Fourteenth Edition

CHILDREN

Mc Graw Hill Education

JOHN W. SANTROCK

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Fourteenth Edition

JOHN W. SANTROCK
University of Texas at Dallas

Mc Graw Hill Education

CHILDREN, FOURTEENTH EDITION

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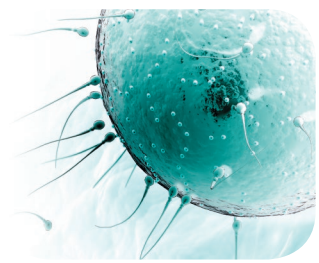

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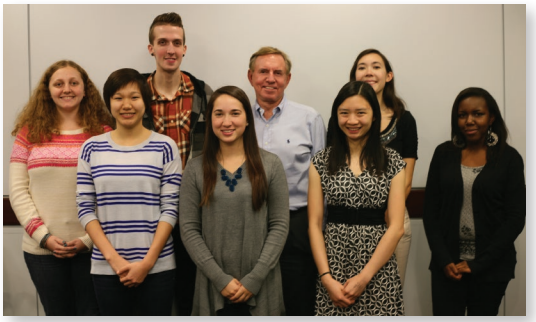
about the **author**

John W. Santrock

John Santrock received his Ph.D. from the University of Minnesota in 1973. He taught at the University of Charleston and the University of Georgia before joining the Program in Psychology at the University of Texas at Dallas, where he currently teaches a number of undergraduate courses and has received the University's Effective Teaching Award.

John has been a member of the editorial boards of *Child Development* and *Developmental Psychology*. His research on father custody is widely cited and used in expert witness testimony to promote flexibility and alternative considerations in custody disputes. John also has authored these exceptional McGraw-Hill texts: *Life-Span Development* (16th edition), *Adolescence* (16th edition), *A Topical Approach to Life-Span Development* (9th edition), and *Educational Psychology* (6th edition).

For many years, John was involved in tennis as a player, teaching professional, and coach of professional tennis players. As an undergraduate, he was a member of the University of Miami (FL) tennis team that still holds the record for most consecutive wins (137) in any NCAA Division I sport. John has been married for four decades to his wife, Mary Jo, who is a Realtor. He has two daughters—Tracy and Jennifer—both of whom are Realtors after long careers in technology marketing and medical sales, respectively. He has one granddaughter, Jordan, age 25, who completed her master's degree from the Cox School of Business at SMU and currently works for Ernst & Young, and two grandsons—the Belluci brothers: Alex, age 12, and Luke, age 11. In the last two decades, John also has spent time painting expressionist art.



John Santrock (back row middle) with the 2015 recipients of the Santrock Travel Scholarship Award in developmental psychology. Created by Dr. Santrock, this annual award provides undergraduate students with the opportunity to attend a professional meeting. As of 2017, 40 students have benefited from this award. A number of the students shown here attended the 2015 meeting of the Society for Research in Child Development.
Courtesy of Jessica Serna

Dedication:

With special appreciation to my grandchildren: Jordan, Alex, and Luke.

Jordan Bowles.
Courtesy of John Santrock.

Alex and Luke, the Bellucci brothers.
Courtesy of John Santrock.

expert consultants

Children's development has become an enormous, complex field, and no single author, or even several authors, can possibly keep up with all of the rapidly changing content in the many periods and different areas of life-span development. To solve this problem, author John Santrock has sought the input of leading experts about content in a number of areas of children's development. These experts have provided detailed evaluations and recommendations in their area(s) of expertise.

The following individuals were among those who served as expert consultants for one or more of the previous editions of this text:

Urie Bronfenbrenner, *Cornell University*
Diana Baumrind, *University of California–Berkeley*
Tiffany Field, *University of Miami*
Scott Johnson, *University of California–Los Angeles*
Nel Noddings, *Stanford University*
Ross Thompson, *University of California–Davis*
Sandra Graham, *University of California–Los Angeles*
James Marcia, *Simon Fraser University*
John Bates, *Indiana University*
Florence Denmark, *Pace University*
Rosalind Charlesworth, *Weber State University*
David Sadker, *The American University–Washington DC*
Marilou Hyson, *University of Pennsylvania*
Algea Harrison-Hale, *Oakland University*
Campbell Leaper, *University of California-Santa Cruz*
Janet DiPietro, *Johns Hopkins University*
Allan Wigfield, *University of Maryland–College Park*
Barbara Pan, *Harvard University*
Peter Scales, *Search Institute*
Esther Leerkes, *University of North Carolina-Greensboro*
David Moore, *Pitzer College* and *Claremont Graduate University*
Elizabeth Gershoff, *University of Texas*
Susan Spieker, *University of Washington*

Following are the expert consultants for the fourteenth edition, who (like those of previous editions) literally represent a *Who's Who* in the field of child and adolescent development.

James A. Graham Dr. Graham is a leading expert on diversity. He currently is a Professor of Psychology at The College of New Jersey (TCNJ). Dr. Graham received master's and doctoral degrees in developmental psychology from the University of Memphis. His research addresses the social-cognitive aspects of relationships between the group and dyadic levels across early, middle, and late childhood in community-based settings. Three interdependent dimensions of his research program examine (1) populations that are typically understudied, conceptually limited, and methodologically constrained; (2) children's development of empathy and prosocial behavior with peer groups and friends; and (3) developmental science in the context of community-engaged research partnerships. Currently, he is Coordinator of the Developmental Specialization in Psychology at TCNJ. For a decade, Dr. Graham taught graduate courses in psychology and education in Johannesburg, South Africa, through TCNJ's Graduate Summer Global Program. His co-authored book, *The African American Child: Development and Challenges*, is in its second edition, and he is co-author and co-editor of two other volumes. Dr. Graham has presented his work at a variety of international and national conferences and has published articles in professional journals such as *Social Development*, *Behavior Modification, Journal of College Student Development, Journal of Multicultural Counseling and Development*, and *American Journal of Evaluation*.

"Dr. Santrock seamlessly integrates the latest research on physical, cognitive, and socioemotional processes of children in an ever-evolving multicultural society. This book is an excellent resource for students in psychology and other social science fields. I am impressed with Dr. Santrock's sensitivity to the impact of culture, ethnicity and socioeconomic status on child and adolescent development. . . This text will help students learn to analyze, compare, and contrast alternative perspectives of children domestically and globally with the major principles and theories of child development in cognitive, socioemotional, and social-contextual domains. This text will also help students to understand the latest research regarding societal values about ethnicity, socioeconomic, and gender issues in child development, and how they influence individual development as well as shape social policy." **—James A. Graham, *The College of New Jersey***

Photo courtesy of James Graham

Joan E. Grusec Dr. Grusec is one of the world's leading experts on parenting and children's socioemotional development. She obtained her Ph.D. from Stanford University and is currently a Professor Emerita in the Department of Psychology at the University of Toronto. Dr. Grusec was previously a professor at Wesleyan University and at the University of Waterloo. Her research focuses on socialization processes, with current studies focusing on the relationship between parenting in different domains of socialization (protection, mutual reciprocity, group participation, guided learning, and control) and internalization of prosocial values. Dr. Grusec is a Fellow of the Canadian and American Psychological Associations. She is past chair of the Examination Committee of the Association of State and Provincial Psychology Boards and has been an Associate Editor of *Developmental Psychology*. She has authored and edited several books, including *Social Development* (written with Hugh Lytton), *Handbook of Parenting and Internalization of Values* (edited with Leon Kuczynski), and *Handbook of Socialization* (two editions edited with Paul Hastings). Her work has been published in leading research journals including *Child Development*, *Developmental Psychology,* and *Social Development.*

"This is, of course, a very successful text. 'Socioemotional Development in Infancy' is a well-presented chapter. The exercises and the reference to previous material both in this and other chapters is an excellent feature. 'Socioemotional Development in Early Childhood,' again, is an impressive bringing together of a

great deal of research into a coherent package. 'Socioemotional Development in Middle and Late Childhood' is overall an engaging and informative chapter." **—Joan E. Grusec, *University of Toronto***
Photo courtesy of Robert Lockhart

Megan McClelland

Dr. McClelland is a leading expert on young children's cognitive development. She is currently the Katherine E. Smith Professor of Healthy Children and Families in Human Development and Family Sciences at Oregon State University. Dr. McClelland also serves as Director of the Healthy Development in Early Childhood Research Core at the Hallie Ford Center for Healthy Children and Families. She obtained her Ph.D. from Loyola University–Chicago. Her research focuses on optimizing children's development, especially as it relates to children's self-regulation and school readiness. Dr. McClelland's investigations include links between self-regulation and academic achievement from early childhood to adulthood, recent advances in measuring self-regulation, and intervention efforts to improve these skills in young children. She has published more than 50 theoretical and empirical articles on the development of self-regulation with colleagues and collaborators around the world, including a new book on promoting self-regulation in the early childhood classroom. Dr. McClelland is currently conducting two federally funded projects to develop measures of self-regulation and an intervention to improve school readiness in young children.

"Strong developmental focus and coverage of relevant theories and concepts in cognitive development. I like the looking back and looking forward summaries and the Reach Your Learning Goals sections. I also think the Resources section is very useful."
—Megan McClelland, *Oregon State University*
Photo courtesy of Megan McClelland

Virginia Marchman

A leading expert on children's language development, Dr. Marchman is a Research Associate at the Stanford University Language Learning Laboratory. She obtained her Ph.D. at the University of California–Berkeley. Her main research areas are language development, language disorders, and early childhood development. Dr. Marchman's specific interests focus on individual differences in typically-developing and late-talking children, as well as lexical and grammatical development in monolingual and bilingual learners. Her studies have incorporated a variety of experimental methods as well as computational approaches and naturalistic observation. Dr. Marchman has worked extensively with the MacArthur-Bates Communicative Development Inventories (CDI), developing the CDI Scoring program and serving on the MacArthur-Bates CDI Advisory Board. She has been a consulting editor for *Journal of Speech, Language & Hearing Research* and *Child Development*. Dr. Marchman's most recent work involves the development of real-time spoken language understanding using the "looking-while-listening" task in typically-developing and at-risk children. Her current studies explore links between children's language processing skills, early learning environments, and individual differences in monolingual and bilingual English-Spanish learners from diverse backgrounds.

"This new edition of John Santrock's Children continues to offer a comprehensive, up-to-date but also nuanced overview of child development. The material is grounded in the traditional issues that are the core of our current understanding of development, but also offers students many opportunities to think about the open questions that remain. The format enables students from many different perspectives to relate easily to the material and to make connections to their own personal and professional lives."
—Virginia Marchman, *Stanford University*
Photo courtesy of Craig Salling

Maureen Black

Dr. Black is one of the world's leading experts on children's health and nutrition. She currently is the John A. Scholl and Mary Louise Scholl Endowed Professor in the Department of Pediatrics and the Department of Epidemiology and Public Health at the University of Maryland School of Medicine. She also is the founder/director of the Growth and Nutrition Clinic that provides services to children with inadequate growth and nutrition problems. Dr. Black obtained her Ph.D. from Emory University. Her major research focus in on evaluation of nutrition and caregiving intervention programs involving the health and development of young children. Dr. Black's intervention research not only targeted children from low-income communities in the United States but also in developing countries as well. Among her many awards are being a past president of two divisions in the American Psychological Association and induction into the Maryland Women's Hall of Fame.

"Very comprehensive coverage—I am impressed with the updated references! The inclusion of topics such as sleep and electronic device use will make the text very relevant and timely for students. Well done!" **—Maureen Black, *University of Maryland***
Photo courtesy of University of Maryland, School of Medicine

Janet DiPietro

One of the world's leading experts on prenatal development, Dr. DiPietro is Vice Dean for Research and Faculty as well as a Professor in the Bloomberg School of Public Health at Johns Hopkins University. She obtained her Ph.D. from the University of California–Berkeley. In her research, Dr. DiPietro uses digitized assessment methods to measure fetal neurobiological functioning to predict clinical and developmental outcomes in postnatal development. She also studies maternal factors, including substance exposure, maternal emotions, and physiological changes during pregnancy, as influences on prenatal development.

