as a function of children's age, gender, socioeconomic status (SES), and ethnicity.
- Critically evaluate the *DSM-5* concept of "mental disorder" as it applies to children and adolescents.
- Understand and give examples of some of the basic principles of developmental psychopathology.
- Explain why evidence-based practice is important when treating children and families.

here once was an old man who lived near the ocean. One morning, the man went for a walk on the beach and found the shore littered with starfish, stretching in both directions. A storm had passed the night before, stranding the starfish upon the sand.

In the distance, the man noticed a young boy walking along the shoreline. As the boy approached, he paused every so often, bent down to pick up an object, and threw it into the sea. When the boy came close enough, the man shouted, "Good morning! May I ask what you are doing?"

The young boy stopped, looked up, and replied, "I'm throwing the starfish into the ocean. The storm has washed them onto the beach, and they can't return to the sea by themselves. They need me to help them."

The old man replied, "But there must be thousands of starfish on this beach. I'm afraid you really won't be able to make much of a difference."

The boy bent down, picked up another starfish, and threw it into the water as far as he could. Then, he turned to the man, smiled, and said, "It made a difference to that one!"

When first learning about psychological disorders in children, it is easy to be pessimistic, like the old man in the story. Approximately 20% of all children and adolescents experience at least one mental health problem prior to adulthood. This percentage means that nearly 15,000,000 youths in the United States alone will encounter problems with their behavioral, cognitive, or social–emotional functioning. These problems include developmental disabilities like Down syndrome or autism spectrum disorder (ASD), externalizing disorders like attention-deficit/hyperactivity disorder (ADHD), internalizing disorders like anxiety and depression, and health-related problems like eating disorders and insomnia. Problems like these are serious; they can affect important aspects of children's development and long-term outcomes, their ability to learn and perform well in school, their relationships with family and friends, and their overall happiness and well-being (Office of Juvenile Justice and Delinquency Prevention, 2016; Perou et al., 2016).

The little boy and the starfish.

Equally worrisome is the fact that most children and adolescents who require treatment for these disorders receive substandard care or no care whatsoever. Barriers to effective treatment include poor recognition of children's psychological problems; limited access to high-quality, mental health services, especially among children from socioeconomically disadvantaged families; and an overall shortage of mental health professionals who are trained in evidence-based interventions (Garland et al., 2013; Olfson, Druss, & Marcus, 2015).

On the other hand, there is good reason to be optimistic, like the young boy who rescued the starfish. There are many new opportunities for students who are interested in helping children and families in need. The past 20 years have witnessed a remarkable increase in the scientific study of child psychopathology. New theories and empirical studies have advanced the field, enabling researchers to more fully understand the causes of these conditions. Research depends on teams of professionals, working together, to piece together the causes of these disorders across multiple levels of analysis: genetic, biological, psychological, familial, and social–cultural (Cicchetti, 2016a, 2016b). No matter what your interest, there is work that needs to be done!

Similarly, we have made great strides developing evidence-based treatments for children with these disorders (Hamilton, Daleiden, & Youngstrom, 2015). These treatments include new medications, psychotherapies, and prevention strategies that can be delivered in a wide range of contexts: clinics, hospitals, schools, and the community. Furthermore, there is increased effort to tailor these interventions to meet the needs of children and families from diverse cultural, ethnic, linguistic, and socioeconomic backgrounds (Christophersen & Vanscoyoc, 2013; Nathan & Gorman, 2015).

There is, perhaps, no more exciting time to be studying abnormal child psychology than now. Even if you do not intend on becoming a mental health professional, it is likely that you will play a significant role in the life of a child or adolescent (if you haven't already). Not all of us are called to be researchers or therapists, but nearly everyone has the opportunity to promote the welfare of children in some capacity: as a caregiver, parent, teacher, coach, or mentor. This book is intended to introduce you to this intellectually exciting and personally rewarding discipline. Welcome!

are scientists who study the prevalence of medical and psychological disorders in the general population (Maughan & Rutter, 2010). refers to the percentage of individuals in a given population who have a medical or psychological condition. To estimate prevalence, epidemiologists collect data from thousands of individuals in the population, recording their current physical or psychological health. To estimate the prevalence of psychological disorders among children and adolescents, epidemiologists usually rely on information gathered from parents, other caregivers, or professionals, such as psychologists, physicians, or teachers. Sometimes, epidemiologists also collect data from children and adolescents themselves, especially when questions deal with feelings (e.g., depression) or behaviors that might be hidden from parents (e.g., alcohol and other drug use). Epidemiologists can use this information to determine *point prevalence*, the percentage of youths with a disorder at a given point in time, and *lifetime prevalence*, the percentage of youths with a disorder at any point in their lifetime.

Sometimes, epidemiologists want to determine the likelihood that someone will develop a disorder in a given period of time. refers to the percentage of new cases of a disorder in a discrete period of time—usually 1 year. Because incidence only refers to new cases of a disorder, it is typically a much smaller number than prevalence. For example, the lifetime prevalence of ASD is approximately 1.8%; that is, roughly 1.8% of youths in the United States have been diagnosed with autism. However, the incidence of autism is approximately 0.3%; that is, in any given year, approximately 0.3% of children will be diagnosed with autism for the first time (Centers for Disease Control and Prevention, 2016c).

Determining the prevalence of children's mental health problems is challenging for several reasons (Costello & Angold, 2016). First, there is no single agency that tracks the prevalence of mental disorders in children and adolescents. Instead, prevalence must be estimated using data from dozens of individual studies, conducted by different research teams.

Second, epidemiological studies use different methods to collect data, yielding slightly different results. For example, the National Health Interview Survey (NHIS) estimates the prevalence of childhood disorders by interviewing 12,000 parents in their homes each year. In contrast, the National Youth Risk Behavior Survey estimates behavior and substance use problems in adolescents by administering questionnaires to 16,000 high school students annually. These different research methods (e.g., interviewing parents vs. administering questionnaires to teens) can yield different findings. For example, parents are generally better able to comment on children's disruptive behavior but are less accurate in estimating children's difficulties with depression or use of alcohol. In contrast, adolescents may be more accurate reporters of their own mood and substance use, but may underestimate behavior problems (Kamphaus, Reynolds, & Dever, 2014; Stiffler & Dever, 2015).

Third, there are practical problems with epidemiological research. Many people do not want to participate in lengthy surveys, others do not understand questions asked of them, and still others provide inaccurate information. Conducting large-scale interviews or surveys is also costly and time consuming.

Despite these methodological obstacles, researchers have conducted several large epidemiological studies designed to estimate the prevalence of childhood disorders. Collectively, these studies include data from tens of thousands of children and their caregivers, using a variety of research strategies. Altogether, these data suggest that 13% to 15% of youths experience a psychological disorder in any given year. Slightly more than 20% of youths experience a disorder at some point before adulthood (Perou et al., 2016).

Recent data indicate that the overall prevalence of children's mental health problems is on the rise. For example, in the past decade, there has been a 24% increase in the number of children receiving mental health or substance abuse treatment in the United States (Health Care Cost Institute, 2012). The number of youths prescribed medication to treat psychological disorders, such as ADHD, has also increased approximately 28% during that same time (Visser, Danielson, & Bitsko, 2014). Finally, the rate of hospital admissions for children with psychological disorders, such as depression, has increased 80% in the past 20 years (Pfuntner, Wier, & Stocks, 2013).

Table 1.1 shows the prevalence of specific mental disorders among children and adolescents in the United States. As you might suspect, ADHD is the most common condition; approximately 8.9% of youths will be diagnosed with this disorder at some point before adulthood. Anxiety disorders, such as separation anxiety or social phobia, are also relatively common. Certain conditions, such as autism, are more common than previously thought; as many as 1 in 68 children will develop this serious condition (Autism and Developmental Disabilities Monitoring [ADDM] Network, 2016). Other problems, such as eating disorders and tics (i.e., repeated, involuntary vocalizations or movements), are relatively rare in children.

Prevalence of Mental Disorders in Children (Ages 3–15)

Diagnosis	*Past 12 Months*	*Lifetime*
Children (3–15 years)		
Any Disorder	**13.1%**	**20.1%**
ADHD	8.1%	8.9%
Anxiety Disorders	4.0%	4.7%
Depression	3.0%	3.9%
Conduct Problems	2.1%	3.9%
Autism Spectrum Disorder	1.1%	1.8%
Eating Disorders	0.2%	0.7%
Bipolar Disorders	0.2%	0.3%
Tics/Tourette Disorder	0.2%	0.3%
Schizophrenia	<0.1%	0.1%

This table shows the median percentage of youths with each disorder from the following US data sets: ADDM Network, National Comorbidity Survey Replication–Adolescent Supplement, NHIS, National Health and Nutrition Examination Survey, National Survey of Children's Health, National Survey on Drug Use and Health, National Youth Risk Behavior Survey (2013–2016).

Children's disorders tend to occur together. refers to the presentation of two or more disorders in the same person at the same time. On average, approximately 40% of children and adolescents with one mental disorder have at least one other psychiatric condition (Merikangas & He, 2014). Certain disorders show high comorbidity in children and adolescents. For example, as many as 75% of youths with depression also experience an anxiety disorder that interferes with their daily functioning (Cummings, Caporino, & Kendall, 2014). Similarly, approximately 50% of young children with ADHD also exhibit conduct problems, such as oppositional defiant behavior toward parents or other adults (Pliszka, 2015). For disorders like depression and ADHD, comorbidity is the rule rather than the exception in children.

Psychological disorders have direct, deleterious consequences on the lives of children and their families. The total cost of child and adolescent mental health care in the United States is approximately $247 billion annually (Centers for Disease Control and Prevention, 2016b). Children with mental health problems need evidence-based interventions, such as counseling and/or medication, to help them manage their symptoms and improve their functioning. Children's mental health problems can also compromise their caregivers' well-being, leading to reduced productivity at work and increased tension at home. The cost to communities is also enormous. Societal costs include incarceration and rehabilitation for youths

with conduct problems, drug and alcohol counseling for youths with substance abuse and dependence, and family supervision and reunification services for youths who experience maltreatment. School districts must pay for special education services for children with cognitive, learning, and behavior problems that interfere with their ability to benefit from traditional public education. Preventing childhood disorders would spare families suffering and save communities money. Unfortunately, prevention remains an underutilized approach to dealing with child and adolescent psychopathology in the United States (Ghaemi, Khakshour, Abasi, & Hajikhani Golchin, 2015).

One of the greatest changes in the field of abnormal child psychology in the past two decades has been the increased use of medication to treat childhood disorders. are prescription drugs used to treat psychological problems. Today, approximately 7.5% of all school-age children and adolescents are taking at least one psychotropic medication (Howie, Pastor, & Lukacs, 2014; Jonas, Gu, & Albertorio-Diaz, 2013).

The use of psychotropic medication varies as a function of children's age (Figure 1.1). Medication is more frequently prescribed to adolescents than to prepubescent children. The greater use of psychotropic medication among adolescents likely reflects the greater overall prevalence of mental health problems in adolescents compared to younger children. Furthermore, adolescents' mental health problems tend to be more severe and, consequently, may be more likely to require medication. Although young children are less likely to be prescribed medication, recent research indicates that 1% to 2% of preschoolers are currently taking at least one psychotropic drug (Chirdkiatgumchai et al., 2013; Fontanella, Hiance, Phillips, Bridge, & Campo, 2014).