"Certainly, a tremendous effort went into this." **—Janet DiPietro, *Johns Hopkins University***
Photo courtesy of Janet DiPietro

Karen Adolph

Dr. Karen Adolph is one of the world's leading experts on children's motor development. She currently is Professor of Psychology and Neural Science at New York University. Dr. Adolph obtained her Ph.D. at Emory University. She has conducted pioneering and leading-edge research on children's motor development. In her Infant Action Laboratory, she has created novel predicaments, including crawling over bridges, squeezing through openings, and reaching for targets with infants' bodies in motion. She observes infant behavior using computerized video recording and state-of-the-art technology, including motion-tracking and eye-tracking equipment. She recently was honored with the appointment of President of the International Congress of Infant Studies, has been awarded numerous research grants from such agencies as NICHD and NSF, and has served on the editorial boards of leading journals such as *Child Development, Developmental Psychology,* and *Developmental Science.* Dr. Adolph also has been given multiple teaching awards at New York University.

". . . readers can learn about the important debates with opposing viewpoints. Best of luck to John on this new edition!"
—Karen Adolph, *New York University*
Photo courtesy of Shohan Hasan

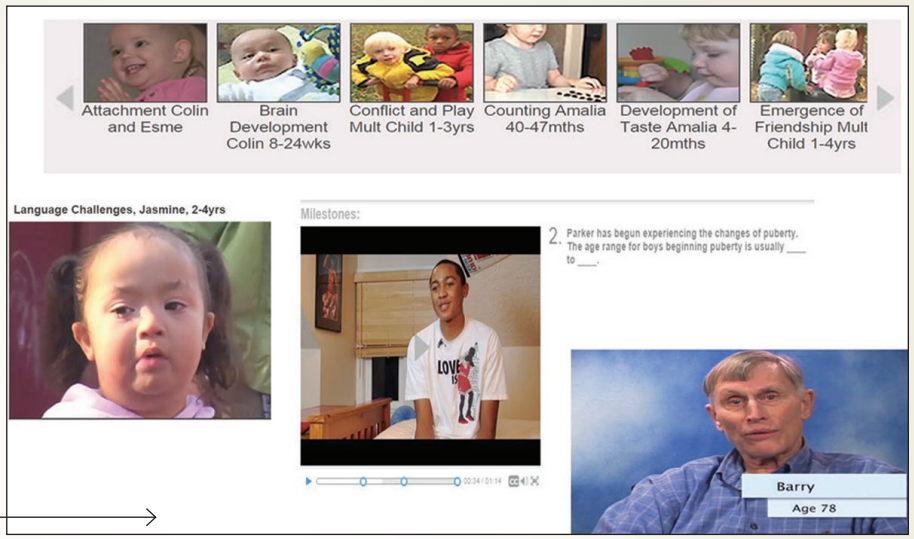
Connecting *Research* and *Results*

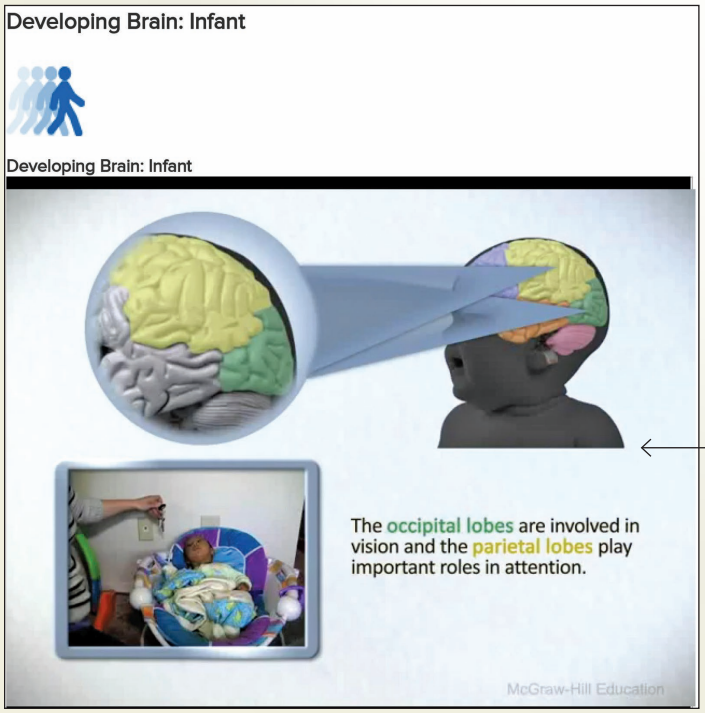
As a master teacher, John Santrock connects current research and real-world applications. Through an integrated, personalized digital learning program, students gain the insight they need to study smarter and improve performance.

McGraw-Hill Education Connect is a digital assignment and assessment platform that strengthens the link between faculty, students, and course work, helping everyone accomplish more in less time. Connect for Child Development includes assignable and assessable videos, quizzes, exercises, and interactivities, all associated with learning objectives. Interactive assignments and videos allow students to experience and apply their understanding of psychology to the world with fun and stimulating activities.

Real People, Real World, Real Life

At the higher end of Bloom's taxonomy (analyze, evaluate, create), the McGraw-Hill Education Milestones video series is an observational tool that allows students to experience life as it unfolds, from infancy to late adulthood. This ground-breaking, longitudinal video series tracks the development of real children as they progress through the early stages of physical, social, and emotional development in their first few weeks, months, and years of life. Assignable and assessable within Connect, Milestones also includes interviews with adolescents and adults to reflect development throughout the entire life span.





Inform and Engage on Psychological Concepts

At the lower end of Bloom's taxonomy, students are introduced to Concept Clips—the dynamic, colorful graphics and stimulating animations that break down some of psychology's most difficult concepts in a step-by-step manner, engaging students and aiding in retention. They are assignable and assessable in Connect or can be used as a jumping-off point in class. Now with audio narration, this edition also includes new Concept Clips on topics such as object permanence and conservation, as well as theories and theorists like Bandura's social cognitive theory, Vygotsky's sociocultural theory, Buss's evolutionary theory, and Kuhl's language development theory.

Better Data, Smarter Revision, Improved Results

Students helped inform the revision strategy of *Children.* McGraw-Hill Education's Smartbook is the first and only adaptive reading and learning experience! SmartBook helps students distinguish the concepts they know from the concepts they don't, while pinpointing the concepts they are about to forget. SmartBook continuously adapts to create a truly personalized learning path and offers students learning resources such as videos, Concept Clips, and slides to further reinforce difficult concepts. SmartBook's real-time reports help both students and instructors identify the concepts that require more attention, making study sessions and class time more efficient.

Informed by Students

Content revisions are informed by data collected anonymously through McGraw-Hill Education's SmartBook.

STEP 1. Over the course of three years, data points showing concepts that caused students the most difficulty were anonymously collected from Connect for Child Development's SmartBook®.

STEP 2. The data from LearnSmart was provided to the author in the form of a ***Heat Map***, which graphically illustrates "hot spots" in the text that affect student learning (see image at right).

STEP 3. The author used the ***Heat Map*** data to refine the content and reinforce student comprehension in the new edition. Additional quiz questions and assignable activities were created for use in Connect to further support student success.

RESULT: Because the ***Heat Map*** gave the author empirically based feedback at the paragraph and even sentence level, he was able to develop the new edition using precise student data that pinpointed concepts that gave students the most difficulty.

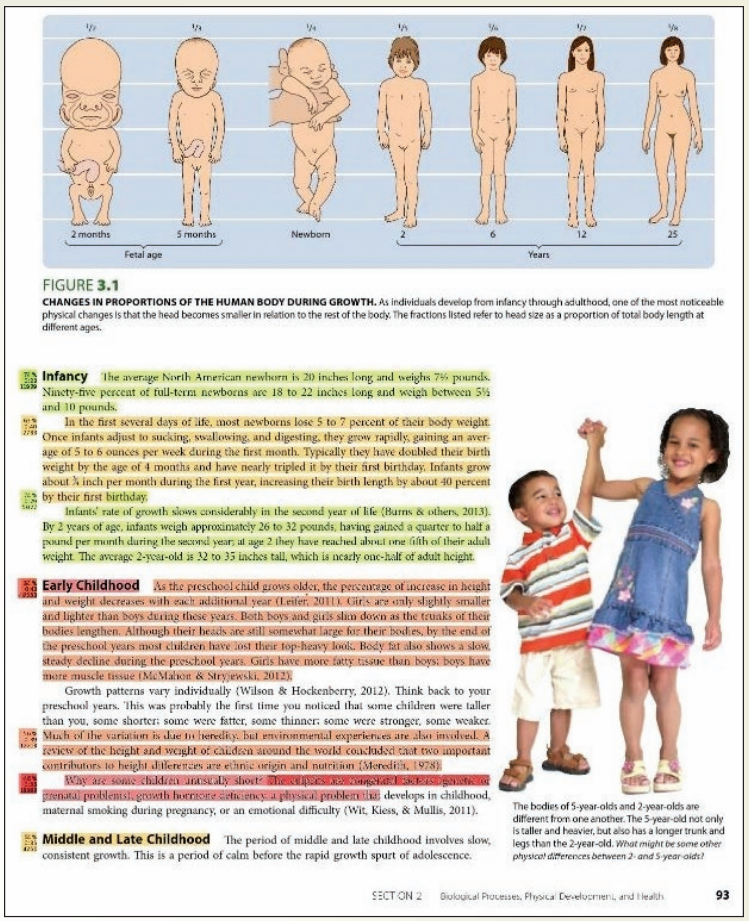


FIGURE 3.1
CHANGES IN PROPORTIONS OF THE HUMAN BODY DURING GROWTH. As individuals develop from infancy through adulthood, one of the most noticeable physical changes is that the head becomes smaller in relation to the rest of the body. The fractions listed refer to head size as a proportion of total body length at different ages.

Infancy The average North American newborn is 20 inches long and weighs 7½ pounds. Ninety-five percent of full-term newborns are 18 to 22 inches long and weigh between 5½ and 10 pounds.

In the first several days of life, most newborns lose 5 to 7 percent of their body weight. Once infants adjust to sucking, swallowing, and digesting, they grow rapidly, gaining an average of 5 to 6 ounces per week during the first month. Typically they have doubled their birth weight by the age of 4 months and have nearly tripled it by their first birthday. Infants grow about ¾ inch per month during the first year, increasing their birth length by about 40 percent by their first birthday.

Infants' rate of growth slows considerably in the second year of life (Burns & others, 2013). By 2 years of age, infants weigh approximately 26 to 32 pounds, having gained a quarter to half a pound per month during the second year; at age 2 they have reached about one fifth of their adult weight. The average 2-year-old is 32 to 35 inches tall, which is nearly one-half of adult height.

Early Childhood As the preschool child grows older, the percentage of increase in height and weight decreases with each additional year (Lester, 2011). Girls are only slightly smaller and lighter than boys during these years. Both boys and girls slim down as the trunks of their bodies lengthen. Although their heads are still somewhat large for their bodies, by the end of the preschool years most children have lost their top-heavy look. Body fat also shows a slow, steady decline during the preschool years. Girls have more fatty tissue than boys; boys have more muscle tissue (McMahon & Stryjewski, 2012).

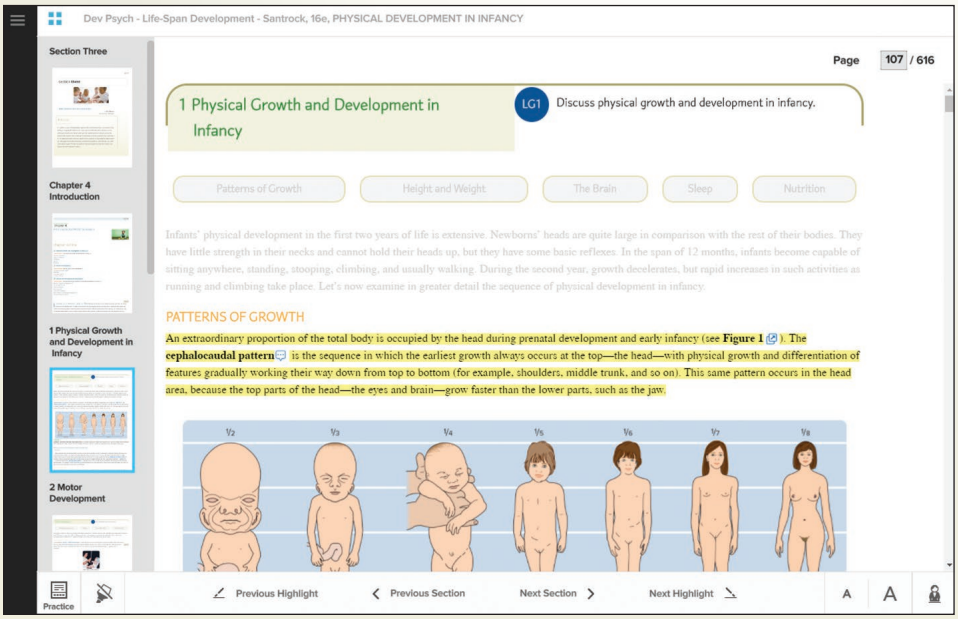
Growth patterns vary individually (Wilson & Hockenberry, 2012). Think back to your preschool years. This was probably the first time you noticed that some children were taller than you, some shorter; some were fatter, some thinner; some were stronger, some weaker. Much of the variation is due to heredity, but environmental experiences are also involved. A review of the height and weight of children around the world concluded that two important contributors to height differences are ethnic origin and nutrition (Meredith, 1978).