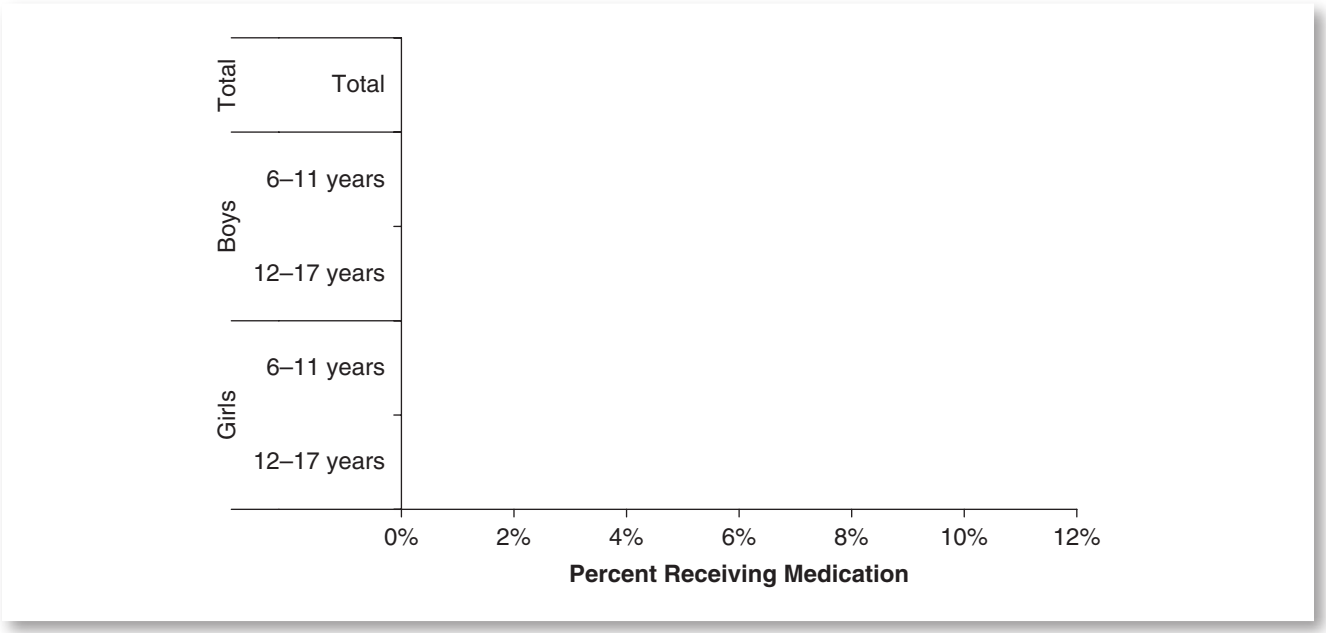
Medication use also varies by gender. Regardless of age, boys are more likely to receive medication for psychological problems than girls. This gender difference in medication use reflects the fact that boys are approximately 3 times more likely than girls to be diagnosed with ADHD and receive medication for that condition.

The percentage of youths receiving medication to treat psychological problems has more than doubled from 1995 to today. Interestingly, the percentage of children participating in psychotherapy, a nonmedicinal treatment, has remained relatively stable during this same time period (Olfson, Blanco, Wang, Laje, & Correll, 2014; Olfson, He, & Merikangas, 2013).

Two factors seem to be driving this overall rise in the use of psychotropic medication for children. First, clinicians are getting better at recognizing mental disorders in youths. Second, physicians have more medication options for children now than two decades ago (Olfson et al., 2014).

Interestingly, not all types of psychotropic medications have showed the same increase in popularity. Medications used to treat ADHD, such as Ritalin and Adderall, showed a dramatic increase in the past two decades. In contrast, medications used to treat anxiety disorders (i.e., anxiolytics) and

Medication use by children and adolescents. Approximately 7.5% of youths use psychotropic medication. Boys are more likely to use medication than girls, and adolescents are more likely to use medication than prepubescent children (Howie et al., 2014).



thought disorders like schizophrenia (i.e., antipsychotics) have increased at a slower pace. Only one class of medication for children and adolescents has declined in popularity: antidepressants. In the 1990s, physicians began prescribing antidepressant medications, like Prozac, to youths with depressive symptoms. In 2004, however, the US Food and Drug Administration (FDA) issued a warning to physicians that youths prescribed antidepressants were significantly more likely to experience suicidal thoughts or engage in suicidal behaviors (4%) than youths with depression who took placebo (2%). Because of this warning, antidepressant prescriptions declined. Today, antidepressants are usually reserved for youths who show more serious depressive symptoms and who are not responsive to psychotherapy (Friedman, 2014).

Is medication overprescribed? To answer this question, researchers examined psychological problems and medication use in a large, nationally representative sample of adolescents (Merikangas & He, 2014). In the previous year, approximately 40% of adolescents experienced a mental health problem. However, only 14.2% of adolescents with mental health problems were prescribed medication by their physician. These findings challenge the widespread belief that psychotropic medication is overprescribed to youths. On the contrary, many children and adolescents who might benefit from medication never receive it.

Approximately 13% to 15% of youths experience a psychological disorder in any given year; 20% of youths experience a disorder prior to reaching adulthood. The most common disorders among children are ADHD and anxiety disorders.

Approximately 40% of youths with one disorder have another (comorbid) disorder.

Approximately 7.5% of school-age children and adolescents are taking at least one psychotropic medication. Although medication can be overprescribed, most youths with psychological disorders do not receive medication.

Mental health problems are not equally distributed across the population (Cook, Barry, & Busch, 2013; Ringeisen, Casanueva, Urato, & Stambaugh, 2015). The prevalence of mental disorders varies across sociodemographic groups. Four sociodemographic factors are especially important: (1) age, (2) gender, (3) socioeconomic status (SES), and (4) ethnicity.

The prevalence of mental disorders varies with age. On average, adolescents are more likely than children to experience mental health problems (Merikangas & He, 2014). The best data that we have regarding the prevalence of mental health problems in adolescents comes from the results of the National Comorbidity Survey Replication–Adolescent Supplement (Kessler et al., 2012a). The researchers who conducted this study interviewed a nationally representative sample of more than 10,000 adolescents ages 13 to 17. They also administered rating scales to parents to gather additional data on adolescents' functioning. Results showed that 23.4% of adolescents reported a mental disorder in the past month and 40.3% reported a mental disorder in the previous year. Although most of the disorders experienced by adolescents were mild to moderate in severity, the overall prevalence of disorders was much higher than in previous studies involving children (Kessler et al., 2012b).

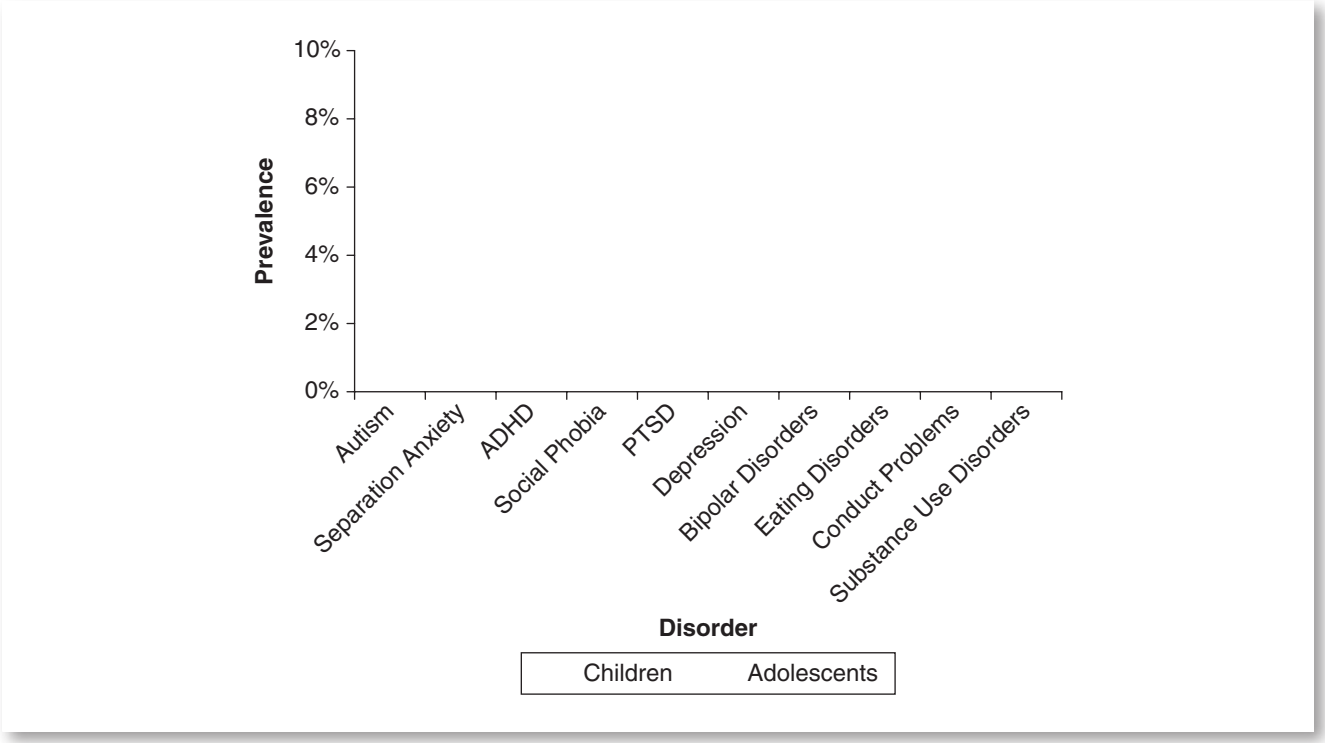
The study also allows us to compare the prevalence of specific disorders across childhood and adolescence (see Figure 1.2). Certain disorders are more common among younger children: autism, separation anxiety, and ADHD. However, the prevalence of most disorders increases with age. For example, adolescents are much more likely to experience problems with social phobia, depression, bipolar disorders, and eating disorders than prepubescent children. Problems with alcohol and other drug use also typically emerge in adolescence and are relatively rare among prepubescent children.

The prevalence of psychological disorders also varies across gender. In early childhood, many disorders are more typically seen in boys. For example, boys are 4 times more likely than girls to be diagnosed with ASD and 3 times more likely than girls to be diagnosed with ADHD. Boys are also more likely than girls to show disruptive behavior problems, such as oppositional defiant disorder (ODD). The prevalence of other disorders is approximately equal in young boys and girls (Perou et al., 2016).

By adolescence, however, girls are more likely than boys to experience mental health problems (Kessler et al., 2012a). Adolescent boys continue to be at greater risk than adolescent girls for developing behavior problems. Similarly, adolescent boys are slightly more likely than adolescent girls to develop problems with alcohol and other drugs. However, adolescent girls are 2 to 3 times more likely than adolescent boys to experience problems with depression or anxiety. Furthermore, adolescent girls are 5 to 10 times more likely than adolescent boys to be diagnosed with an eating disorder.

Psychologists have struggled to explain why girls show a dramatic increase in mental health problems during adolescence. Researchers have suggested many causes ranging from biological changes during puberty to unreasonable social–cultural expectations placed on girls. Recently, however, researchers have identified two particularly important factors: stressful life events and the way girls think about those events.

Children's mental disorders vary by age. On average, adolescents are more likely to experience disorders than children. However, certain disorders, like autism spectrum disorder and separation anxiety disorder, are more common among younger children than adolescents (Kessler et al., 2012a; Perou et al., 2015).



In one study, researchers followed a large sample of adolescents from late childhood through middle adolescence (Hamilton, Stange, Abramson, & Alloy, 2015). Most adolescents reported increased stress during this time period; however, girls were particularly sensitive to "interpersonally dependent stressors"—that is, stressful events that involved important people or relationships in their lives. For example, girls were especially likely to report difficulties with parents, peers, or romantic partners. Perhaps more importantly, the way girls thought about these interpersonally dependent stressors affected their mood. For example, adolescents who believed they were responsible for these interpersonal problems (e.g., "It's my fault my mom is angry with me") were more likely to experience depression than adolescents who did not blame themselves (e.g., "My mom is just grouchy after working all day"). Similarly, adolescents who tended to ruminate, or dwell upon and overthink these events (e.g., "I wonder why my friends are mad at me? Was it something I said?"), were also more likely to experience problems with depression. These findings suggest that girls' thoughts about interpersonal events can greatly determine their well-being. In fact, cognitive therapists help adolescents change their ways of thinking to alleviate these negative moods (Image 1.2).

is one of the best predictors of children's mental health. SES is a composite variable that reflects three aspects of a child's environment: (1) parents' levels of education, (2) parents' employment, and (3) family income. As you might expect, these three variables are correlated; parents with more education tend to work more complex, higher-paying jobs. Overall, children from lower-SES families are at greater risk for developing mental disorders than children from middle- or high-SES families (Kessler et al., 2012a).

There are at least two explanations for the association between SES and risk for psychological disorders. First, higher-SES parents may be less likely to experience psychological problems themselves. They pass on genes conducive to better mental health to their children. Second, higher-SES parents may be better able to provide environments for their children that protect them from psychological problems. For example, parents with higher incomes may be better able to afford higher-quality health care, nutrition, or schooling for their children. These early experiences, in turn, can protect their children from the emergence of mental health problems.

A related predictor of children's mental health is family composition. Recent research indicates that youths living with only one biological parent are twice as likely to develop an anxiety or mood disorder as youths living with both biological parents. Furthermore, adolescents living in single-parent homes may be 6 times more likely to develop

Slumber Party Nightmare. Imagine that you go to a slumber party and the other girls ignore you. Is it your fault? Will it happen again in the future? Will it affect other parts of your life? Researchers found that the way girls think about events like these predicted their likelihood of depression (Hamilton, Stange, Abramson, & Alloy, 2015).

monkeybusinessimages

a behavior or substance use disorder as youths living in a two-parent household (Kessler et al., 2012a). The association between single-parent families and increased mental health problems is partially explained by SES; single parents often earn lower family incomes than two-parent families. However, single parents also report greater stress and may have more difficulty monitoring their children's behavior than two-parent families. These factors, in turn, can contribute to their children's behavior problems (Frick, 2013).

The relationship between ethnicity and childhood disorders is complex. Certain disorders are more commonly diagnosed in non-Latino, White families. For example, the prevalence of ASD is approximately twice as high among non-Latino, White children (1.1%) compared to Latino (0.5%) or African American (0.4%) youths. Similarly, ADHD is more frequently diagnosed in non-Latino, White youths (9.1%) than in African American (8.0%) or Latino (4.1%) children. Anxiety disorders are also slightly more common among White youths compared to their non-White classmates (Perou et al., 2016).

On the other hand, African American youths are more likely to develop conduct problems than White youths. Specifically, approximately 8.1% of African American youths will develop oppositional defiant behavior or conduct problems at some point in childhood, compared to 4.2% of White and 3.9% of Latino youths (Perou et al., 2016).

What explains these differences? One possibility is that differences in SES partially explain these differences in mental disorders across ethnicities. Sadly, members of many minority groups disproportionately come from lower-SES families (Taylor & Wang, 2013). Consequently, minority families often face many of the same risks confronted by low-SES families: reduced access to high-quality health care and nutrition, less optimal child care, impoverished educational experiences, and higher family stress. Immigrant families also face special risks, such as stress associated with language differences and acculturation (Coll & Magnuson, 2014). These risk factors might explain the higher prevalence of conduct problems among African American youths. Indeed, when researchers control for SES, there are often few differences in the percentage of children diagnosed with mental disorders across ethnic groups (Hayden & Mash, 2014).

Another possibility is that children's racial or ethnic background might partially determine the likelihood that their disorders are identified and treated. For example, African American and Latino children tend to be diagnosed with ASD much later than non-Latino, White children (Ratto, Reznick, & Turner-Brown, 2015). Research indicates that minority parents are often less able to recognize the early signs of autism; consequently, their

children's disorder may remain unrecognized (Magaña, Lopez, Aguinaga, & Morton, 2013). Similarly, recent research has found that many Latino parents regard the hyperactive–impulsive symptoms of ADHD to be developmentally normative. Consequently, they may be less likely to view their children's symptoms as problematic and less likely seek treatment (Gerdes, Lawton, Haack, & Hurtado, 2014).

A third possibility is that these differences reflect divergent parenting practices and cultural values across racial and ethnic groups. For example, African American adolescents are much less likely to develop alcohol and other drug use problems that non-Latino, White adolescents (Kessler et al., 2012a). Some experts have argued that African American culture, which tends to discourage heavy alcohol use, protects many of these youths from substance use disorders (Zapolski, Pedersen, McCarthy, & Smith, 2014). Furthermore, the more African American adolescents endorsed these cultural beliefs, the more likely they were to avoid substance use problems (Stock et al., 2013).

Adolescents are more likely than children to experience psychological disorders.

Boys are more likely to be diagnosed with psychological disorders in early childhood, especially ASD and ADHD. Girls are more likely to be diagnosed in adolescence, especially anxiety and depression.

Children from low-SES families are at greater risk for psychological disorders than children from higher-SES families.

The prevalence of certain disorders, such as ADHD and ASD, is higher among non-Latino, White children than children of other ethnicities. The prevalence of other disorders, especially disruptive disorders, is higher among certain minority youths.

Although 20% of children and adolescents will develop a mental disorder at some point prior to adulthood, only about one-half of these youths receive treatment. The most recent, epidemiological studies indicate that approximately 51% of children and 45% of adolescents with mental disorders receive any form of treatment (Centers for Disease Control and Prevention, 2016b; Costello, He, Sampson, Kessler, & Merikangas, 2014). The likelihood that a youth will receive treatment depends on his or her disorder. For example, youths with ADHD are most likely to receive treatment, usually in the form of stimulant medication (e.g., Adderall, Ritalin). In contrast, youths with anxiety disorders are least likely to receive medication or therapy.

Children and adolescents with mental health problems are most likely to receive treatment at school (24%), a specialized mental health clinic (23%), or a medical facility (10%). Some children receive services through other social service agencies (8%), clinics that offer complementary or alternative medicine (5%), or the juvenile justice system (5%). As we might expect, youths with ADHD and learning disabilities are most likely to receive treatment at school, whereas youths with certain high-risk conditions such as eating disorders and substance use problems are more likely to visit specialized mental health facilities. Children and adolescents with anxiety and mood disorders are most likely to be treated by their pediatricians.

Not all children have equal access to high-quality mental health care. Parents of higher SES are most likely to obtain specialty mental health care for their children. In contrast, youths from lower-SES backgrounds disproportionately receive treatment through public schools, human-service agencies, and the juvenile justice system. Furthermore, African American youths are less likely than non-Latino, White youths to receive treatment (Costello et al., 2014).

Altogether, these data indicate that only 50% of youths with mental health problems receive the treatment they need. Furthermore, when children are able to access treatment, it is often not delivered by mental health specialists. Instead, many youths receive care from paraprofessionals such as school personnel, juvenile justice officers, nurses, and pediatricians. We desperately need students to devote their careers to providing specialized mental health services to children and adolescents, either by delivering evidence-based treatment themselves, or by removing sociocultural barriers to families' access to high-quality treatment.

Researchers and policy experts have identified several barriers to families' access to high-quality mental health interventions (Garland et al., 2013; Santiago, Kaltman, & Miranda, 2013). First, financial hardship often interferes with children's access to comprehensive treatment. In the United States, mental health treatment and medical treatment do not receive equal coverage from insurance companies, despite evidence that mental health problems cost families and society considerable financial expense. Families may find themselves unable to pay for high-quality treatment. Families who lack adequate insurance face the additional challenge of obtaining treatment from a public social service system that is often overburdened and underfunded.

Second, even if families can pay for high-quality mental health services, they may be unable to find these services. As we will see, evidence-based high-quality mental health treatments are not available in most communities. For example, Multisystemic Therapy (MST) is an evidence-based treatment for older adolescents with serious conduct problems. Many well-designed studies have shown MST to reduce adolescents' disruptive behavior problems, improve their social and academic functioning, reduce their likelihood of arrest and incarceration, and

save money (Dopp, Borduin, Wagner, & Sawyer, 2014; van der Stouwe, Asscher, Stams, Deković, & van der Laan, 2014). However, few clinicians are trained in providing MST, and MST is available in only a small number of communities. Consequently, many clinicians rely on other, less well-supported interventions.

Third, there are simply not enough experts in child and adolescent mental health to satisfy the need for services. Our current mental health system is able to address the needs of only about 10% of all youths with psychological problems. Furthermore, only 63% of counties in the United States have a mental health clinic that provides treatment for children and adolescents (Cummings, Wen, & Druss, 2013). Youths who receive treatment are typically those who show the most serious distress or impairment. Youths with less severe problems, such as moderate depression, mild learning disabilities, or unhealthy eating habits, often remain unrecognized and untreated until their condition worsens. Inadequate mental health services are especially pronounced in disadvantaged communities.

Finally, can interfere with children's access to mental health treatment (O'Driscoll, Heary, Hennessy, & McKeague, 2012). Stigma refers to negative beliefs about individuals with mental disorders that can lead to fear, avoidance, and discrimination by others or shame and low self-worth in oneself (Corrigan, Bink, Schmidt, Jones, & Rüsch, 2016). Many caregivers are reluctant to refer their children for therapy because of the negative connotations associated with diagnosis and treatment. In fact, roughly 25% of all pediatrician visits involve behavioral or emotional problems that could be better addressed by mental health professionals (Horwitz et al., 2002). Parents often seek help from pediatricians and family physicians to avoid the stigma of mental health treatment. Stigma associated with the diagnosis and treatment of childhood disorders causes many at-risk youths to receive less-than-optimal care (Bowers, Manion, Papadopoulos, & Gauvreau, 2013).

> Only about one-half of children with psychological problems receive treatment. Non-Latino, White children and youths from higher-SES families are most likely to receive care.
>
> Barriers to treatment include (a) financial problems, (b) a lack of evidence-based treatment in the community, (c) an absence of well-trained clinicians, and (d) stigma.

There is no consensus on how to define abnormal behavior in children and adolescents, and no agreement on how best to differentiate abnormality from normal functioning. However, mental health practitioners and researchers have proposed several criteria to identify children with behavioral and social–emotional problems (Cicchetti, 2016a; Dulcan, 2015; Hayden & Mash, 2014).

One approach to defining abnormality is based on *statistical deviancy*. Using this approach, abnormal behaviors are defined by their relative infrequency in the general population. For example, transient thoughts about death are fairly common among adolescents. However, recurrent thoughts about killing oneself are statistically infrequent and could indicate a mood disturbance, such as depression. Advocates of the statistical infrequency approach might administer a rating scale to clients and identify youths who show symptoms well beyond the range of normality, compared to other children and adolescents of the same age and gender (Achenbach, 2015).

The chief limitation of the statistical deviancy approach to defining abnormality is that not all infrequent behaviors are indicative of mental disorders. Imagine a child who is tearful, prefers to stay in her room, does not want to play with friends, and is having problems completing schoolwork. From the statistical deviancy perspective, we might diagnose this girl with depression because she shows mood problems that are rare among children her age. However, if we learn that her grandfather died a few days before her assessment, we would likely interpret her behavior as a normal grief reaction, not as an indicator of major depressive disorder (MDD). Although statistical infrequency may be an important component of a definition of abnormality, it is insufficient. Statistical deviancy does not take into account the context of children's behavior.

Another approach to defining abnormality is based on disability or degree of *impairment*. From this perspective, abnormal behavior is defined by thoughts, feelings, or actions that interfere with a person's social, academic, or occupational functioning. For example, an adolescent who feels sad because she broke up with her boyfriend would not be diagnosed with depression, as long as she is able to maintain relationships with friends, get along with parents, and perform adequately in school. However, her behavior might be considered abnormal if her functioning deteriorates in any of these areas.

Defining abnormality by level of impairment has a serious drawback: Many people with mental disorders do not show overt impairment in functioning. For example, 15-year-old Dorothy Dutiel shot and killed herself and a classmate at her high school in Glendale, Arizona. Dorothy obtained a gun from another classmate who did not know that she was depressed and intended a murder–suicide. After the incident, first responders found a handwritten note in Dorothy's pocket that read, "I would like to clarify that (the student) and his family are in no way affiliated with my actions. (The student) was under the absolute impression I needed the gun for self-defense.