Why are some children unusually short? The culprits are congenital factors, genetic or prenatal problems, growth hormone deficiency, a physical problem that develops in childhood, maternal smoking during pregnancy, or an emotional difficulty (Wit, Kiess, & Mullis, 2011).

Middle and Late Childhood The period of middle and late childhood involves slow, consistent growth. This is a period of calm before the rapid growth spurt of adolescence.

The bodies of 5-year-olds and 2-year-olds are different from one another. The 5-year-old not only is taller and heavier, but also has a longer trunk and legs than the 2-year-old. *What might be some other physical differences between 2- and 5-year-olds?*

SECTION 2 Biological Processes, Physical Development, and Health 93



Powerful Reporting

Whether a class is face-to-face, hybrid, or entirely online, Connect for Child Development provides tools and analytics to reduce the amount of time instructors need to administer their courses. Easy-to-use course management tools allow instructors to spend less time administering and more time teaching, while easy-to-use reporting features allow students to monitor their progress and optimize their study time.

- The At-Risk Student Report provides instructors with one-click access to a dashboard that identifies students who are at risk of dropping out of the course due to low engagement levels.
- The Category Analysis Report details student performance relative to specific learning objectives and goals, including APA outcomes and levels of Bloom's taxonomy.
- Connect Insight is a one-of-a-kind visual analytics dashboard—now available for both instructors and students—that provides at-a-glance information regarding student performance.
- The LearnSmart Reports allow instructors and students to easily monitor progress and pinpoint areas of weakness, giving each student a personalized study plan to achieve success.

Online Instructor Resources

The resources listed here accompany *Children,* Fourteenth Edition. Please contact your McGraw-Hill representative for details concerning the availability of these and other valuable materials that can help you design and enhance your course.

Instructor's Manual Broken down by chapter, this resource provides chapter outlines, suggested lecture topics, classroom activities and demonstrations, suggested student research projects, essay questions, and critical thinking questions.

Test Bank and Computerized Test Bank This comprehensive Test Bank includes more than 1,500 multiple-choice and approximately 75 essay questions. Organized by chapter, the questions are designed to test factual, applied, and conceptual understanding. All test questions are available within TestGen™ software.

PowerPoint Slides The PowerPoint presentations, now WCAG compliant, highlight the key points of the chapter and include supporting visuals. All of the slides can be modified to meet individual needs.

preface

Making Connections . . . From My Classroom to *Children* to You

Having taught two or more undergraduate courses in developmental psychology—child development, adolescence, and life-span development—every year across four decades, I'm always looking for ways to improve my course and *Children*. Just as McGraw-Hill looks to those who teach the child development course for input, each year I ask the students in my undergraduate developmental courses to tell me what they like about the course and the text, and what they think could be improved. What have my students told me about my course and text? Students said that highlighting connections among the different aspects of children's development would help them to better understand the concepts. As I thought about this, it became clear that a connections theme would provide a systematic, integrative approach to the course material. I used this theme to shape my goals for my course, which in turn influence the main goals of this text, as follows:

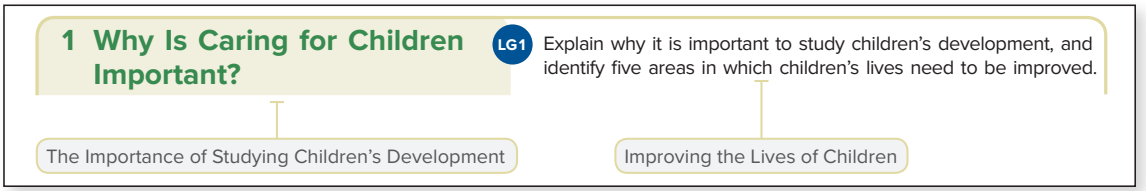
1. **Connecting with today's students** to help students learn about children's development more effectively;
2. **Connecting with research on children's development** to provide students with the best and most recent theory and research in the world today about each of the periods of children's development;
3. **Connecting development processes** to guide students in making developmental connections across different points in children's development;
4. **Connecting development to real life** to help students understand ways to apply content about child development to the real world and improve children's lives, and to motivate students to think deeply about their own personal journey through life and better understand who they were as children and how their experiences and development have influenced who they are today.

Connecting with Today's Students

In *Children,* I recognize that today's students are as different in some ways from the learners of the last generation as today's discipline of child development is different from the field 30 years ago. Students now learn in multiple modalities; rather than sitting down and reading traditional printed chapters in linear fashion from beginning to end, their work preferences tend to be more visual and more interactive, and their reading and study often occur in short bursts. For many students, a traditionally formatted printed textbook is no longer enough when they have instant, 24/7 access to news and information from around the globe. Two features that specifically support today's students are the adaptive ebook (***SmartBook***—see pages xv) and the learning goals system.

The Learning Goals System

My students often report that development courses are challenging because so much material is covered. To help today's students focus on the key ideas, the Learning Goals System I developed for *Children* provides extensive learning connections throughout the chapters. The learning system connects the chapter-opening



reach your **learning goals**

Introduction

1 Why Is Caring for Children Important?

LG1 Explain why it is important to study children's development, and identify five areas in which children's lives need to be improved.

The Importance of Studying Children's Development

- Studying children's development is important because it will help you to better understand your own childhood and provide you with strategies for being a competent parent or educator.
- Health and well-being are important areas in which children's lives can be improved. Today,

outline, learning goals for the chapter, mini-chapter maps that open each main section of the chapter, ***Review, Connect, Reflect*** questions at the end of each main section, and the chapter summary at the end of each chapter.

The learning system keeps the key ideas in front of the student from the beginning to the end of the chapter. The main headings of each chapter correspond to the learning goals, which are presented in the chapter-opening spread. Mini-chapter maps that link up with the learning goals are presented at the beginning of each major section in the chapter.

Then, at the end of each main section of a chapter, the learning goal is repeated in ***Review, Connect, Reflect*****,** which prompts students to review the key topics in the section, to connect these topics to existing knowledge, and to relate what they have learned to their own personal journey through life. ***Reach Your Learning Goals*****,** at the end of each chapter, guides students through the bulleted chapter review, connecting with the chapter outline/learning goals at the beginning of the chapter and the ***Review, Connect, Reflect*** material at the end of major chapter sections.

connecting with research

Caregivers' Emotional Expressiveness, Children's Emotion Regulation, and Behavior Problems in Head Start Children

A study by Dana McCoy and Cybele Raver (2011) explored links between caregivers' reports of their positive and negative emotional expressiveness, observations of young children's emotion regulation, and teachers' reports of the children's internalizing and externalizing behavior problems. The study focused on 97 children, most of whom were African American or Latino and whose mean age was 4 years and 3 months. The other participants in the study were the children's primary caregivers (90 mothers, 5 fathers, and 2 grandmothers).

To assess caregiver expressiveness, caregivers were asked to provide ratings on a scale from 1 (never/rarely) to 9 (very frequently) for 7 items that reflect caregiver expressiveness, such as "telling family members how happy you are" and "expressing anger at someone's carelessness." Children's emotion regulation was assessed with (a) the emotion regulation part of the PSRA (preschool self-regulation assessment) in which observers rated young children's behavior on 4 delay tasks, 3 executive function tasks, and 3

What did Dana McCoy and Cybele Raver discover about the importance of caregivers' emotions and children's emotion regulation in children's development?

©Najilah Feanny/Corbis

were linked to more internalizing behavior problems in the young Head Start children. Also, caregivers' reports of their positive emo-

Connecting with Research on Children's Development

Over the years, I have made every effort to include the most up-to-date research available. I continue this tradition in this edition by looking closely at specific areas of research, involving experts in related fields, and updating research throughout. ***Connecting with Research*** describes a study or program to illustrate how research in child development is conducted and how it influences our understanding of the discipline. Topics range from "How Can the Newborn's Perception Be Studied?" to "What Are Some Important Findings in the National Longitudinal Study of Child Care in the United States?" to "Caregivers' Emotional Expressiveness, Children's Emotion Regulation, and Behavior Problems in Head Start Children" to "Parenting and Children's Achievement: My Child Is My Report Card, Tiger Moms, and Tiger Babies Strike Back" to "Evaluation of a Family Program Designed to Reduce Drinking and Smoking in Young Adolescents."

The tradition of obtaining detailed, extensive input from a number of leading experts in different areas of child development also continues in this edition. Biographies and photographs of the leading experts in the field of child development appear on pages xii to xiii, and the chapter-by-chapter highlights of new research content are listed on pages xxi to xxxviii. Finally, the research discussions have been updated for each developmental period and topic. I expended every effort to make this edition of *Children* as contemporary and up-to-date as possible. To that end, there are more than 1,200 citations from 2016, 2017, and 2018 in this edition.

Connecting Developmental Processes

Too often we forget or fail to notice the many connections from one point in child development to another. I have substantially increased attention to these connections in the text narrative and included features to help students connect topics across the stages of child development.

Developmental Connections, which appear multiple times in each chapter, point readers to places where the topic is discussed in a previous, current, or subsequent chapter. This feature highlights links across topics of development *and* connections among biological, cognitive, and socioemotional processes. The key developmental processes are typically discussed in isolation from each other, so students often fail to see the connections among them. Included in ***Developmental Connections*** is a brief description of the backward or forward connection. For example, the developmental connection to the right appears in the margin next to the discussion of minimizing bias in research.

Furthermore, a Connect question is included in the self-reviews at the end of each section—**Review, Connect, Reflect**—so students can practice making connections among topics. For example:

- In "Cognitive Development in Infancy" and "Cognitive Development in Early Childhood," you read about the development of attention in infancy and early childhood. How might ADHD be linked to earlier attention difficulties?

developmental **connection**

Gender

Gender stereotyping continues to be extensive. Recent research indicates that girls and older children use a higher percentage of gender stereotypes than younger children and boys. Connect to "Socioemotional Development in Middle and Late Childhood."

Topical Connections: Looking Back and ***Looking Forward*** begin and conclude each chapter by placing the chapter's coverage in the larger context of development. The Looking Back section reminds the reader of what happened developmentally in previous periods of development.

Topical Connections *looking forward*

Next you will learn about the birth process and the transition from fetus to newborn, see how the newborn's health and responsiveness are assessed, read about low birth weight and preterm babies and find out about special ways to nurture these fragile newborns, and examine what happens during the postpartum period.

Connecting Development to Real Life

In addition to helping students make research and developmental connections, *Children* shows the important real-life connections to the concepts discussed in the text. In recent years, students in my development course have increasingly told me that they want more of this type of information. In this edition, real-life connections are explicitly made in the chapter-opening vignette as well as in ***Caring Connections, Connecting with Diversity,*** the ***Milestones*** video program, ***Connecting with Careers, How Would You . . . ?*** questions that pertain to five career areas, and ***Reflect: Your Own Personal Journey of Life.***

Each chapter begins with a story designed to spark students' interest and motivate them to read the chapter. Among the chapter-opening stories are those involving the journey of pregnancy and the birth of "Mr. Littles," Reggio Emilia's children and their early childhood education program, children living in the South Bronx, and Jewel Cash and her amazing contributions to her community.

Caring Connections provides applied information about parenting, education, or health and well-being related to topics ranging from "From Waterbirth to Music Therapy" to "Parenting Strategies for Helping Overweight Children Lose Weight" to "Strategies for Increasing Children's Creative Thinking."

Children puts a strong emphasis on diversity. For a number of editions, this text has benefited from having one or more leading experts on diversity to ensure that it provides students with current, accurate, sensitive information related to diversity in children's development. The diversity expert for this edition of *Children* is James A. Graham.

Diversity is discussed in every chapter. ***Connecting with Diversity*** interludes also appear in every chapter, focusing on a diversity topic related to

caring connections

Parenting Strategies for Helping Overweight Children Lose Weight

Most parents with an overweight child want to help the child to lose weight but aren't sure of the best ways to accomplish this goal. Keep in mind the research we have discussed that indicates overweight children are likely to become overweight adolescents and adults, so it is important for parents to help their children attain a healthy weight and maintain it. Following are some recommended ways that parents can help their overweight children lose weight (DiLonardo, 2013; Matthiessen, 2013; Moninger, 2013):

- ***Work on a healthy project together and involve the child in the decision-making process.*** Get the child involved in an activity that can help him or her lose weight such as purchasing pedometers for all family members and developing goals for how many steps to take each day. By involving the child in making decisions about the family's health, the hope is that the child will begin to take responsibility for his or her own health.
- ***Be a healthy model for your child. In many aspects of life, what people do is more influential than what they say.*** So if parents are overweight and engaging in unhealthy behaviors such as eating unhealthy fast food and not exercising, then telling their overweight children to lose weight is unlikely to be effective.
- ***Engage in physical activities with children.*** Parents and children can engage in activities like bicycling, jogging, hiking, and swimming together. Parents might say something like, "Let's take a bike ride after dinner this evening. It would be fun and could help us both get in better shape."

What are positive strategies parents can adopt to help overweight children lose weight?

©vgajic/Getty Images RF

select the fruits and vegetables they are willing to eat. Let them choose which sport or type of exercise they would like to do.

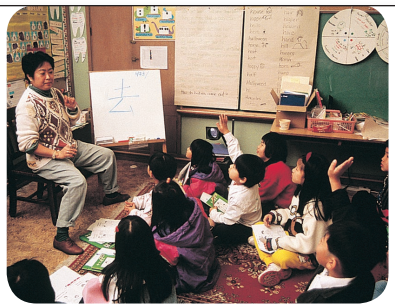
- ***Eat healthy family meals together on a regular basis.*** Children who eat meals together with their family are less likely to be overweight.
- ***Reduce screen time.*** Children who spend large numbers of hours per day in screen time are more likely to be overweight

connecting with diversity

What Is the Best Way to Teach English Language Learners?

A current controversy related to dual-language learning involves the millions of U.S. children who come from homes in which English is not the primary language (Echevarria, Vogt, & Short, 2017; Peregoy & Boyle, 2017). What is the best way to teach these English language learners (ELLs), many of whom in the United States are from immigrant families living in poverty (McCabe & others, 2013)?

ELLs have been taught in one of two main ways: (1) instruction in English only, or (2) a *dual-language* (used to be called *bilingual*) approach that involves instruction in their home language and English (Haley & Austin, 2014). In a dual-language approach, instruction is given in both the ELL child's home language and English for varying amounts of time at certain grade levels. One of the arguments for the



A first- and second-grade bilingual English-Cantonese teacher instructing students in Chinese in Oakland, California. *What have researchers found about the effectiveness of bilingual education?*
©Elizabeth Crews

connecting with careers

Salvador Tamayo, Teacher of English Language Learners

Salvador Tamayo is an ELL fifth-grade teacher at Turner Elementary School in West Chicago. He recently received a National Educator Award by the Milken Family Foundation for his work in educating ELLs. Tamayo is especially adept at integrating technology into his ELL classes. He and his students have created several award-winning Web sites about the West Chicago City Museum, the local Latino community, and the history of West Chicago. His students also developed an "I Want to Be an American Citizen" Web site to assist family and community members in preparing for the U.S. Citizenship Test. Tamayo also teaches an ELL class at Wheaton College.

Salvador Tamayo works with dual-language education students.
Courtesy of Salvador Tamayo

How Would You...?
If you were an **educator,** how would you work with low-socioeconomic-status families to increase parental involvement in their children's educational activities?

the material at that point in the chapter. Topics range from "The Increased Diversity of Adopted Children and Adoptive Parents" to "Cultural Variations in Guiding Infants' Motor Development" to "What Is the Best Way to Teach English Language Learners?" to "Cross-Cultural Comparisons of Secondary Schools."

The ***Milestones*** video program shows students what developmental concepts look like by letting them watch actual humans develop. Students are able to track several individuals starting from infancy and watch them achieve major developmental milestones, both physically and cognitively. (See page xiv for further details.)

Connecting with Careers profiles careers ranging from genetic counselor to toy designer to teacher of English Language Learners, all of which require a knowledge of children's development. The careers highlighted extend from the Careers Appendix immediately following "Introduction," which provides a comprehensive overview of careers to show students where knowledge of children's development could lead them.

How Would You . . . ? questions in the margins of each chapter highlight issues involving five main career areas of children's development: psychology, human development and family studies, education, health professions (such as nursing and pediatrics), and social work. The ***How Would You . . . ?*** questions ensure that this book orients students to concepts that are important to their understanding of children's development. I have asked instructors specializing in these fields to contribute ***How Would You . . . ?*** questions for each chapter. Strategically placed in the margin next to the relevant chapter content, these questions highlight essential ideas for students to take away from chapter content.

Finally, part of applying knowledge of children's development to the real world is understanding how it affects oneself. Accordingly, one of the goals of my child development course and this text is to motivate students to think deeply about their own journey of life. To encourage students to make personal connections to content in the text, I include a ***Reflect: Your Own Personal Journey of Life*** prompt in the end-of-section review. This question asks students to reflect on some aspect of the discussion in the section they have just read and connect it to their own life. For example, in relation to a discussion of the early-later experience issue in development, students are asked,

- Can you identify an early experience that you believe contributed in important ways to your development? Can you identify a recent or current (later) experience that you think had (is having) a strong influence on your development?

Content Revisions

A significant reason why *Children* has been successfully used by instructors for edition after edition is the painstaking effort and review that goes into making sure the text provides the latest research on all topic areas discussed in the classroom. This new edition is no exception, with more than 1,200 citations from 2016, 2017, and 2018.

Below is a sample of the many chapter-by-chapter changes that were made in this new edition of *Children*. Although every chapter has been extensively updated, three chapters ("Cognitive Development in Infancy," "Cognitive Development in Early Childhood," and "Socioemotional Development in Middle and Late Childhood") and the following content areas were especially targeted for revisions based on the results of the Heat Map data (discussed on page xv) and updated and expanded research: diversity and culture; genetics and epigenetics; neuroscience and the brain; identity issues, especially gender and transgender; health; and technology.

Chapter 1: Introduction

- Updated data on the dramatic increase in Latino and Asian American children in the United States, with recent projections from 2014 to 2060 (Colby & Ortman, 2015)
- Updated statistics on the recent increase in the percentage of U.S. children and adolescents under 18 years of age living in poverty, including data reported separately for African American and Latino families (DeNavas-Walt & Proctor, 2015; Proctor, Semega, & Kollar, 2016)
- Expanded content on the early-later experience issue regarding sensitive parenting to include the importance of positive close relationships later in childhood, in adolescence, and in adulthood (Antonucci & others, 2016)
- In the section on physiological methods, new discussion of recent advances in assessing genes, including specific genes linked to childhood obesity (Grigorenko & others, 2016; Moore, 2017)
- Updated and expanded coverage of the increased use of eye-tracking equipment to assess children's development (Loi & others, 2017; Meng, Uto, & Hashiva, 2017)
- New entries in Resources section: *Cambridge Handbook of International Prevention Science,* edited by Israelashvili and Romano (2017), provides up-to-date coverage of social policy and intervention in children's lives to improve their well-being and development in the United States and around the world. In *Encyclopedia of Lifespan Development* by Bornstein (2018), leading experts provide up-to-date discussions of many of the topics found in this edition.

Chapter 2: Biological Beginnings

- Revised and updated based on comments by leading experts Elena Grigorenko, David Moore, and Kirby Deater-Deckard
- Due to the increased emphasis on gene × environment interaction, the content on shared and non-shared environmental experiences has been deleted because it is now being given less attention.
- New description of recent research on how exercise, nutrition, and respiration can modify the expression of genes (Done & Traustadottir, 2016; Van Bussel & others, 2016)
- New coverage of the process of methylation, in which tiny atoms attach themselves to the outside of a gene. Researchers have found that exercise, diet, and tobacco use can change whether a gene is expressed or not through the methylation process (Butts, 2017; Chatterton & others, 2017; Godfrey & others, 2017).
- Updated and expanded discussion of genome-wide association studies, including research on suicide (Sokolowski, Wasserman, & Wasserman, 2016), autism (Connolly & others, 2017), attention deficit hyperactivity disorder (Naaijen & others, 2017), and glaucoma (Springelkamp & others, 2017)
- Expanded content about why recent improvements in next-generation sequencing have led to advances in analysis of genes and their links to various diseases (Bardak & others, 2017)
- Updated and expanded research on gene-gene interaction, including studies of immune system functioning (Heinonen & others, 2015), obesity (Bordoni & others, 2017), type 2 diabetes (Saxena, Srivastaya, & Banergee, 2017), cancer (Wu & others, 2017), and cardivovascular disease (De & others, 2017)
- Inclusion of recent research in which a higher level of maternal responsivity to children with fragile X syndrome's adaptive behavior improved the children's communication skills (Warren & others, 2017)
- New content on how stem cell transplantation is being explored in the treatment of infants with sickle-cell anemia (Azar & Wong, 2017)
- Updated description of how research now supports the use of hydroxyurea therapy for infants with sickle cell anemia beginning at 9 months of age (Nevitt, Jones, & Howard, 2017; Yawn & John-Sawah, 2015)
- Description of a recent research review that concluded many aspects of the developing prenatal brain can be detected in the first trimester using ultrasound, which also can help to identify spina bifida early (Engels & others, 2016)
- Inclusion of information from a recent research review that concluded fetal MRI does not provide good results in the first trimester of pregnancy because of small fetal structures and movement artifacts (Wataganara & others, 2016). In this review, it also was argued that fetal MRI can especially be beneficial in assessing central nervous system abnormalities in the third trimester of pregnancy.
- New commentary that maternal blood screening can be used to detect congenital heart disease risk in the fetus (Sun & others, 2016)

- Inclusion of recent research that found ultrasound can accurately identify the sex of the fetus between 11 and 13 weeks of gestation (Manzanares & others, 2016)
- New content on fertility drugs being more likely to produce multiple births than in vitro fertilization (March of Dimes, 2017)
- New coverage of a recent national study in which low birthweight and preterm birth were significantly higher in infants conceived through assisted reproduction technology (Sunderam & others, 2017)
- Discussion of a recent study of 3- to 5-year-old children in which parents' secure attachment increased their adopted children's secure attachment, with mothers' secure attachment making a stronger contribution to their children's secure attachment than fathers' secure attachment (Barone, Lionetti, & Green, 2017)
- Description of a study of adoptees in emerging adulthood that found perceptions of secure parent-child attachment relationships, as well as sensitive and open communication about birth parent contact, were linked to greater satisfaction for adoptees (Farr, Grant-Marsney, & Grotevant, 2014)
- Coverage of a recent research review of internationally adopted adolescents in which a majority were well adjusted, but adoptees had a higher level of mental health problems than their non-adopted counterparts (Askeland & others, 2017)
- New commentary about the epigenetics of well-being (Szyf & Pluess, 2016)
- New entry in Resources: *The Developing Genome* by David Moore (2015) provides a superb overview of recent thinking and research on epigenetics.