I lied to receive this gun." Dorothy's classmate was unaware that she was depressed. Not all mental health problems are accompanied by overt impairment.

Yet another definition of abnormality incorporates a person's degree of *psychological distress*. People can show psychological distress through depressed mood, irritability, anxiety, worry, panic, confusion, frustration, anger, or any other feeling of dysphoria. Psychological distress is one of the central features of most anxiety and mood disorders.

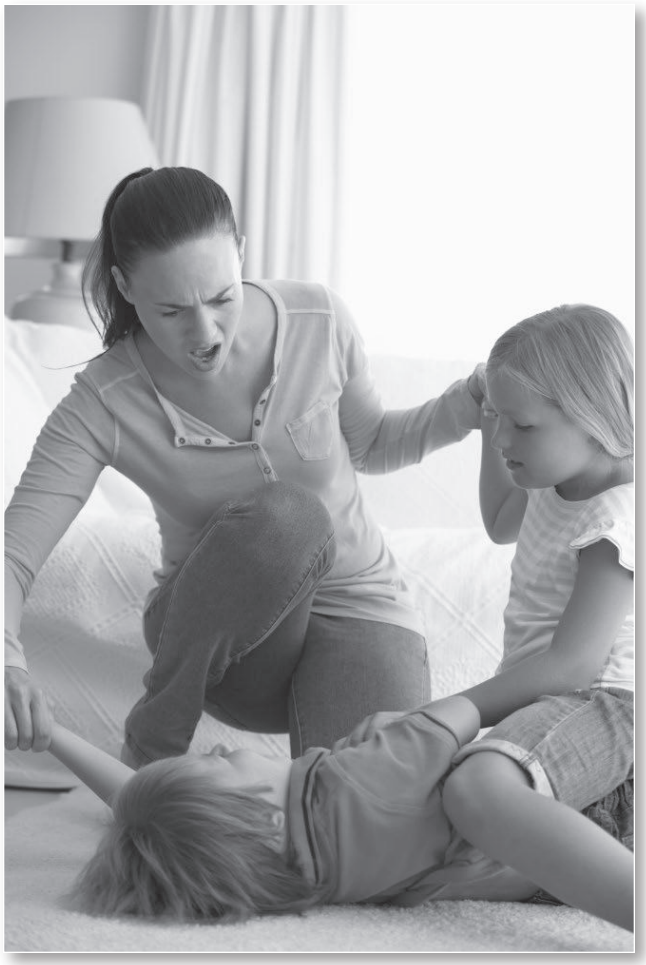
One limitation of defining abnormality in terms of psychological distress is that distress is often subjective. Some signs of distress can be observed by others, such as sweaty palms and flushed face. However, distress is usually assessed by asking clients to report their feelings. Subjective assessment of distress in children is especially problematic. Many young children are not aware of their mood states. For example, some youths express anxiety or depression in terms of physical complaints, like headaches or stomachaches, instead of experiencing negative emotions. Other children have trouble differentiating their feelings. For example, young children often confuse negative emotions, such as "fear" and "anger." Finally, children's ratings of distress often cannot be compared against an objective criterion. For example, a child who reports feeling "bad" might be experiencing more distress than another child who reports feeling "terrible."

A second limitation to defining abnormality based on distress is that many youths with serious behavior problems do not experience negative emotions. For example, adolescents with conduct problems often show no signs of anxiety or depression. They may only express remorse when they are caught and punished. Similarly, younger children with oppositional and defiant behavior toward adults rarely express psychological distress. Instead, their disruptive behavior causes distress to their parents and teachers (see Image 1.3).

Abnormal behavior might also be defined by actions that violate society's standards or rules. Put another way, abnormality may be defined in terms of *cultural deviancy*. For example, conduct disorder (CD) is characterized by a persistent pattern of behavior that violates the rights of others or the rules of society. Adolescents with CD often have histories of disruptive behavior problems that clearly go against cultural norms and mores: shoplifting, robbery, violence toward others, and truancy.

The chief limitation of defining abnormal behavior exclusively by the degree to which it violates social norms is that these norms can vary considerably from culture to culture. For example, in Western societies, parents often require young children to sleep in their own beds, usually in separate rooms. Children who refuse to sleep in their own beds may be classified as having a sleep disorder. However, in many non-Western societies, requiring young children to sleep alone is considered cruel and detrimental to their social and emotional development.

Psychological disorders are often defined by psychological distress. Often, however, children with mental health problems cause distress to others rather than experience it themselves.



bowdenimages

Some experts define abnormality in terms of *behavioral rigidity*. From this perspective, abnormal behavior is characterized by the repeated and inflexible display of certain actions, thoughts, or emotions in response to psychosocial stressors. Consider a child who shows fear at the prospect of separating from his mother. Under some circumstances, clinginess to parents is adaptive, for example, when the child is in an unfamiliar and potentially dangerous setting, such as a crowded airport. Under other circumstances, however, separation anxiety is clearly maladaptive, such as when a child is unwilling to leave his parents to attend school. Whereas mental health is characterized by flexibility and adaptation to changing circumstances, abnormality may be characterized by the persistent use of the same behavior in all situations, regardless of the context (Millon, 2014).

A final way to differentiate abnormality from normality is based on the notion of . According to Jerome Wakefield (1992), a disorder exists when two criteria are met. First, the person must show a

dysfunction—that is, a failure in some internal mechanism to work in the correct manner. Second, the dysfunction *must cause harm,* or it must limit or threaten the person in some way.

The harmful dysfunction criteria can be applied to the field of medicine. For example, heart disease is a disorder because (1) it involves an abnormality in the functioning of the pulmonary system and (2) this underlying dysfunction can cause disability or death. Similarly, the harmful dysfunction criteria can be used to identify mental health problems. For example, depression is a mental disorder because (1) it involves an abnormality in the functioning of people's capacity for emotion regulation and (2) this underlying dysfunction causes great distress and impairment.

When applying the harmful dysfunction criteria to the field of abnormal child psychology, we must remember to consider the child's behavior in the context of her development and social–cultural surroundings (Wakefield, 1997). Many behaviors that are objectively dysfunctional may be appropriate or adaptive given the context. For example, Sarah is a girl who lives with her parents on a military base in California. Upon hearing that her mother will soon be deployed to a combat area, Sarah becomes excessively clingy with both parents, has problems eating and sleeping, and refuses to go to school. She may meet diagnostic criteria for an anxiety disorder because of her problematic behavior and degree of impairment. However, her anxiety might be justified given her social context—that is, the imminent deployment of her mother. Behavior can only be understood in the context of a person's life and social context.

> Abnormal behavior can be defined in terms of (1) statistical infrequency, (2) associated impairment, (3) associated distress, (4) cultural deviancy, and (5) behavioral rigidity. Each characteristic, however, has limitations. Andrew Wakefield proposed that abnormal behavior is characterized by an underlying medical or psychological dysfunction that causes the person harm and/or limits the person's functioning in some way.

In the United States, most mental health practitioners and researchers use the

American Psychiatric Association, 2013) to diagnose mental disorders. *DSM-5* is published by the American Psychiatric Association and reflects a medical approach to identifying mental health problems in children and adults.

The *DSM-5* definition of a not only reflects Wakefield's notion of harmful dysfunction but also emphasizes the role of impairment and psychological distress in differentiating normal versus abnormal behavior:

> A mental disorder is a syndrome characterized by clinically significant disturbance in an individual's cognition, emotion regulation, or behavior that reflects a dysfunction in the psychological, biological, or developmental processes underlying mental functioning. Mental disorders are usually associated with significant distress or disability in social, occupational, or other important activities. An expectable or culturally approved response to a common stressor or loss, such as the death of a loved one, is not a mental disorder. Socially deviant behavior (e.g., political, religious, sexual) and conflicts that are primarily between the individual and society are not mental disorders unless the deviance or conflict results from a dysfunction in the individual, as described above. (American Psychiatric Association, 2013, p. 20)

DSM-5 adopts a *medical approach* to mental disorders in which psychological problems have underlying causes that reside within the individual (Stein, Phillips, et al., 2010). For example, if someone is diagnosed with a medical illness, such as smallpox, we assume that this illness is caused by a virus that has infected the person's body. Similarly, practitioners who adopt the medical model for mental disorders assume that if a child exhibits behavioral or social–emotional problems, those problems are caused by some underlying dysfunction within the child.

There are two limitations with the *DSM-5* medical conceptualization of mental disorders, especially when applied to children. First, some childhood disorders are relational in nature and are best understood in an interpersonal context (Heyman et al., 2009). For example, young children with ODD argue with their parents, refuse to comply with parental requests, and throw tantrums when they do not get their way. Interestingly, their defiant behavior is often directed at some adults (e.g., parents) but not others (e.g., teachers). Therefore, the disorder seems to be dependent on the relationship between people and does not merely reside within the child. Relationships may be especially important to mental disorders in children and adolescents, who are highly dependent on other people for their well-being.

A second limitation of the medical approach to mental disorders is that we often do not know the underlying cause for children's psychological problems. When smallpox was first described by physicians in the 15th century, it was assigned a diagnostic label based on its symptoms: small blisters (i.e., "pox") on the skin. We now know that smallpox is caused by a virus, not the blisters themselves. Today, however, we are only beginning to understand the underlying causes of mental disorders. When we say that a child has ADHD, we are describing his symptoms, not their underlying cause. In fact, ADHD probably has multiple underlying causes that have yet to be fully identified (Pliszka, 2016). Therefore, we must avoid attributing a child's symptoms to his diagnostic label since these labels describe symptoms,

not causes. Instead, we must look at the scientific research literature to determine the underlying causes of childhood disorders. For example, we should not say, "My son has problems with attention because of his ADHD" because ADHD is defined by problems with attention. Instead, we might say, "My son has problems with inattention because of underactivity of his prefrontal cortex," which more accurately reflects the cause of his behavior problems, rather than merely describes his symptoms.

The *DSM-5* definition also claims that all mental disorders have an underlying dysfunction that is typically biological in nature. Indeed, some disorders are associated with specific biological causes. For example, many adolescents who develop schizophrenia experience progressive deterioration of the frontal lobes of their brain shortly before their first symptoms (Giedd et al., 2015). However, requiring an underlying biological cause for childhood disorders is problematic in at least three ways.

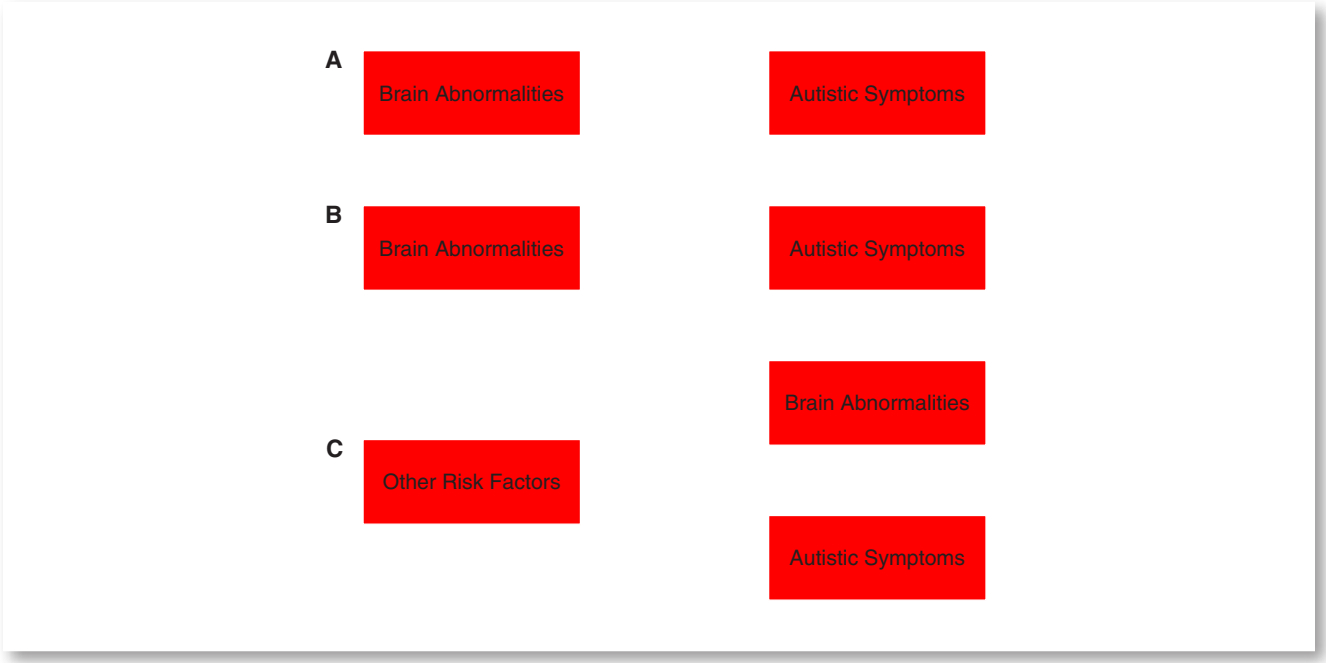
First, researchers have not yet identified specific biological causes for most childhood disorders (Frances, 2009). For example, autism is a highly heritable condition that leads to serious impairment in social communication and behavior. However, researchers have been unable to identify which genes cause this disorder.