Chapter 3: Prenatal Development

- Changes in the chapter based on feedback from leading expert consultant Janet DiPietro
- Updated data on the average length and weight of the fetus at different points in prenatal development, including revisions involving these data in Figure 10 in "Biological Beginnings"
- Coverage of a recent large-scale study in Brazil in which flour that was fortified with folic acid produced a significant reduction in neural tube defects (Santos & others, 2016)
- Description of a recent study in which higher maternal pre-pregnancy body mass was linked to a higher level of adiposity and inflammation in newborns (McCloskey & others, 2017)
- Discussion of a recent research review that concluded a combination of aerobic and resistance (muscle strength) exercise during pregnancy benefited maternal cardiorespiratory fitness (Perales & others, 2016)
- Inclusion of a recent meta-analysis that concluded regular aerobic exercise during pregnancy is associated with a decrease in preterm birth and a higher incidence of vaginal birth, as well as a lower level of caesarean delivery (Di Mascio & others, 2016)
- Coverage of a recent study that found women who exercised regularly during pregnancy were less likely to have high blood pressure and excessive weight gain (Barakat & others, 2016)
- Description of a recent study that revealed regular exercise by pregnant women was linked to more advanced development in the neonatal brain (Laborte-Lemoyne, Currier, & Ellenberg, 2017)
- Inclusion of recent research in which two weekly 70-minute yoga sessions reduced pregnant women's stress and enhanced their immune system functioning (Chen & others, 2017)
- Discussion of recent research that found isotretinoin (used to treat acne) is one of the most commonly prescribed drugs for adolescent girls seeking contraceptive advice, yet girls were not receiving adequate information about its harmful effects on offspring if they become pregnant (Eltonsy & others, 2016; Stancil & others, 2017)
- Coverage of recent research on negative outcomes for fetal alcohol spectrum disorders (FASD) that include lower executive function (Kingdon, Cardoso, & McGrath, 2016), as well as externalized and internalized behavior problems (Tsang & others, 2016), and a significantly lower life expectancy (Thanh & Johnsson, 2016)
- New description of the French Alcohol Society's (2016) recommendation that women should not consume any alcohol during pregnancy
- Inclusion of recent research indicating that maternal cigarette smoking during pregnancy was linked to increased risk of offspring smoking cigarettes at 16 years of age (De Genna & others, 2016)
- Description of recent research in which daughters whose mothers smoked during pregnancy were more likely to subsequently smoke during their own pregnancy (Ncube & Mueller, 2017)
- Coverage of recent research that found despite the plethora of negative outcomes for maternal smoking during pregnancy, 23 percent of pregnant adolescent and 15 percent of adult pregnant women reported using tobacco in the previous month (Oh & others, 2017)
- New content on the increasing use of e-cigarettes during pregnancy and research on pregnant women's misconceptions about e-cigarettes (Mark, 2015; Spindel & McEvoy, 2016)
- Coverage of recent research in which cocaine use during pregnancy was associated with impaired connectivity of the thalamus and prefrontal cortex in newborns (Salzwedel & others, 2016)
- Discussion of recent research indicating that cocaine use by pregnant women is linked to attention deficit hyperactivity disorder, oppositional defiant disorder, and posttraumatic stress disorder (PTSD) in offspring (Richardson & others, 2016), as well as self-regulation problems at age 12 (Minnes & others, 2016)
- Coverage of a recent meta-analysis that found marijuana use during pregnancy was associated with the following outcomes in offspring: low birth weight and an increased

likelihood of being placed in a neonatal intensive care unit (Gunn & others, 2016)

- New research indicating that pregnant women have increased their use of marijuana in recent years (Brown & others, 2016)
- Description of recent research that found cardiac defects, pulmonary problems, and microencephaly were among the most common fetal and neonatal outcomes when pregnant women have rubella (Yazigi & others, 2017)
- Inclusion of two recent research reviews that concluded maternal obesity during pregnancy is associated with an increased likelihood of offspring becoming obese in childhood and adulthood (Pinto Pereira & others, 2016; Santangeli, Sattar, & Huda, 2015)
- New research indicating that offspring of mothers who have gestational diabetes are at increased risk for developing cardiovascular disease later in life (Amrithraj & others, 2017)
- Revised content stating that pregnant women are now being advised to increase their fish consumption, especially low-mercury-content fish such as salmon, shrimp, tilapia, and cod (American Pregnancy Association, 2016; Federal Drug Administration, 2016)
- Coverage of two recent studies that found very advanced maternal age (40 years and older) was linked to negative perinatal outcomes, including spontaneous abortion, preterm birth, stillbirth, and fetal growth restriction (Traisrisilp & Tongsong, 2015; Waldenstrom & others, 2015)
- Inclusion of recent research that revealed maternal prenatal stress and anxiety were linked to lower levels of infants' self-regulation (Korja & others, 2017)
- Description of a recent study in which taking antidepressants early in pregnancy was linked to increased risk of miscarriage (Almeida & others, 2016)
- Discussion of a recent study that found when fetuses were exposed to serotonin-based antidepressants, they were more likely to be born preterm (Podrebarac & others, 2017)
- Coverage of a recent study that revealed taking antidepressants in the second or third trimester was associated with increased risk of autism in children (Boukhris & others, 2016)
- Inclusion of a recent study that found intimate partner violence increased the mother's stress level during her pregnancy (Fonseca-Machado Mde & others, 2015)
- Description of recent research in which CenteringPregnancy participation was linked to reduced incidence of low birth weight and placement in a neonatal intensive care unit (Gareau & others, 2016)

Chapter 4: Birth

- Revisions based on feedback from leading expert Janet DiPietro
- Update on the percentage of U.S. births that take place in hospitals, at home, and in birthing centers and the percentage of babies born through cesarean delivery (Martin & others, 2017)
- New description of global cesarean delivery rates, with the Dominican Republic and Brazil having the highest rates (56 percent) and New Zealand and the Czech Republic having the lowest (26 percent) (McCullough, 2016). The World Health Organization recommends a cesarean rate of 10 percent or less.
- Discussion of a recent study that found waterbirth was associated with fewer negative outcomes for offspring (Bovjerg, Cheyney, & Everson, 2016)
- Discussion of a recent research review in which waterbirth neonates experienced fewer negative outcomes than non-waterbirth neonates (Bovbjerg, Cheyney, & Everson, 2016)
- Description of a recent research review that concluded waterbirth is associated with high levels of maternal satisfaction with pain relief and the experience of childbirth (Nutter & others, 2015)
- Inclusion of recent research indicating that both music therapy and Hoku point ice massage were effective in reducing labor pain (Dehcheshmeh & Rafiel, 2015)
- Discussion of a recent study in which acupuncture reduced labor pain 30 minutes after the intervention (Allameh, Tehrani, & Ghasemi, 2015)
- Revised and updated content on cesarean delivery to include two specific reasons for this intervention: failure to progress through labor and fetal distress
- Coverage of recent studies that have found low Apgar scores are linked to higher needs for long-term additional support needs in education and educational attainment (Tweed & others, 2016), risk of developmental vulnerability at five years of age (Razaz & others, 2016), and risk for developing ADHD (Hanc & others, 2016)
- Updated data on the recent decline in the percentage of births in the United States that are preterm, including ethnic variations (Martin & others, 2017)
- Coverage of a recent study that found especially in very preterm infants, the identical twin who was smaller (an index of prenatal environmental experience) than his/her co-twin was far more likely to have poorer working memory and a lower level of self-regulation at 8 years of age (Deater-Deckard, 2016). The most likely explanation of this outcome involves epigenetic influences.
- Description of a recent study that found kangaroo care significantly reduced the amount of crying and increased heart rate stability in preterm infants (Choudhary & others, 2016)
- Inclusion of recent research that revealed kangaroo care was effective in reducing neonatal pain (Johnston & others, 2017; Mooney-Leber & Brummelte, 2017)
- Coverage of a recent study in Great Britain in which the use of kangaroo care in neonatal units resulted in substantial cost savings mainly because of its reductions in diseases such as gastroenteritis and colitis (Lowson & others, 2015)
- Inclusion of a recent study in which massage therapy improved the scores of HIV-exposed infants on both physical and mental scales, as well as improving their hearing and speech (Perez & others, 2015)

- Updated data on the percentage of births in the United States that are preterm, low birth weight, and cesarean section (Hamilton, Martin, & Osterman, 2016)
- Inclusion of a longitudinal study in which the nurturing positive effects of kangaroo care with preterm and low birth weight infants at 1 year of age were still present 20 years later in a number of positive developmental outcomes (Charpak & others, 2017)
- Inclusion of information about a recent study in which kangaroo care and massage therapy were equally effective in improving body weight and reducing hospital stays for low birth weight infants (Rangey & Sheth, 2014)
- Description of recent research that found that women who had a history of depression were 20 times more likely to develop postpartum depression than women who had no history of depression (Silverman & others, 2017)
- Coverage of a recent study in which postpartum depression was associated with an increase in 4-month-olds' unintentional injuries (Yamaoka, Fujiwara, & Tamiva, 2016)
- Inclusion of recent research in which mothers' postpartum depression, but not generalized anxiety, was linked to their children's emotional negativity and behavior problems at 2 years of age (Prenoveau & others, 2017)
- Discussion of a recent study that found depressive symptoms in mothers and fathers were linked to impaired bonding with their infant in the postpartum period (Kerstis & others, 2016)

Chapter 5: Physical Development in Infancy

- Revisions based on feedback from leading expert Karen Adolph
- New discussion of how infant growth is often not smooth and continuous but rather is episodic, occurring in spurts (Adolph & Berger, 2015; Lampl & Schoen, 2017)
- New description indicating that neuronal connections number in the trillions (de Haan, 2015)
- Coverage of a recent study that found higher-quality mother-infant interaction predicted a higher level of frontal lobe functioning when assessed by EEG later in infancy (Bernier, Calkins, & Bell, 2016)
- New description of research done by Mark Johnson and his colleagues (Gliga & others, 2017; Johnson & others, 2015; Milovavlijeviz & others, 2017; Saez de Urabain, Nuthmann, & Johnson, 2017; Senju & others, 2016) on infant brain development, including their neuroconstructivist approach and studies of the development of the prefrontal cortex and its function, early identification of autism, face processing, and early social experiences
- New discussion of the recent increase in the use of functional near-infrared spectroscopy to assess infants' brain activity, a technique that is portable and allows researchers to monitor infants' brain activity while they are exploring the world around them (de Haan & Johnson, 2016; Emberson & others, 2017b). Also, new Figure 4 shows an infant in an experiment using near-infrared spectroscopy.
- Inclusion of a recent research review of 27 studies that confirmed pacifier use is associated with a lower incidence of SIDS (Alm & others, 2016)
- Description of a recent Swedish study that revealed bed sharing was more common in SIDS deaths (Mollborg & others, 2015)
- New commentary that after prone sleeping position, the two most critical factors in predicting SIDS are maternal smoking and bed sharing (Mitchell & Krous, 2015)
- Coverage of two recent studies that found sleep difficulties in infancy were linked to developmental problems in attention (Geva, Yaron, & Kuint, 2016; Sadeh & others, 2015)
- Inclusion of information about recent longitudinal studies that revealed when mothers participated prenatally and in early childhood in WIC programs, young children showed short-term cognitive benefits and longer-term reading and math benefits (Jackson, 2015)
- Updated data on the continuing increase in breast feeding by U.S. mothers (Centers for Disease Control and Prevention, 2016)
- Description of a recent Danish study that found breast feeding did not protect against allergic sensitization in early childhood and allergy-related diseases at 7 years of age (Jelding-Dannemand, Malby Schoos, & Bisgaard, 2015)
- Coverage of a recent large-scale study of more than 500,000 Scottish children found that those who were exclusively breast fed at 6 to 8 weeks were less likely to ever have been hospitalized through early childhood than their formula fed counterparts (Ajetunmobi & others, 2015)
- Inclusion of recent research that found breast feeding was associated with a small increase in intelligence in children (Kanazawa, 2015)
- New content on a key child undernutrition problem in developing countries: micronutrient deficiencies such as those involving iron, zinc, and iodine (Hwalla & others, 2017; Lazarus, 2017a, b; World Health Organization, 2017)
- New coverage of a recent study of infants' organization of exploratory behaviors in planning locomotion in challenging contexts (Kretch & Adolph, 2017)
- New discussion of how walking skills might produce a developmental cascade of changes in infancy, including increases in language skills (Adolph & Robinson, 2015; He, Walle, & Campo, 2015)
- Discussion of a recent study that examined a number of predictors of motor milestones in the first year (Flensborg-Madsen & Mortensen, 2017)
- Description of recent studies that indicated short-term training involving practice of reaching movements increased both preterm and full-term infants' reaching for and touching objects (Cunha & others, 2016; Guimaraes & Tudelia, 2015)
- Inclusion of recent research in which infants who were not yet engaging in reaching behavior were provided with reaching experiences at 3 months of age, and these infants

engaged in increased object exploration and attention focusing at 5.5 months (Libertus, Joh, & Needham, 2016)
- New coverage of a recent study that revealed 3-month-old infants who participated in active motor training using sticky mittens that allowed them to pick up toys engaged in more sophisticated object exploration at 5.5 months (Wiesen, Watkins, & Needham, 2016)
- Discussion of a study that found newborns' pain threshold was lower than that of adults (Goksan & others, 2015)
- Three new recommendations in Resources section: *Typical and Atypical Functional Brain Development* by Michelle de Haan and Mark Johnson (2016); *Healthy Sleep Habits, Happy Child* by Marc Weissbluth (2016); and *The Pediatrician's Guide to Feeding Babies and Toddlers* by Anthony Porto and Dina DiMaggio (2016)

Chapter 6: Cognitive Development in Infancy

- New coverage of a recent study of 5-month-olds that found their better performance on an A-not-B task was linked to how well they focused their attention on a different task, indicating that infants' attention may be involved in performance variations on the A-not-B task (Marcovitch & others, 2016)
- Expanded and updated criticism of the innate view of the emergence of infant morality, with an emphasis on the importance of infants' early interaction with others and later transformation through language and reflective thought (Carpendale & Hammond, 2016)
- Coverage of recent research that revealed problems in joint attention as early as 8 months of age were linked to a child being diagnosed with autism by 7 years of age (Veness & others, 2014)
- Inclusion of a recent study in which infants who initiated joint attention at 14 months of age had higher executive function at 18 months of age (Miller & Marcovitch, 2015)
- Coverage of a recent study in which hand-eye coordination involving connection of gaze with manual action on objects rather than gaze following alone predicted joint attention (Yu & Smith, 2017)
- Discussion of recent research by Patricia Bauer and her colleagues regarding when infantile amnesia begins to occur and why (Bauer, 2015; Bauer & Larkina, 2015; Pathman, Doydum, & Bauer, 2015). By 8 to 9 years of age, children's memory of events that occurred at 3 years of age began to significantly fade away (Bauer & Larkina, 2014).
- New coverage of a study that found early language skills at 24 months of age predicted IQ at 6 years of age and were linked to intellectual disability (predicted from 8 months) and giftedness (predicted from 12 months of age) (Peyre & others, 2017)
- Revisions and updates based on feedback from leading experts Roberta Golinkoff and Virginia Marchman
- New opening commentary about the nature of language learning and how it involves comprehending a sound system (or sign system for individuals who are deaf), the world of objects, actions, and events, and how units such as words and grammar connect sound and world (Pace & others, 2016)
- Revised definition of infinite generativity to include comprehension as well as production
- Expanded description of how statistical regularity of information is involved in infant word learning (Pace & others, 2016)
- Description of recent research in which vocabulary development from 16 to 24 months of age was linked to vocabulary, phonological awareness, reading accuracy, and reading comprehension five years later (Duff & others, 2015)
- New content on the language of Korean children being more verb friendly than noun friendly (Waxman & others, 2013)
- New research on babbling onset predicting when infants would say their first words (McGillion & others, 2017)
- New commentary on why gestures such as pointing promote further advances in language development
- Inclusion of a recent study involving joint attention in which infants' eye-gaze behaviors during Spanish tutoring sessions at 9.5 to 10.5 months of age predicted the infants' second-language phonetic learning at 11 months of age, indicating a strong influence of social interaction at the earliest ages of learning a second language (Convoy & others, 2015)
- New discussion of Patricia Kuhl's (2015) findings that the periods when a baby's brain is most open to learning the sounds of a native language begin at age 6 months for vowels and age 9 months for consonants
- Expanded descriptions of the functions of child-directed speech, such as capturing infants' attention, maintaining social interaction between infants and caregivers, and providing infants with information about their native language through its contrast with speech directed to adults (Golinkoff & others, 2015)
- Coverage of recent research in which child-directed speech in a one-to-one social context for 11- to 14-month-olds was related to productive vocabulary at 2 years of age for Spanish-English bilingual infants for both languages and each language independently (Ramirez-Esparza, Garcia-Sierra, & Kuhl, 2017)
- New emphasis on the importance of social cues in infant language learning (Pace & others, 2016)
- New content on whether infants learn language effectively through television and videos
- Discussion of a recent study of toddlers in which frequent television exposure increased the risk of delayed language development (Lin & others, 2015)
- Coverage of a recent study that found Skype provides some improvement in children's language learning over television and videos (Roseberry, Hirsh-Pasek, & Golinkoff, 2014)
- Description of a recent study in which the quality of early foundational communication between parent and child at age 2 accounted for more variability in language outcomes

one year later than the amount of parent speech did (Hirsh-Pasek & others, 2015)
- Discussion of how joint engagement and relevant responsiveness by a social partner in infancy predict later growth in language, possibly because they improve the infant's mapping process that connects word and the world (Tamis-LeMonda & others, 2014)
- Coverage of a recent study in which both full term and preterm infants who heard more caregiver talk based on all-day recordings at 16 months of age had better language skills at 18 months of age (Adams & others, 2017)
- Revised definitions of recasting, expanding, and labeling
- Expanded coverage of how parents can facilitate infants' and toddlers' language development

Chapter 7: Socioemotional Development in Infancy

- New introductory comments about the important role that cognitive processes, in addition to biological and experiential influences, play in children's emotional development, both in the moment and across childhood (Calkins, Perry, & Dollar, 2016)
- Coverage of recent research indicating that smiling and laughter at 7 months of age were associated with self-regulation at 7 years of age (Posner & others, 2014)
- Inclusion of a recent study in which mothers were more likely than fathers to use soothing techniques to reduce infant crying (Dayton & others, 2015)
- Coverage of a recent study that found depressed mothers rocked and touched their crying infants less than non-depressed mothers did (Esposito & others, 2017a)
- New description of a study in which young infants with a negative temperament used fewer emotion regulation strategies, while maternal sensitivity to infants was linked to more adaptive emotion regulation (Thomas & others, 2017)
- New discussion of describing temperament in terms of emotional reactivity and self-regulation (Bates & Pettit, 2015)
- New research that found positive affectivity, surgency, and self-regulation capacity assessed at 4 months of age was linked to school readiness at 4 years of age (Gartstein, Putnam, & Kliewer, 2016)
- Coverage of a recent study in which disinhibition in the toddler years was linked to career stability in middle adulthood (Blatney & others, 2015)
- Description of recent research that found an inhibited temperament at 2 to 3 years of age was related to social phobia related symptoms at 7 years of age (Lahat & others, 2014)
- Inclusion of recent findings indicating that an inhibited temperament in infants and young children is linked to the development of social anxiety disorder in adolescence and adulthood (Perez-Edgar & Guyer, 2014; Rapee, 2014)
- New description of how the use of positive parenting, which includes high levels of warmth and low levels of harsh control, increases children's effortful control (Bates & Pettit, 2015)
- Two new research studies that linked a lower level of effortful control at 3 years of age with ADHD symptoms in the first grade (Willoughby, Gottfredson, & Stifter, 2017) and at 13 years of age (Einziger & others, 2017)
- Description of a recent study that revealed if parents had a childhood history of behavioral inhibition, their children who also had a high level of behavioral inhibition were at risk for developing anxiety disorders (Stumper & others, 2017)
- New coverage of recent research in which children who had a difficult temperament at 5 and 14 years were more likely to have mental health problems at 21 years of age (Kingsbury & others, 2017)
- New discussion of the recent interest in the *differential susceptibility* and *biological sensitivity to context* models emphasizing that certain characteristics—such as a difficult temperament—may render children more vulnerable to difficulty in adverse contexts but also make them more susceptible to optimal growth in very supportive conditions (Baptista & others, 2017; Belsky & others, 2015; Belsky & Pluess, 2016; Belsky & van IJzendoorn, 2017; Simpson & Belsky, 2016)
- New commentary about recent advances in infants' understanding of others (Rhodes & others, 2015), including research indicating that infants as young as 13 months of age seem to consider another's perspective when predicting their actions (Choi & Luo, 2015)
- Expanded and updated content on the increasing belief that babies are socially smarter than used to be thought, including information about research by Amanda Woodward and her colleagues (Krough-Jespersen & Woodward, 2016; Liberman, Woodward, & Kinzler, 2017; Shneidman & Woodward, 2016; Sodian & others, 2016) on how quickly infants understand and respond to others' meaningful intentions
- Inclusion of recent research in which infant attachment insecurity (especially insecure resistant attachment) and early childhood behavioral inhibition predicted adolescent social anxiety symptoms (Lewis-Morrarty & others, 2015)
- Inclusion of recent research conducted in Zambia, where siblings were substantially involved in caregiving activities, that revealed infants showed strong attachments to both their mothers and their sibling caregivers, with secure attachment being the most frequent attachment classification for both mother-infant and sibling-infant relationships (Mooya, Sichimba, & Bakermans-Kranenburg, 2016)
- Description of a recent study that did not find support for the view that genes influence mother-infant attachment (Leerkes & others, 2017b)
- Updated and expanded coverage of the neuroscience of attachment to include the role of the brain's neurotransmitter dopamine circuits that provide pleasure and reward when mothers care for their infants and are exposed to their infants' cues; these experiences and brain changes likely

promote mother-infant attachment and sensitive parenting (Feldman, 2017; Kim, Strathearn, & Swain, 2016; Sullivan & Wilson, 2018)

- Discussion of three recent studies on the transition to parenthood that found (1) men, especially men who were avoidantly attached, adapted more poorly to child care tasks (Fillo & others, 2015); (2) in dual-earner couples, after a child was born, women did more than 2 hours of additional work compared with 40 minutes more for men (Yavorsky & others, 2015); and (3) in comparison with married fathers, cohabiting fathers' personal dedication and relationship confidence decreased and their feelings of constraint increased across the transition to parenting (Kamp Dush & others, 2014)
- Expanded coverage of the types of behaviors infants and parents engage in when reciprocal socialization is occurring
- New commentary about how the expectations parents have for their toddlers' behavior are likely higher than the toddlers' ability to control their behavior and impulses based on what is known about the maturation of the prefrontal cortex
- Discussion of a recent study that found when adults used scaffolding, infants were twice as likely to engage in helping behavior (Dahl & others, 2017)
- Coverage of a recent study of disadvantaged families in which an intervention that involved improving early maternal scaffolding was linked to improvement in children's cognitive skills at 4 years of age (Obradovic & others, 2016)
- Description of a recent national poll that estimated there are 2 million stay-at-home dads in the United States, a significant increase from 1.6 million in 2004 and 1.1 million in 1989 (Livingston, 2014)
- Coverage of a recent study in which both paternal and maternal sensitivity assessed when the infant was 10 to 12 months old were linked to the child's cognitive development at 18 months of age and the child's language development at 36 months (Malmburg & others, 2016)
- Discussion of a recent study that found negative outcomes on cognitive development in infancy when fathers were more withdrawn and depressed and positive outcomes on cognitive development when fathers were more engaged and sensitive, as well as less controlling (Sethna & others, 2017)
- Added commentary that infants and toddlers are more likely to be found in family child care and informal care settings while older children are more likely to be in child care centers and preschool and early education programs
- Description of a recent Australian study in which higher-quality child care at 2 to 3 years of age was linked to children's better self-regulation of attention and emotion at 4 to 5 and 6 to 7 years of age (Gialamas & others, 2014)
- New entry in Resources, *Raising a Secure Child* by Kent Hoffman & others (2017), which provides valuable information and strategies for protecting and nurturing infants

Chapter 8: Physical Development in Early Childhood

- Description of a recent study that found positive effects of growth hormone treatment across five years for children born small for gestational age (Ross & others, 2015)
- Coverage of a recent research review that concluded an accurate assessment of growth hormone deficiency is difficult and that many children diagnosed with the deficiency re-test normal later in childhood (Murray, Dattani, & Clayton, 2016)
- Inclusion of recent research on how poverty is linked to maturational lags in children's frontal and temporal lobes, and these lags are associated with lower school readiness skills (Hair & others, 2015)
- Description of a recent study that revealed higher levels of maternal sensitivity in early childhood were related to higher total brain volume in children (Kok & others, 2015)
- Coverage of a recent study in which young children with higher cognitive ability showed increased myelination by 3 years of age (Deoni & others, 2016)
- Inclusion of recent research in which myelination in a number of brain areas was linked to young children's processing speed (Chevalier & others, 2015)
- Discussion of a recent study of 4-year-old girls that found a nine-week motor skill intervention improved the girls' ball skills (Veldman & others, 2017)
- Description of recent research indicating that higher motor skill proficiency in preschool was linked to engaging in a higher level of physical activity in adolescence (Venetsanou & Kambas, 2017)
- Inclusion of recent research that found children with a low level of motor competence had a lower motivation for sports participation and lower global self-worth than their counterparts who had a high level of motor competence (Bardid & others, 2017b)
- Coverage of a recent study of 36- to 42-month-old children in which consistent bedtime routine was linked to more nightly sleep and an increase in nightly sleep minutes across a six-month period (Staples, Bates, & Petersen, 2015)
- Inclusion of recent research in China that revealed preschool children who slept seven hours per day or less had worse school readiness profiles and that children who used electronic devices three hours per day or more had shortened sleep durations (Tso & others, 2015)
- Description of a recent study of 2- to 5-year-olds that revealed each additional hour of daily screen time was associated with a decrease in sleep time, less likelihood of sleeping 10 hours or more per night, and later bedtime (Xu & others, 2016)
- Discussion of a recent study that revealed 2½-year-old children's liking for fruits and vegetables was related to their eating more fruits and vegetables at 7 years of age (Fletcher & others, 2017)