Second, when specific abnormalities have been identified in research studies, not all children with the disorder show these abnormalities. For example, some children with autism show reduced synaptic density and abnormalities in their limbic system; however, these differences in brain structure cannot be used to identify children with the disorder. The brains of most children with autism are not different than the brains of typically developing peers.

Third, even when children show specific biological abnormalities, we usually cannot conclude that these abnormalities cause the disorder. For example, some children with autism show underactivity in a brain region responsible for processing human faces. However, we do not know if underactivity in this brain region causes autism or whether their autistic symptoms lead to deterioration in this brain region. Alternatively, a third variable, such as exposure to environmental toxins during pregnancy, may cause abnormalities in both brain and behavior (see Figure 1.3).

It is worth noting that *DSM-5* describes people with mental disorders as "usually" experiencing significant distress *or* disability (i.e., impairment)—they may not always show both characteristics. As we have seen, some seriously depressed adolescents experience tremendous emotional pain, but they do not show marked impairment in their social or academic functioning. Other youths who show serious conduct problems have been arrested and have dropped out of school, but they report no problems with anxiety, depression, or low self-esteem.

Correlation does not imply causality.



Based on Baron-Cohen (2005) and Lawrence, Lott, and Haier (2005).

Although there is a correlation between brain structure and autistic symptoms, we do not know if (a) brain abnormalities cause autistic behaviors, (b) autistic behaviors lead to abnormal brain development, or (c) other risk factors, like exposure to toxins, cause both brain abnormalities and autism.

Although most youths with mental health problems experience distress *and* impairment, both features are usually not required for a *DSM-5* diagnosis.

> The *DSM-5* definition of *mental disorder* reflects Wakefield's notion of a "harmful dysfunction." According to *DSM-5*, a disorder reflects a biological, developmental, or psychological dysfunction that causes distress or disability in the individual.
>
> *DSM-5* adopts a medical approach to disorders. Limitations of this approach include (1) we cannot always identify the underlying cause of children's disorders, and (2) many childhood disorders are best understood in an interpersonal context rather than within an individual.

According to *DSM-5*, clinicians must carefully differentiate symptoms of a mental disorder from behaviors and psychological states that are sanctioned in a given culture. Differentiating abnormal symptoms from culturally sanctioned behavior is especially challenging when clinicians are asked to assess youths from other cultural backgrounds. Consider the case of Julia (below).

Ethnicity and culture can affect the diagnostic process in at least four ways (Alarcon, 2009; Miller & Prosek, 2013). First, members of minority groups living in the United States often have different cultural values that affect their views of children, beliefs about child-rearing, and behaviors they consider problematic. For example, non-Latino, White parents often place great value on fostering children's social–emotional development and encouraging child autonomy. These parents often provide warm and responsive behavior during parent–child interactions. In contrast, many African American parents place relatively greater value on children's compliance; consequently, they may adopt less permissive and more authoritarian socialization tactics. Clinicians need to be aware of cultural differences in socialization goals and parents' ideas about appropriate and inappropriate child behavior.

Second, recent immigrants living in the United States often encounter psychosocial stressors associated with acculturation. Acculturation stressors can include assimilation into the mainstream culture, separation from extended family and friends, language differences, limited educational and employment opportunities, and prejudice. Some immigrants do not share the same legal status as members of the dominant culture. For these reasons, the sheer number of psychosocial stressors encountered by these families is greater than those encountered by families who are members of the dominant culture.

Third, language and cultural differences can cause problems in the assessment and diagnosis of minority youths. The assessment and diagnostic process was designed predominantly for English-speaking individuals living in the United States and other Western societies. The words that describe some psychological symptoms are not easily translated into other languages. Furthermore, many symptoms reported by individuals from other cultures do not readily map onto *DSM-5* diagnostic criteria. Psychological tests are almost always developed with

Culture Matters

©iStockphoto.com/FangXiaNuo

Julia was a 16-year-old Asian American girl who was referred to our clinic by her oncologist after she was diagnosed with a rare form of cancer. Julia refused to participate in radiation therapy or take medications for her illness. Her physician suspected that Julia was paranoid because she attempted to attack him when he tried to examine her in his office.

With the help of a translator, Julia's therapist learned that Julia was a second-generation Hmong immigrant from Southeast Asia who lived with her parents and extended family. Julia and her family had limited contact with individuals outside the Hmong community and refused to participate in Western medicine. Instead, Julia and her parents practiced traditional Eastern folk medicine.

Because Julia's therapist doubted that folk medicine alone would help her cancer, she suggested that Julia's community shaman talk with her physician to identify which aspects of medical treatment might be acceptable to Julia and her family. Over time, Julia was able to successfully participate in Western medical treatment by having the shaman attend all of the radiation therapy sessions, bless the medications prescribed by the oncologist, and perform other remedies important to Julia and her family.

English-speaking children and adolescents in mind. For example, children raised in Columbus, Ohio, will likely find the following question on an intelligence test fairly easy: "Who was Christopher Columbus?" However, immigrant children who recently moved to the city might find the question extremely challenging. Psychologists must be aware of differences in language and cultural knowledge when interpreting test results.

Fourth, ethnic minorities are often underrepresented in mental health research. Over the past two decades, researchers have made considerable gains in understanding the causes and treatment for a wide range of child and adolescent disorders. However, researchers know relatively little about how differences in children's ethnicity and cultural backgrounds might place them at greater risk for certain disorders or affect treatment. Furthermore, researchers have only recently begun to create treatment programs designed specifically for minority youths. For example, narrative therapies have been developed to help Spanish-speaking children and adolescents overcome mood and anxiety problems, using culturally relevant storytelling (Costantino, Malgady, & Cardalda, 2005). Youths listen to, write, and sometimes enact stories in which the main characters model adaptive responses to stressful life experiences in a manner that is consistent with social–cultural attitudes and values. Clearly, more research needs to be done to investigate the interplay between psychopathology and culture.

Children's ethnicity can affect their likelihood of being identified with a disorder in at least four ways: (1) the cultural values of the child's family may be different from those of the clinician; (2) immigrant families may experience increased stress due to acculturation; (3) language differences can cause communication problems between the clinician and the family; and (4) minority children are often underrepresented in mental heath research.

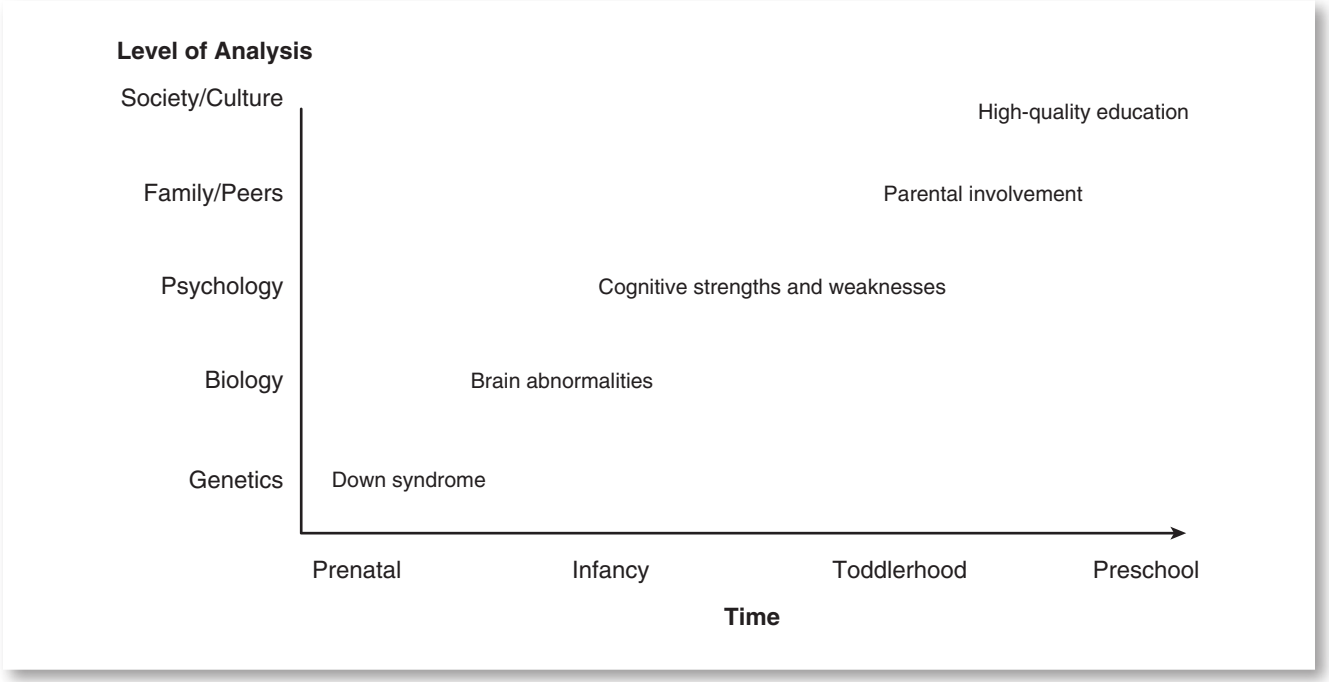
is a broad approach to studying adaptive and maladaptive development across the life span. Developmental psychopathologists believe that development is shaped by the complex interaction of biological, psychological, and social–cultural factors over time. An adequate understanding of development depends on the appreciation of each of these domains, how they interact, and how they affect the person from infancy through adulthood (Achenbach, 2015; Rutter & Sroufe, 2000).

Developmental psychopathologists study human development across several levels of analysis. These levels include the person's (1) genetics, (2) brain structure and functioning, (3) psychological development (i.e., actions, thoughts, and emotions), (4) family interactions and peer relationships, and (5) the broader social–cultural context in which the person lives. Each of these levels can be used to describe and explain the emergence of children's disorders. More importantly, however, factors on each of these levels interact with each other, over time, to shape children's developmental outcomes (Cicchetti, 2016a, 2016b). Developmental psychopathologists call this process of unfolding .

To understand epigenesis, consider Nina, a child with Down syndrome (see Figure 1.4). As you probably know, this genetic disorder places Nina at increased risk for low cognitive functioning. Nina's disorder was caused by a genetic mutation on chromosome 21, probably acquired through an abnormality in her mother's egg cell (Level 1: genetics). This genetic mutation caused Nina's brain and central nervous system to develop in an abnormal fashion. Specifically, she showed abnormalities in her hippocampus, a brain region important for memory and learning (Level 2: biology). These abnormalities, in turn, shaped her psychological functioning during early childhood. Nina's parents reported delays in her motor development (e.g., sitting up, walking), use of language, and acquisition of daily living skills (e.g., toilet training, dressing). In school, she showed problems learning to read, write, and count (Level 3: psychology). These psychological characteristics affected the type of care she received from parents and teachers. Nina's mother was understandably very protective, and her teachers often offered Nina extra attention in school. Nina's cognitive functioning also affected her relationships with peers. Nina preferred to play with younger children rather than her classmates (Level 4: parents and peers). By the time Nina reached junior high school, she was well behind her peers academically. However, Nina was able to spend half the school day in a regular sixth-grade classroom, assisted by an aide. She spent the remainder of the day in a special education class. These extra services offered by her school district enabled Nina to begin a part-time job during high school (Level 5: social–cultural factors).