- Updated data on the percentage of U.S. 2- to 5-year-old children who are obese (Ogden & others, 2016)
- Recent description by expert panels from Australia, Canada, the United Kingdom, and the United States that were remarkably similar in recommending that young children get an average of 15 or more minutes of physical activity per hour over a 12-hour period, or about 3 hours total per day (Pate & others, 2015)
- Coverage of recent research in which 60 minutes of physical activity per day in preschool academic contexts improved young children's early literacy (Kirk & Kirk, 2016)
- New discussion of a longitudinal study that revealed when young children were exposed to environmental tobacco smoke they were more likely to engage in antisocial behavior at 12 years of age (Pagani & others, 2017)
- New entry in Resources, *Early Childhood Development Coming of Age: Science through the Life Course* by Maureen Black and her colleagues (2017), which outlines the key features needed in early childhood programs to help at-risk children reach their potential

Chapter 9: Cognitive Development in Early Childhood

- Updates and revisions in this chapter based on feedback from leading expert Megan McClelland
- Inclusion of recent research showing the effectiveness of the Tools of the Mind approach in improving a number of cognitive processes and academic skills in young children (Blair & Raver, 2014)
- Discussion of recent research that found preschool sustained attention was linked to a greater likelihood of completing college by 25 years of age (McClelland & others, 2013)
- Inclusion of recent research that revealed myelination in a number of brain areas was linked to young children's information processing speed (Chevalier & others, 2015)
- Coverage of a recent study of young children that found executive function was associated with emergent literacy and vocabulary development (Becker & others, 2014)
- Description of recent research in which executive function at 3 years of age predicted theory of mind at 4 years of age, and executive function at 4 years of age predicted theory of mind at 5 years of age, but the reverse did not occur—theory of mind at earlier ages did not predict executive function at later ages (Marcovitch & others, 2015)
- New coverage of developmental changes in executive function in early childhood
- Description of recent research on executive function and school readiness (Willoughby & others, 2017)
- Inclusion of research in which secure attachment to mothers during the toddler years was linked to a higher level of executive function at 5 to 6 years of age (Bernier & others, 2015)
- Discussion of a recent observational study that found a higher level of control by fathers predicted a lower level of executive function in 3-year-olds (Meuwissen & Carlson, 2016)
- Coverage of recent research in which experiencing peer problems in early childhood was linked to lower executive function later in childhood (Holmes, Kim-Spoon, & Deater-Deckard, 2016)
- Expanded and updated coverage of factors that influence children's theory of mind development: prefrontal cortex functioning (Powers, Chavez, & Hetherington, 2016); various aspects of social interaction, including secure attachment and mental state talk, parental engagement in mind-mindedness (Hughes, Devine, & Wang, 2017); having older siblings and friends who engage in mental state talk, and living in a family with higher socioeconomic status (Devine & Hughes, 2017)
- New description of recent research indicating that children with an advanced theory of mind are more popular with their peers and have better social skills in peer relations (Peterson & others, 2016; Slaughter & others, 2014)
- Updated statistics on the increase in the estimated percentage of children who have autism spectrum disorders (Christensen & others, 2016)
- Coverage of a recent study in which theory of mind predicted the severity of autism in children (Hoogenhout & Malcolm-Smith, 2017)
- Revisions in the discussion of young children's language development based on feedback from leading experts Roberta Golinkoff and Virginia Marchman
- Update on the increase in publicly funded preschool programs that now occurs in 42 states plus the District of Columbia (National Institute for Early Education Research, 2016)
- Updated information about the dramatic increase in the number of Montessori schools in the United States and the estimated number worldwide (North American Montessori Teachers' Association, 2016)
- Inclusion of a recent study that found Latino children living in low-income communities who began the school year having at-risk pre-academic and behavioral skills benefited from a Montessori public pre-K program, ending the year scoring above national averages for school readiness (Ansari & Winsler, 2014)
- Description of a recent study that revealed neighborhood poverty was linked to lower levels of classroom quality in Head Start programs (McCoy & others, 2015)
- Description of two recent studies that confirmed the importance of improved parenting engagement and skills in the success of Head Start programs (Ansari & Gershoff, 2016; Roggman & others, 2016)
- New entry in *Connecting With Improving the Lives of Children*, "Engage children in activities that will improve their executive function", including a recommended resource for these activities: http://developingchild.harvard.edu/science/key-concepts/executive-function/
- New entry in *Connecting with Improving the Lives of Children:* "Monitor young children's ability to delay gratification"

- New entry in Resources, *Becoming Brilliant* by Roberta Golinkoff and Kathy Hirsh Pasek (2016), a terrific book in which two leading developmental psychologists make compelling arguments that education of children needs to place more emphasis on promoting collaboration, communication, critical thinking, creative innovations, and confidence
- New entry in Resources, *Executive Functions in Children's Everyday Lives* (edited by Maureen Hoskyn and her colleagues (2017), which explores many aspects of children's executive function, including the role of parental influence and the importance of executive function in school and academic achievement
- New entry in Resources, *Stop, Act, and Think: Integrating Self-Regulation in the Early Childhood Classroom* by Megan McClelland and Shauna Tominey (2015), which provides a wealth of strategies for improving young children's self-regulation, including the use of various games, songs, and puzzles

Chapter 10: Socioemotional Development in Early Childhood

- New coverage of links between perspective taking and young children's social relationships, including a recent study that found higher perspective taking in 2-year-olds predicted more stable mother-child security later in the preschool years (Meins, Bureau, & Ferryhough, 2017)
- Inclusion of recent research indicating that a broad capacity for self-evaluative emotion was present in the preschool years and was linked to young children's empathetic concern (Ross, 2017)
- Expanded coverage of the importance of emotion regulation in childhood and links between emotion regulation and executive function (Blair, 2016, 2017; Calkins & Perry, 2016; Griffin, Freund, & McCardle, 2015)
- Inclusion of two new key terms—empathy and sympathy—with their definitions (Eisenberg, Spinrad, & Valiente, 2016)
- Coverage of a recent study in which young children's sympathy predicted whether they would share (Ongley & Malti, 2014)
- New commentary about connections between different emotions and how they may influence development, including a recent study in which participants' guilt proneness combined with their empathy to predict an increase in prosocial behavior (Torstevelt, Sutterlin, & Lugo, 2016)
- Coverage of a recent study in Great Britain in which gender non-conforming boys were most at risk for peer rejection (Braun & Davidson, 2017)
- Inclusion of a recent research review of a large number of studies that found authoritarian parenting was associated with a higher level of externalizing problems (Pinquart, 2017)
- Discussion of a recent study that revealed children of authoritative parents engaged in more prosocial behavior than their counterparts whose parents used the other parenting styles discussed in the section (Carlo & others, 2017)
- Description of a recent research review in which authoritative parenting was the most effective parenting style in predicting which children and adolescents would be less likely to be overweight or obese later in their development (Sokol, Qin, & Puti, 2017)
- New commentary about how in many traditional cultures, fathers use an authoritarian style; in such cultures, children benefit more when mothers use an authoritative parenting style
- Inclusion of new information that physical punishment is outlawed in 41 countries (Committee on Rights of the Child, 2014)
- Coverage of a recent review that concluded there is widespread approval of corporal punishment by U.S. parents (Cocca, 2017)
- Discussion of a longitudinal study that found harsh physical punishment in childhood was linked to a higher incidence of intimate partner violence in adulthood (Afifi & others, 2017b)
- Description of a recent Japanese study in which occasional spanking at 3 years of age was associated with a higher level of behavioral problems at 5 years of age (Okunzo & others, 2017)
- Discussion of a recent meta-analysis that found when physical punishment was not abusive, it still was linked to detrimental child outcomes (Gershoff & Grogan-Kaylor, 2016)
- Discussion of a recent study in which experiencing parents' divorce, as well as child maltreatment, in childhood was linked to midlife suicidal ideation (Stansfield & others, 2017)
- Updated data on the number of U.S. children who were victims of child maltreatment in 2013 (U.S. Department of Health and Human Services, 2015)
- Inclusion of a recent study that revealed exposure to either physical or sexual abuse in childhood and adolescence was linked to an increase in 13- to 18-year-olds' suicidal ideation, plans, and attempts (Gomez & others, 2017)
- Coverage of a recent study that indicated a bidirectional association between a child's behavior (conduct problems, for example) and quality of sibling relationships (Pike & Oliver, 2017)
- Discussion of a recent study in which individuals who had experienced their parents' divorce were at greater lifetime risk of engaging in a suicide attempt (Alonzo & others, 2015)
- Inclusion of a 30-year longitudinal study that found offspring of parents who engaged in child maltreatment and neglect are at increased risk for engaging in child neglect and sexual maltreatment themselves (Widom, Czaja, & DuMont, 2015)
- Description of recent research on almost 3,000 adolescents that revealed a negative association of the father's, but not the mother's, unemployment on the adolescents' health (Bacikov-Sleskova, Benka, & Orosova, 2015)
- Coverage of recent research indicating that enriched work-family experiences were positively linked to better parenting quality, which in turn was associated with better child outcomes; by contrast, conflicting work-family experiences

were related to poorer parenting quality, which in turn was linked to more negative child outcomes (Vieira & others, 2016)

- Inclusion of recent research in which children were more likely to have behavior problems if their post-divorce environment was less supportive and stimulating, their mother was less sensitive and more depressed, and if their household income was lower (Weaver & Schofield, 2015). Also in this study, a higher level of predivorce maternal sensitivity and child IQ served as protective factors in reducing child problems after the divorce.
- Coverage of a recent study that found interparental hostility was a stronger predictor of children's insecurity and externalizing problems than interparental disagreement and low levels of interparental cooperation (Davies & others, 2016)
- Inclusion of recent research in which maladaptive marital conflict when children were 2 years old was associated with an increase in internalizing problems eight years later due to an undermining of attachment security in girls, while negative emotional aftermath of conflict increased both boys' and girls' internalizing problems (Brock & Kochanska, 2016)
- Coverage of a longitudinal study that revealed parental divorce experienced prior to 7 years of age was linked to a lower level of the children's health through 50 years of age (Thomas & Hognas, 2015)
- Description of recent research on non-residential fathers in divorced families that found high father-child involvement and low interparental conflict were linked to positive child outcomes (Flam & others, 2016)
- Discussion of a recent study that found co-parenting following divorce was positively associated with better mental health and higher self-esteem and academic achievement (Lamela & Figueiredo, 2016)
- Updated data on the percentage of gay and lesbian parents who are raising children
- Inclusion of recent research that revealed no differences in the adjustment of school-aged children adopted in infancy by gay, lesbian, and heterosexual parents (Farr, 2017)
- Description of a recent study of lesbian and gay adoptive families in which 98 percent of the parents reported their children had adjusted well to school (Farr, Oakley, & Ollen, 2017)
- Update on the latest national survey of screen time indicating a dramatic shift to greater use of mobile devices by young children (Common Sense Media, 2013)
- Coverage of a recent study of preschool children in which each additional hour of screen time was linked to less nightly sleep, later bedtime, and reduced likelihood of sleeping 10 or more hours per night (Xu & others, 2016)
- Inclusion of a recent research review that concluded higher screen time was associated with a lower level of cognitive development in early childhood (Carson & others, 2015)
- Coverage of recent research on children in which higher viewing of TV violence, video game violence, and music video violence was independently associated with a higher level of physical aggression (Coker & others, 2015)
- Inclusion of recent research with 2- to 6-year-olds that indicated increased TV viewing on weekends was associated with a higher risk of being overweight or obese (Kondolot & others, 2017)
- New entry in Resources, *Parents and Digital Technologies* by Suzie Hayman and John Coleman, which provides excellent strategies parents can use to communicate more effectively with children about technology, as well as establish boundaries