Nina's story illustrates the unfolding of development over time. Each level of development affects the one beyond it. Epigenesis is also a bidirectional process. Genetic and biological factors certainly affect psychological and social functioning; however, psychological and social factors can also determine the effects of genes and biology on development. Many experts use the term *transactional* to refer to the way factors across levels affect each other over time (Kerig, 2016; Sameroff, 2000).

Probabilistic epigenesis refers to the unfolding of children's development. Outcomes are "probabilistic," not predetermined. The long-term outcome of a child with Down syndrome will depend greatly on the severity of his cognitive impairment, his parents' involvement, and the quality of his education and life experiences.



To understand the transactional nature of development, consider Anthony, another child with Down syndrome. Anthony's mother, Anita, was heartbroken when her obstetrician told her that Anthony had Down syndrome (see Image 1.4). Rather than despair, Anita decided that she was going to maximize her son's cognitive, social, and behavioral potential by giving him the most enriching early environment that she could provide. Anita spent countless hours talking to Anthony, reading books, listening to music, playing games, and going on outings. Anita also learned to capitalize on Anthony's strengths. For example, she noted that Anthony acquired skills best through hands-on learning rather than verbal instruction. Although Anthony acquired language and daily living skills slowly, Anita had high expectations for him. She remained patient and tried to provide structure and help so that Anthony might learn these skills independently. Anita enrolled Anthony in a special needs preschool and was heavily involved throughout his education. Anthony developed fairly good language and daily living skills and was able to graduate with his high school class. Today, Anthony is employed full-time in the mailroom of a large company, lives independently, and has several friends and hobbies.

Understanding and predicting child development is extremely difficult for two reasons. First, development is influenced by many factors across multiple levels: genes, biology, psychology, family, and society. Second, these factors are constantly changing over time, each interacting with the others. Consequently, the unfolding of development is not predetermined by one's genes, biology, or any other factor. Instead, the unfolding of development is probabilistic; a person's developmental outcome can vary depending on the interplay of many biological and environmental factors. Developmental psychopathologists use the term *probabilistic epigenesis* to refer to the complex transaction of biogenetic, psychological, familial, and social–cultural factors that shape development over time (Gottlieb & Willoughby, 2006; Rutter & Sroufe, 2000).

From the perspective of developmental psychopathology, normal and abnormal behavior is determined by the degree to which it promotes children's competence. Behaviors that allow children to develop social, emotional, and behavioral competence over time and meet the changing demands of the environment are regarded as adaptive. Examples of include toddlers learning to understand other people's emotional states, school-age children learning to think before acting, and adolescents using moral reasoning to solve interpersonal problems. These behaviors are adaptive because they allow children to understand and interact with their environment in effective and flexible ways (Sroufe, 1997).

Behaviors that interfere with children's social, emotional, and behavioral competence or do not meet the changing demands of the environment are regarded as . Examples of maladaptive behaviors

The development of this infant with Down syndrome will depend on the interaction of biological, psychological, and social-cultural factors over time. Developmental psychopathologists use the term epigenesis to refer to this process.

include toddlers who do not understand others' emotional expressions and withdraw from social interactions, school-age children who impulsively hit others when they are angry, and adolescents who fail to show respect to peers. These behaviors are considered maladaptive because they indicate a failure to develop social competencies and they interfere with children's social–emotional well-being (Sroufe, 1997).

Normal behavior is determined by the degree to which children's actions are adaptive, given their age and level of development. Consequently, normality and abnormality are dependent on children's *developmental context.* Consider a 2-year-old child who stubbornly refuses to dress in the morning and tantrums when told that he cannot have cookies for breakfast. Although these oppositional behaviors cause parents grief, they are usually not considered abnormal in 2-year-olds. In fact, defiance and stubbornness can reflect toddlers' developmentally appropriate bids for autonomy. However, the same behaviors shown by a 6-year-old child would likely be considered maladaptive and abnormal. In the context of his age and level of development, these behaviors likely reflect problems balancing needs for autonomy with respect for parental authority (Burt, Coatsworth, & Masten, 2016).

Normal and abnormal behaviors are also determined by the degree to which they are adaptive given the child's surroundings. Consequently, normality and abnormality are dependent on children's *environmental context*. Consider Xavier, a 13-year-old boy who has a history of running away from home, staying out all night, skipping school, and earning low grades. Clearly, Xavier's behavior is problematic. However, if we discover that Xavier is also experiencing physical abuse at home, we might see how his problematic behavior reflects an attempt to cope with this psychosocial stressor. Specifically, Xavier stays out at night and runs away from home to escape physical maltreatment. Furthermore, he likely has difficulty completing assignments and attending school because of his stressful home environment. Although Xavier's behavior deserves the attention of caring professionals, his actions are best understood in terms of his environmental context.

Developmental psychopathologists view abnormal development as a deviation from normality. Our ability to recognize, understand, and treat childhood disorders depends on our knowledge of normal child development. Consider George, a 14-year-old boy who begins drinking with friends at parties. Approximately once every month for the past 6 months, George has drunk at least five or more alcoholic beverages while partying with friends. He drinks in order to "have fun" and has never gotten into trouble or put himself in dangerous situations while intoxicated. Consider also a 14-year-old girl, Maria, who is dieting to lose weight. Although Maria's weight is average

for a girl her age and height, she is very dissatisfied with her body and feels like she needs to lose at least 15 lbs. Whether we regard George and Maria's actions as abnormal depends partially on whether their behaviors are atypical of adolescents their age or inconsistent with the environmental demands they face. Knowledge of normal development can assist us in identifying and treating children's problems.

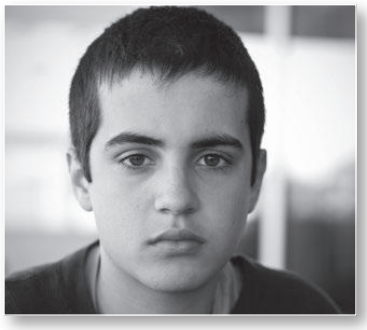
Developmental psychopathologists also believe that abnormal behavior can shed light on normal child and adolescent development. Youths who clearly show delays in mastering developmental tasks or failures in meeting environmental demands can teach us how development typically proceeds. For example, children with autism show unusual deficits in perceiving and interpreting other people's social behavior. By studying these deficits, researchers are beginning to understand how the ability to process social information develops in typically developing infants and children (Burt et al., 2016; Masten & Cicchetti, 2016).

Developmental psychopathologists believe that development is shaped by multiple factors (e.g., biological, psychological, social), it is probabilistic rather than predetermined, and it is transactional (i.e., the result of factors influencing each other over time).

Developmental psychopathologists view behavior as either adaptive or maladaptive. Thoughts, feelings, and actions that promote children's competence, and help them meet important developmental tasks, are adaptive. Adaptive and maladaptive behaviors can be understood only in the child's developmental and environmental context. A behavior that was adaptive in one situation, or in the past, may be maladaptive in another situation or at another time.

Developmental psychopathologists liken child development to a journey along a path. Indeed, they often refer to children as following certain , or trajectories, toward either healthy or unhealthy outcomes (Pickles & Hill, 2006). Consider Carter, a boy heading down a problematic developmental pathway (see below).

A Pathway to Trouble



©iStockphoto.com/Juanmonino

Carter was a 13-year-old boy who was referred to the psychologist at his school because of fighting. Although Carter's most immediate problem was getting into fights with other boys at lunch and after school, the psychologist knew that Carter's problems began much earlier. As a preschooler, Carter was physically abused by his mother's live-in boyfriend. Like many children who experience maltreatment, Carter developed problems trusting adults—especially men. He was reluctant to develop close emotional ties with others or to rely on others when he was sad, scared, or in need of comfort and reassurance. Instead, Carter became mistrustful of others and often expected others to be angry or hurtful toward him. These early experiences placed him on a developmental path strewn with many obstacles toward a healthy view of himself and others.

Carter's early experience of maltreatment also taught him that physical aggression can be an effective, short-term strategy for expressing anger and solving interpersonal problems. Instead of learning to avoid arguments or to regulate his emotions, Carter tended to solve disputes by yelling, pushing, or punching. These aggressive actions interfered with his ability to develop more adaptive, prosocial problem-solving strategies and led him further along a path to long-term problems.

Now in middle school, Carter has few friends and is actively disliked by most of his peers. Because of his social rejection, Carter spends time with other peer-rejected youths who introduce him to more serious, disruptive behavior: truancy, vandalism, and alcohol use. Carter is following a path blazed by many youths who show conduct problems and antisocial behavior in adolescence.

Luckily, it is not too late for Carter. His school psychologist might help him find ways to reconnect with prosocial peers. Maybe Carter can join a sports team or after-school club? The psychologist might also be able to teach Carter new strategies to regulate his emotions and solve social problems so that he does not have to rely on fighting. Most importantly, perhaps the psychologist's actions and empathy can convince Carter to trust other adults. Interventions like these can help Carter find a new path to adulthood that is characterized by behavioral, social, and emotional competence.

As children grow, they face certain developmental tasks or challenges along their paths (see Table 1.2). These tasks depend largely on the age and developmental level of the child. Erik Erikson (1963) outlined some of the most important social and emotional tasks facing individuals as they progress from infancy through old age. For example, the primary developmental task facing infants is to establish a sense of trust in a loving and responsive caregiver. Infants must expect their caregivers to be sensitive and responsive to their physical, social, and emotional needs and to see themselves as worthy of receiving this care and attention from others. A primary developmental task of adolescence is to establish a sense of identity. Adolescents must develop a coherent sense of self that links childhood experiences with goals for adulthood. Adolescents usually accomplish this task by trying out different social roles during the teenage years.

Developmental tasks present forks in life's path. The child can either successfully master the developmental task or have problems with its successful resolution. Mastery of developmental tasks leads to social, emotional, and behavioral competence, placing children on course for optimal development. For example, infants who establish a sense of basic trust in caregivers may have greater ability to make and keep friends in later childhood (Image 1.5). Unsuccessful resolution of developmental tasks, however, can lead to problems in later development. For example, failure to establish a sense of trust in caregivers during infancy

Developmental Tasks in Childhood and Adolescence

Infants, Toddlers, and Preschool-Aged Children
Attachment (basic trust) to one or more specific caregivers
Learning to sit, stand, walk, and jump
Acquiring functional language
Obedience to simple commands and instructions of adults
Toilet training
Appropriate play with toys and other people
Achieving a sense of autonomy from parents
School-Aged Children
Learning reading, writing, mathematics
Attending and behaving appropriately at school
Following rules for behavior at home, at school, and in public places
Getting along with peers at school
Making friends with peers
Younger Adolescents
Attending and behaving appropriately at school
Learning to solve advanced problems with numbers, algebra
Learning required language, history, and other subjects
Completing secondary schooling
Getting along with peers in school
Making and maintaining close friendships
Obeying the laws of society
Older Adolescents
Working or preparing for future higher education
If working, behaving appropriately in the workplace
If in school, meeting academic standards for courses or degrees
Forming and maintaining romantic relationships
Obeying the laws of society
Transitioning from parents, living independently

Based on Masten, Burt, & Coatsworth (2006).

At each stage of life, children are confronted with developmental tasks that they must master. This infant must develop a sense of trust in her primary caregivers. Mastery of early tasks can set the stage for competence later in development.

may interfere with children's abilities to develop close peer relationships later in childhood (Masten & Cicchetti, 2016).

Progress along developmental pathways, therefore, builds upon itself over time. Early developmental experiences set the groundwork for later experiences. If children show early social, emotional, and behavioral competence, they can use these early skills to master later developmental tasks. However, failure to master early developmental tasks can interfere with the development of later skills and abilities. For example, a preschool child who learns to control his behavior and emotions during play will likely have an easier time making friends when he enters first grade. However, a preschooler who continues to tantrum or act aggressively when he does not get his way may be ostracized by peers in the first-grade classroom.

To understand the hierarchical nature of development, consider another analogy: Development is like a building. Our genetic endowment might form the foundation of the building, providing us with our physical attributes, raw neurobiological potentials, and behavioral predispositions. The ground floor might consist of early environmental experiences, such as our prenatal surroundings or the conditions of our gestation and delivery. Subsequent floors might consist of postnatal experiences, such as our nutrition and health care, the relationships we develop with our parents, the quality of our education, and the friends we make in school. The integrity of the upper levels of our "building" is partially determined by the strength of the lower levels. For example, problems with the foundation will place additional challenges on the formation of higher levels. However, especially well-developed higher levels can partially compensate for difficulties in the foundation.

The building does not exist in a vacuum, however. The context in which the structure is created is also important. Just as temperature, wind, and rain can affect the construction of a building, so, too, can the child's social–cultural climate affect his development. Certain social and cultural conditions can promote the child's psychological integrity: high-quality schools, safe neighborhoods, and communities that protect and value children and families. Other social and cultural factors, such as exposure to poverty and crime, can compromise child development.

When children are first diagnosed with a mental disorder, parents often want to know this: How long will it last? Some disorders tend to be developmentally transient; they rarely persist into adolescence or adulthood. For example, most children with elimination disorders (e.g., bed-wetting and soiling), experience problems only during their school-age years. In contrast, other disorders show

—that is, they persist into adolescence or adulthood relatively unchanged. For example, young children with intellectual disability or autism will likely continue to show these disorders as adults (Maughan & Rutter, 2010).

Most childhood disorders, however, show

—that is, children's symptoms change over time, but their underlying pattern of behavior remains the same. To understand heterotypic continuity, consider Ben, a 6-year-old boy recently diagnosed with ADHD. Like most young boys with ADHD, Ben's most salient problem is hyperactivity; he frequently leaves his seat during class, talks with his neighbors, and fidgets with his clothes and belongings. By middle school, however, Ben shows more problems with inattention than hyperactivity. He has difficulty staying focused during class, remembering to complete homework assignments, and ignoring distractions during exams. Finally, as a young adult, Ben continues to experience underlying symptoms of ADHD, but he is most bothered by problems with organization, planning, and prioritizing activities at home and at work. Although Ben's most salient symptoms have changed, his underlying problems with attention and inhibition have persisted over time (Barkley, 2016).

Another example of heterotypic continuity can be seen in Emma, an extremely shy preschooler. Approximately 15% of infants inherit a temperament that predisposes them to become shy and inhibited when placed in unfamiliar situations (Fox, Snidman, Haas, Degnan, & Kagan, 2015). Emma, who inherited this tendency, developed extreme anxiety when separated from her mother. She would cry, tantrum, and become physically ill when her mother would leave her at preschool. Although Emma's separation anxiety gradually declined, she began experiencing problems with chronic worrying in middle school. Now, as a young adult, Emma continues to experience problems with both anxiety and depression. Although Emma's symptoms have changed over time, her pattern of underlying distress has persisted into adulthood.

Of course, not all childhood disorders persist into adulthood. Why do some youths show continuity whereas others do not? Developmental psychopathologists are very interested in in child and adolescent development—that is, they want to discover what causes children's divergent developmental outcomes. Predicting individual differences in development is extremely difficult because, as we have seen, many factors interact over time to affect children's outcomes. The interactions between factors, over time, produce two phenomena: equifinality and multifinality (Hinshaw & Beauchaine, 2015).

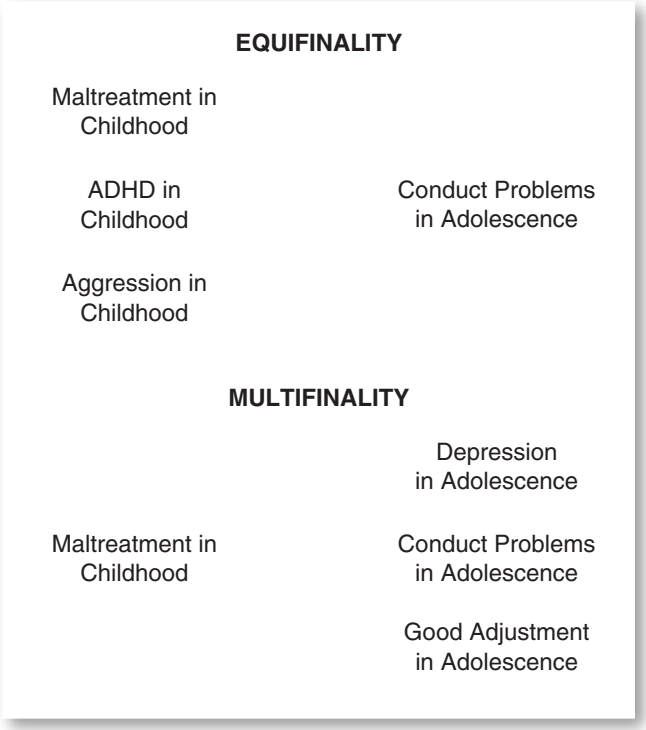
occurs when children with different developmental histories show similar developmental outcomes. For example, imagine that you are a psychologist who conducts evaluations for a juvenile court. As part of your duties, you assess adolescent boys who have been arrested and convicted of illegal activities, such as theft, assault, and drug use, in order to make recommendations to the court regarding probation and treatment. All of the boys that you assess have similar developmental outcomes—that is, they all show conduct problems. However, after interviewing many of the boys, you discover that their developmental histories are quite different. Some boys have long histories of antisocial behavior, beginning in early childhood. Other boys have no histories of conduct problems until their recent arrest. Still other boys' conduct problems are limited to times when they were using drugs and alcohol. Your discovery illustrates the principle of equifinality in child development: There are many different paths to the same developmental outcome (see Figure 1.5).

The principle of refers to the tendency of children with similar early experiences to show different social, emotional, and behavioral outcomes. For example, imagine that you are a clinical social worker who evaluates children who have been physically abused. During the course of your career, you have assessed a number of children who have been abused by their caregivers. You notice, however, that some of these children show long-term emotional and behavioral problems while others seem to show few adverse effects. Your observation reflects the principle of multifinality: Children with similar early experiences show different outcomes.

The principle of equifinality makes definitive statements about the *causes* of psychopathology extremely difficult. Because of equifinality, we usually cannot infer the causes of children's problems based on their current symptoms. For example, many people incorrectly believe that all adolescents who sexually abuse younger children were, themselves, sexually abused in the past. In actuality, adolescents engage in sexual abuse for many reasons, not only because they were victimized themselves.

The principle of multifinality limits the statements we can make about children's *prognoses*. For example, many people erroneously believe that if a child has been sexually abused, she is likely to exhibit a host of emotional and behavioral problems later in life, ranging from sexual deviancy and aggression to depression and anxiety. In fact, the developmental outcomes of boys and girls who have been sexually abused vary considerably. Some children show significant maladjustment while others show few long-term effects. Their diversity of outcomes illustrates the difficulty in making predictions regarding development (Hinshaw & Beauchaine, 2015).

Equifinality occurs when children with different histories show the same outcomes; multifinality occurs when children with the same histories show different outcomes.



Developmental pathways reflect the manner by which children face important developmental tasks over time. Common developmental tasks include establishing a sense of trust (in infancy), developing basic academic competence (in elementary school), and forming close friendships (in adolescence).

Mastery of early developmental tasks (e.g., trust in infancy) can promote mastery in later developmental tasks (e.g., friendships in adolescence).

Some disorders, such as autism, show homotypic continuity; they remain relatively stable over time. Most disorders, such as anxiety and mood disorders, show heterotypic continuity; the overt signs and symptoms of the disorder change over time, but the underlying problem remains relatively constant.

Equifinality occurs when children with different histories show the same outcomes; multifinality occurs when children with the same histories show different outcomes.

What explains equifinality and multifinality? Why is there such great variability in children's developmental pathways? The answer is that child development is multiply determined by the complex interplay of genetic, biological, psychological, familial, and social–cultural factors. Some of these factors promote healthy, adaptive development, whereas other factors increase the likelihood that children will follow less-than-optimal, more maladaptive, developmental trajectories.

Developmental psychopathologists use the term to describe influences on development that interfere with the acquisition of children's competencies or compromise children's ability to adapt to their environments. Risk factors occur across levels of functioning: They can be genetic, biological, psychological, familial, or social–cultural (Cicchetti, 2016a; Luthar, 2006).

In general, the more risk factors experienced by children, the greater their likelihood of developing a mental disorder. In one study, researchers counted the number of environmental risks experienced by a large sample of adolescents (McLaughlin et al., 2012). Approximately 58% of adolescents experienced at least one risk factor such as parental divorce (28%), parental mental illness (16%), or economic hardship (16%). Regardless of race, ethnicity, or gender, the more risks experienced, the greater the likelihood of a mental disorder. Certain risk factors were especially predictive of mental health problems, such as parental criminal involvement, parental mental health problems, family violence, and child maltreatment.

It is noteworthy, however, that not all youths who experience these risk factors develop mental disorders. Psychologists use the term to refer to influences on development that buffer the negative effects of risks on children's development and promote adaptive functioning (see Table 1.3).

Some Risk and Protective Factors in Childhood and Adolescence

Level	*Possible Risk Factors*	*Possible Protective Factors*
Genetic	Genetic disorders Genetic predisposition toward behavioral, cognitive, emotional, or social problems	Genetic screening to identify potential problems Genetic predisposition toward behavioral, cognitive, emotional, or social competence
Biological	Inadequate prenatal health care Complications during pregnancy or delivery Inadequate postnatal health care, immunizations Malnutrition Exposure to environmental toxins, teratogens Childhood illness or injury Abnormalities in brain development Speech, language, vision, hearing problems	Good access to prenatal and postnatal care High-quality nutrition Early recognition of medical and developmental delays or deficits Early intensive treatment for medical problems and developmental delays
Psychological	Cognitive delays or deficits Hyperactivity, inattention, learning problems Problems regulating emotions Problems in social interactions	Enriched learning, environmental experiences High-quality special educational services Help from therapist, school counselor, parents to remedy problems in emotional control or social functioning
Familial	Parental death, separation, or abandonment Parental divorce, marital conflict Cold, distant, intrusive, or harsh parenting Child abuse or neglect Placement into foster care, group home Parental substance abuse or mental illness Parental antisocial behaviors	Close relationship with at least one caregiver Sensitive, responsive parenting behavior Consistent use of parental discipline Adequate parental monitoring Good relationships with peers, extended kin Adoption by loving parents
Social–Cultural	Low socioeconomic status (SES) Dangerous, high-crime neighborhood Inadequate educational opportunities Rejected by peers or association with deviant peers Discrimination	Peer acceptance, close friends Involvement in prosocial activities (e.g., sports, clubs) Relationships with adult mentors (e.g., coaches) Adequate educational opportunities

Adapted from Hayden and Mash (2013).

Diverging Developmental Paths

©iStockphoto.com/Feverpitched

Ramon and Rafael are brothers growing up in the same low-income, high-crime neighborhood. Ramon, the older brother, begins showing disruptive behavior at a young age. He is disrespectful to his mother, defiant toward his teachers, and disinterested in school. By late elementary school, he has been suspended a number of times for fighting and being truant. In junior high school, Ramon associates with peers who introduce him to other antisocial behaviors, such as shoplifting and breaking into cars. By adolescence, Ramon rarely attends school and earns money selling drugs. At 15, Ramon is removed from his mother's custody because of his antisocial behavior and truancy.

Rafael, the younger brother, also shows early problems with defiance and aggression. However, these problems do not persist beyond the early elementary school years. Although Rafael does not enjoy school, he befriends an art teacher who recognizes his talent for drawing. The teacher offers to tutor him in art and help him show his work. Rafael also takes art classes at a local community center to learn new mediums. Through these classes, he meets other adolescents interested in drawing and painting. Rafael's grades in high school are generally low; however, he excels in art, music, and draftsmanship. He graduates with his class and studies interior design at community college.

Like risk factors, protective factors can occur across the genetic, biological, psychological, familial, or social–cultural levels. For example, parental divorce is a risk factor for the development of behavioral and emotional disorders in young children, especially in families experiencing chronic stress and economic adversity (Hetherington, 2014). However, certain factors protect children of divorcing parents from developing problems. These protective factors include the child's temperament or innate emotional disposition (a biological factor), the quality of the parent–child relationship (a familial factor), and the degree to which parents can rely on others for social and tangible support (a social–cultural factor).

The salience of a risk factor depends on the child's age, gender, level of development, and environmental context. For example, child sexual abuse is a risk factor for later psychosocial problems. However, the effects of sexual abuse depend on the gender of the child and the age at which the abuse occurs. Boys often show the greatest adverse effects of sexual victimization when they are abused in early childhood, whereas girls often show the poorest developmental outcomes when abuse occurs during early adolescence.

Similarly, the ability of protective factors to buffer children from the harmful effects of risk depends on context. For example, many children who experience sexual abuse report considerable psychological distress and show marked behavioral impairment. However, children who are able to rely on a caring, nonoffending parent are often able to cope with this stressor more effectively than youths without the presence of a supportive parent (Heflin & Deblinger, 2003).

Protective factors are believed to promote resilience in youths at risk for maladaptive development.
refers to the tendency of some children to develop social, emotional, and behavioral competence despite the presence of multiple risk factors (Hayden & Mash, 2014). Consider the case of Ramon and Rafael (above), two brothers growing up in the same impoverished, high-crime neighborhood but experiencing different outcomes.

What accounts for Ramon's struggles and Rafael's resilience? Although there is no easy answer, a partial explanation might be the presence of protective factors at just the right time in Rafael's development. Ramon's path to antisocial behavior was probably facilitated by peers who introduced him to criminal activities. In contrast, Rafael's peer group encouraged prosocial activities and the development of artistic competence. If Rafael's teacher did not encourage the development of his art talents until later in Rafael's development, perhaps after he developed friendships with deviant peers, would he have followed the same developmental pathway as Ramon? Although we do not know for sure, we can speculate that these protective factors played an important role in his ability to achieve despite multiple risks (Masten & Cicchetti, 2016).

Most protective factors occur spontaneously: A teacher nurtures a special talent in an at-risk youth, a coach encourages a boy with depression to join a team, or a girl who has been abused is adopted by loving parents. Sometimes, however, protective factors are planned to

Malala Yousafzai

Photo courtesy of Wikimedia Commons: UK Department for International Development.

Malala was a Sunni Muslim girl living in the Swat Valley of Pakistan. As a child, Malala's region was invaded by the Taliban, a religious extremist group. The Taliban killed more than 2,000 people in her region and initiated a war with the Pakistani army that brought chaos to the area. The Taliban also prohibited television, music, and the education of girls and women.

With the help of her parents, Malala became a human rights advocate, speaking out against the Taliban. In her first speech, 11-year-old Malala questioned, "How dare the Taliban take away my basic right to education?" Several months later, she began writing a blog that described her experiences living under Taliban oppression:

I had a terrible dream yesterday with military helicopters and the Taliban. I have had such dreams since the launch of the military operation in Swat. My mother made me breakfast and I went off to school. I was afraid of going to school because the Taliban had issued an edict banning all girls from attending schools. Only 11 students attended the class out of 27. The number decreased because of Taliban's edict.

Malala's activism angered the Taliban. In 2012, a Taliban gunman shot her three times as she traveled to school. After her recovery, Malala continued to advocate for female education and human rights. She received the Nobel Peace Prize in 2014, at the age of 17, making her the youngest recipient of that award.

prevent the emergence of disorders. For example, communities may offer free infant and toddler screenings to identify children with developmental disabilities at an early age. Identification of developmental delays in infancy or toddlerhood can lead to early intensive intervention and better prognosis. Similarly, schools may offer prevention programs for girls who might develop eating disorders. Volunteers might teach girls about healthy eating, risks of dieting, and stress management. Even psychotherapy can be seen as a protective factor. Therapy helps children and adolescents alter developmental trajectories away from maladaption and toward adaptation (Masten & Cicchetti, 2016). Consider Malala Yousafzai, a girl who demonstrated remarkable resilience in the face of incredible risks (see above).

As we have seen, developmental psychopathology is an emerging approach to understanding abnormal child behavior in the context of normal child development, in relation to the environment, and across time. Developmental psychopathology offers a rich and multifaceted perspective on abnormal child psychology across a number of different levels: genetic, biological, psychological, familial, and social–cultural. Throughout this book, we will use the principles of developmental psychopathology to explore the causes and treatment of child and adolescent disorders across these levels and within various developmental contexts.

Risk factors are influences that interfere with the acquisition of children's competencies or children's ability to adapt to their surroundings. Protective factors are influences that buffer children from these risks.

Resilience occurs when children develop behavioral, emotional, and social competencies despite the presence of multiple risk factors.

Imagine that you experience unusual pain in your stomach that does not go away with the help of over-the-counter medication. You make an appointment with your physician in the hope that she might be able to identify the cause of your ailment and prescribe an effective treatment. You would hope that your physician's assessment, diagnostic, and treatment strategies are evidence-based—that is, that they reflect the scientific research and best available practice (Rousseau & Gunia, 2016).

Psychologists and other mental health professionals who work with children and families also strive for

evidence-based practice. According to the American Psychological Association (APA; Brown et al., 2008), is "the integration of the best available research with clinical expertise in the context of patient characteristics, culture, and preferences." The purpose of evidence-based practice is to deliver the highest-quality mental health services to children, adolescents, and families and to promote mental health in the community (Hamilton, Daleiden, et al., 2015).

Clinicians who adopt an evidence-based approach to their practice consider the following three factors:

> Scientific research: According to the research literature, what methods of assessment and forms of treatment work best for a child with this disorder?
>
> Clinical expertise: According to my own professional experience and judgment, what is the best way for me to assess and treat this child?
>
> Patient characteristics: How might the child's age, gender, and sociocultural background, or the family's expectations and preferences for therapy, affect the way I help them?

Evidence-based practice, therefore, begins with consideration of the scientific research literature. If parents request treatment for their son with ADHD, which form of treatment is most likely to be helpful? Fortunately, professional organizations have identified various that have been shown in research studies to reduce children's symptoms and improve their functioning. For example, the Society of Clinical Child and Adolescent Psychology (2016) maintains an excellent website, effectivechildtherapy.org, that describes the most efficacious psychosocial treatments for childhood disorders. Similarly, the American Academy of Child and Adolescent Psychiatry (2016) issues guidelines to help physicians identify medications and psychosocial treatments that are effective for childhood disorders.

Evidence-based treatments are typically categorized into one of five levels, depending on how well they are supported by research (Southam-Gerow & Prinstein, 2014). Figure 1.6 shows each level and its degree of research support. For example, behavior parent training is a "well-established" treatment for children with ADHD; it has been shown to reduce symptoms in several randomized controlled studies. Behavior parent training, in which parents learn to monitor their children's behavior and reinforce appropriate actions, is considered a first-line psychosocial treatment. Neurofeedback training, on the other hand, is considered "possibly efficacious" because it has less empirical support. Although one large and well-designed study suggests that this treatment can help children regulate brain activity and behavior, the study needs to be replicated before it can be considered a first-line treatment. Finally, the research literature suggests that social skills training is not effective in reducing children's ADHD symptoms. Most children with ADHD already know how to behave in social situations; their main problem is inhibiting their behavior long enough to implement this knowledge (Evans, Owens, & Bunford, 2014).

Evidence-based practice does not simply mean using evidence-based treatments. Clinicians must also use their expertise and experience to tailor interventions to meet the social–emotional needs of children and families. For example, imagine that a mother brings her son with ADHD to their first therapy session. The therapist might initially decide to use behavior parent training. However, the therapist soon senses that the mother needs time in the initial session to describe her own frustration with her son's behavior and her ex-husband's lack of interest in sharing caregiving responsibilities. The skillful therapist knows that evidence-based treatments must be modified to meet the immediate needs of families. Consequently, the therapist might see her initial goal as providing empathy and building an alliance with a mother who feels powerless or isolated as a caregiver (Rajwan, Chacko, Wymbs, & Wymbs, 2014).

Finally, evidence-based practice requires clinicians to consider the characteristics and sociodemographic backgrounds of the children and families they serve (Gonzales, Lau, Murray, Pina, & Barrera, 2016). For example, therapists sometimes have difficulty engaging fathers in parent training. Consequently, researchers have modified traditional parent training to better address the interests of fathers. A treatment called COACHES (Coaching Our Acting-Out Children: Heightening Essential Skills) allows fathers to practice parent management techniques as they play soccer with their children (see Image 1.6). Several studies show that the COACHES program not only engages fathers who might otherwise avoid therapy but also improves children's behavior on the playing field and at home (Isaacs, Webb, Jerome, & Fabiano, 2015).

Evidence-based practice is important to provide effective, ethical care to children and families (Society of Clinical Child and Adolescent Psychology, 2016). refers to the principles and standards of a profession that (1) ensure high-quality care and (2) protect the rights and dignity of others (Hill, 2014). Two important ethical principles in psychology are *beneficence* and *nonmaleficence*. Beneficence is the ethical principle that guides psychologists to help and promote the welfare of others. Nonmaleficence is the related principle that instructs psychologists to "do no harm" (APA, 2010). Evidence-based practice is important because it increases the likelihood that psychologists' interventions will be helpful and decreases the likelihood that their actions will be harmful (Hamilton, Daleiden, et al., 2015).

Evidence-based practice is also important to the scientific practice of psychology. Psychology is a science that

Evidence-based Treatment for Childhood Disorders (Southam-Gerow & Prinstein, 2014)

1. Well-Established Treatment

At least two, large randomized controlled studies, conducted by independent researchers, showing treatment is better than placebo or an existing treatment

2. Probably Efficacious Treatment

At least two, large randomized controlled studies showing treatment is better than placebo or an existing treatment

3. Possibly Efficacious (Promising) Treatment

At least one, well-designed study showing treatment is better than no treatment; or, several studies with methodological limitations

4. Experimental Treatment

At least one study showing treatment is helpful, but with methodological limitations

5. Ineffective Treatment

Treatment does not work better than no treatment or is harmful

has its roots in empirical evidence and objective evaluation (McFall, 1991). Indeed, the distinction between psychological science and clinical practice is artificial. The only way clinicians can help their clients in a competent and ethical manner is to base their interventions on the research literature and on empirical investigation. Before practicing any form of assessment or treatment, clinicians must ask, "What is the empirical evidence supporting my practice?" Whenever possible, clinicians must rely on assessment strategies and therapy techniques that have scientific support.

Unfortunately, some clinicians do not ground their interventions in the research literature or empirical data (Garb & Boyle, 2004). Instead, they may base their clinical practice on other factors, including theory, clinical experience, and anecdotal information provided by others. Although theories, experience, and anecdotes can be useful when combined with empirical evidence, they are insufficient guides for clinical practice by themselves. Psychological scientists believe that empirical data provide the best evidence either for or against specific clinical interventions.

Without empirical data, clinicians might intervene in ways that are not effective. Ineffective interventions can harm clients and their families in at least three ways. First, ineffective interventions can *cost significant time and money*—resources that might be better spent participating in treatment with more empirical support. For example, available treatments for childhood disorders include listening to certain types of music, wearing special glasses, taking large doses of vitamins, avoiding certain textured foods, riding on horseback, swimming with dolphins, reenacting the birth experience, and doing a host of other therapies with little systematic support. Although most of