Chapter 11: Physical Development in Middle and Late Childhood

- Description of a 14-year longitudinal study in which parental weight gain predicted children's weight change (Andriani, Liao, & Kuo, 2015)
- Coverage of a study that found both a larger waist circumference and a higher body mass index (BMI) combined to place children at higher risk for developing cardiovascular disease (de Koning & others, 2015)
- Discussion of a recent study of elementary school children that revealed 55 minutes or more of daily moderate-to-vigorous physical activity was associated with a lower incidence of obesity (Nemet, 2016)
- Description of a recent meta-analysis that found children who engage in regular physical activity have better cognitive inhibitory control (Jackson & others, 2016)
- Inclusion of recent research on 7- to 9-year-olds that found participating for approximately one year in organized leisure sports was linked to decreased cardiovascular risk (Hebert & others, 2017)
- Updated data on the percentage of 6- to 11-year-old U.S. children who are obese (Ogden & others, 2016)
- Inclusion of a recent Japanese study that revealed the highest incidence of overweight/obesity in children was linked to a family pattern of irregular mealtimes and high amounts of screen time for both parents (Watanabe & others, 2016)
- Discussion of a recent study in which children were less likely to be obese or overweight when they attended schools in states that had a strong policy implementation on healthy food and beverage (Datar & Nicosia, 2017)
- Coverage of a recent research review that concluded the elementary school programs that emphasized increased physical activity, decreased intake of sugar-sweetened beverages, and increased fruit intake were the most effective in reducing BMI measurements in children (Brown & others, 2016)
- Updated research on the Bogalusa Health Study, including these two studies: (1) body fatness and elevated blood pressure beginning in childhood were linked to premature death from coronary heart disease in adulthood (Berenson & others, 2016), and (2) secondhand smoke exposure in childhood was

associated with increased carotid artery thickness in adulthood (Chen & others, 2015)

- Updated statistics on the percentage of U.S. children who have different types of disabilities and updated version of Figure 4 (National Center for Education Statistics, 2016)
- Updated statistics on the percentage of U.S. children who have ever been diagnosed with ADHD (Centers for Disease Control and Prevention, 2016)
- New research that revealed the dopamine transporter gene DAT 1 was involved in decreased cortical thickness in the prefrontal cortex of children with ADHD (Fernandez-Jaen & others, 2015)
- Description of a recent research review that found girls with ADHD had more problematic peer relations than typically developing girls in a number of areas (Kok & others, 2016)
- Coverage of a recent research review that concluded ADHD in childhood is linked to a number of long-term outcomes (Erksine & others, 2016)
- Discussion of a recent study that found childhood ADHD was associated with long-term underachievement in math and reading (Voigt & others, 2017)
- Coverage of a recent research review that concluded stimulant medications are effective in treating children with ADHD in the short term, but that long-term benefits of such medications are not clear (Rajeh & others, 2017)
- Inclusion of recent research in which a higher level of physical activity in adolescence was linked to a lower level of ADHD in emerging adulthood (Rommel & others, 2015)
- Description of a recent meta-analysis that concluded that short-term aerobic exercise is effective in reducing symptoms such as inattention, hyperactivity, and impulsivity (Cerillo-Urbina & others, 2015)
- Inclusion of a recent meta-analysis that concluded physical exercise is effective in reducing cognitive symptoms of ADHD in individuals 3 to 25 years of age (Tan, Pooley, & Speelman, 2016)
- Coverage of a recent meta-analysis in which exercise was associated with better executive function in children with ADHD (Vysniauske & others, 2017)
- Discussion of a recent meta-analysis in which mindfulness training significantly improved the attention of children with ADHD (Cairncross & Miller, 2016)
- Inclusion of new content on how 3-D printing and haptic devices provide important technology support for students with visual impairments (Pawluck & others, 2015)
- Updated data on the increasing percentage of children who are diagnosed with autism spectrum disorders (Christensen & others, 2016)
- Description of a recent study in which an 8-week yoga program improved the sustained attention of children with ADHD (Chou & Huang, 2017)
- Inclusion of a recent study that revealed a lower level of working memory was the executive function most strongly associated with autism spectrum disorders (Ziermans & others, 2017)
- New coverage of two recent surveys in which only a minority of parents reported that their child's autism spectrum disorder was identified prior to 3 years of age and that one-third to one-half of the cases were identified after 6 years of age (Sheldrick, Maye, & Carter, 2017)
- Update on the percentage of children with a disability who spend time in a regular classroom (*Condition of Education*, 2015).
- New entry in Resources, *Routledge Handbook of Talent Identification and Development in Sport* edited by Joseph Baker and others (2017), which provides extensive information and positive strategies for helping parents become more effective in raising children who are talented in sports; includes chapters on family influences and creating optimal sports environments

Chapter 12: Cognitive Development in Middle and Late Childhood

- Expanded and updated coverage of Alan Baddeley's important concept of working memory, including coverage of its link to improving many aspects of children's cognitive and academic development (Gerst & others, 2016; Peng & Fuchs, 2016)
- Description of recent research indicating that working memory develops slowly; for example, even by 8 years of age, children can hold in memory only half the items that adults can remember (Kharitonova, Winter, & Sheridan, 2015)
- Discussion of a recent study in which children's verbal working memory was linked to these aspects of both first and second language learners: morphology, syntax, and grammar (Verhagen & Leseman, 2016)
- Expansion of the activities that improve executive function to include scaffolding of self-regulation (Bodrova & Leong, 2015)
- Coverage of recent research in which mindfulness training improved children's attention and self-regulation (Poehlmann-Tynan & others, 2016), achievement (Singh & others, 2016), and coping strategies in stressful situations (Dariotis & others, 2016)
- Description of two recent studies that found mindfulness training reduced public school teachers' stress, improved their mood at school and at home, and produced better sleep (Crain, Schonert-Reichl, & Roeser, 2016; Taylor & others, 2016)
- Description of the most recent revision of the Wechsler Intelligence Scale for Children—V, and its increased number of subtests and composite scores (Canivez, Watkins, & Dombrowski, 2017)
- Description of a recent meta-analysis that revealed a correlation of +.54 between intelligence and school grades (Roth & others, 2015)

- Coverage of recent research that found a significant link between children's general intelligence and their self-control (Meldrum & others, 2017)
- Discussion of a recent two-year intervention study with families living in poverty in which maternal scaffolding and positive home stimulation improved young children's intellectual functioning (Obradovic & others, 2016)
- New content on stereotype threat in the section on cultural bias in intelligence tests (Pennington & others, 2016; Spencer, Logel, & Davies, 2016)
- Description of a recent study using Stanford Binet intelligence scales that found no differences between non-Latino White and African American preschool children when they were matched for age, gender, and level of parent education (Dale & others, 2014)
- Coverage of a recent analysis that concluded the underrepresentation of African Americans in STEM subjects and careers is linked to practitioners' expectations that they have less innate talent than non-Latino Whites (Leslie & others, 2015)
- Update on the percentage of U.S. students who are classified as gifted (National Association for Gifted Children, 2017)
- New description of how children who are gifted excel in various aspects of processing information (Ambrose & Sternberg, 2016a, b)
- Discussion of a recent study that revealed parents and teachers rated elementary school children who are not gifted as having more emotional and behavioral problems than children who are gifted (Eklund & others, 2015)
- New content on the importance of encouraging students to monitor their writing progress (Fidalgo, Harris, & Braaksma, 2016)
- Discussion of a recent strategy intervention with struggling second-grade writers and their teachers that provided positive results for a number of writing outcomes (Harris, Graham, & Atkins, 2015)
- Revised and updated content on bilingualism, including information about whether infants and young children benefit from learning two languages simultaneously (Bialystok, 2014, 2015)
- Coverage of a recent study of 6- to 10-year-old children that found early bilingual exposure was a key factor in bilingual children outperforming monolingual children on phonological awareness and word learning (Jasinsksa & Petitto, 2017)
- Discussion of research that documented bilingual children were better at theory of mind tasks than were monolingual children (Rubio-Fernandez, 2016)
- New description of the rate at which bilingual and monolingual children learn language(s) (Hoff, 2015) and inclusion of a recent study that found by 4 years of age children who continued to learn both Spanish and English had a total vocabulary growth that was greater than that of monolingual children (Hoff & others, 2014)
- Description of a recent study of minority low-SES youth that found their intrinsic motivation (but not their extrinsic motivation) predicted their intention to pursue a health-science-related career (Boekeloo & others, 2015)
- New coverage of contextual factors that influence students' interest and achievement motivation (Linnenbrink-Garcia & Patall, 2016)
- Revisions to the discussion of achievement based on feedback from leading expert Carol Dweck
- Inclusion of recent research that found students from lower-income families were less likely to have a growth mindset than were students from wealthier families but the achievement of students from lower-income families was more likely to be protected if they had a growth mindset (Claro, Paunesku, & Dweck, 2016)
- New coverage of a recent research review that concluded increases in family income for children in poverty were linked to increased achievement in middle school as well as higher educational attainment in adolescence and emerging adulthood (Duncan, Magnuson, & Votruba-Drzal, 2017)
- Updated data on U.S. students' math and science achievement in comparison with their counterparts in other countries (Desilver, 2017; PISA, 2015: TIMMS, 2015)
- Discussion of a recent study in China that found young adolescents with authoritative parents showed better adjustment than their counterparts with authoritarian parents (Zhang & others, 2017)
- New entry in Resources, *Motivation at School,* edited by Kathryn Wentzel and David Miele (2016), which explores many aspects of schools that influence students' achievement

Chapter 13: Socioemotional Development in Middle and Late Childhood

- New description of recent research studies indicating that children and adolescents who do not have good perspective-taking skills are more likely to have difficulty in peer relations and engage in more aggressive and oppositional behavior (Morosan & others, 2017; Nilsen & Basco, 2017; O'Kearney & others, 2017)
- Inclusion of a longitudinal study that revealed the quality of children's home environment (which involved assessment of parenting quality, cognitive stimulation, and the physical home environment) was linked to their self-esteem in early adulthood (Orth, 2017)
- Inclusion of recent research in which higher levels of self-control at 4 years of age were linked to improvements in math and reading achievement in the early elementary school years for children living predominantly in rural and low-income contexts (Blair & others, 2015)
- New description of an app that is effective in improving children's self-control: www.selfregulationstation.com/sr-ipad-app/

- New content on how during middle and late childhood, as part of their understanding of emotions, children can engage in "mental time travel," in which they anticipate and recall the cognitive and emotional aspects of events (Hjortsvang & Lagattuta, 2017; Kramer & Lagattuta, 2018; Lagattuta, 2014a, b)
- New section, "Social-Emotional Education Programs," that describes two increasingly implemented programs: (1) Second Step (Committee for Children, 2017) and (2) Collaborative for Academic, Social, and Emotional Learning (CASEL, 2017)
- New commentary on how children who have developed a number of coping techniques have the best chance of adapting and functioning competently in the face of disasters and traumas (Ungar, 2015)
- New section on Jonathan Haidt's (2013, 2017) criticism of Kohlberg's view of moral reasoning as always conscious and deliberate, and his lack of attention to the automatic, intuitive precursors of moral reasoning
- New section on criticism of Kohlberg's theory of moral development for not giving adequate attention to emotional influences (Gui, Gan, & Liu, 2016)
- Expanded and updated discussion of Darcia Narváez's view on how we need to make better progress in dealing with an increasing array of temptations and possible wrongdoings in a human social world in which complexity is accumulating over time (Christen, Narváez, & Gutzwiller, 2017)
- New commentary added about research indicating that young children's gender-typing is often rigid but becomes more flexible in middle and late childhood (Halim & others, 2016). Also, in some studies, girls' gender-typing becomes more flexible than boys' (Miller & others, 2009).
- New commentary about the multiple factors that may contribute to gender differences in academic achievement in areas such as reading and math (Wentzel & Miele, 2016)
- Inclusion of information from a meta-analysis in which females are better than males at recognizing nonverbal displays of emotion (Thompson & Voyer, 2014)
- Inclusion of recent research with eighth-grade students in 36 countries that revealed girls had more egalitarian attitudes about gender roles than did boys (Dotti Sani & Quaranta, 2017)
- New content on peer rejection being consistently linked to the development and maintenance of conduct problems (Chen, Drabick, & Burgers, 2015)
- Coverage of a recent study of young adolescents in which peer rejection predicted increases in aggressive and rule-breaking behavior (Janssens & others, 2017)
- Substantial expansion and updating of bullying and cyberbullying (Hall, 2017; Muijs, 2017; Zarate-Garza & others, 2017)
- Discussion of a recent analysis that concluded bullying can have long-term effects, including difficulty in establishing long-term relationships and difficulties at work (Wolke & Lereya, 2015)
- Description of a longitudinal study that revealed children who were bullied at 6 years of age were more likely to have excess weight gain when they were 12 to 13 years old (Sutin & others, 2016)
- Inclusion of a longitudinal study that revealed being a victim of bullying in childhood was linked to increased use of mental health services five decades later (Evans-Lacko & others, 2017)
- Description of recent longitudinal studies that indicated victims bullied in childhood and adolescence have higher rates of agoraphobia, depression, anxiety, panic disorder, and suicidality in their early to mid-twenties (Arseneault, 2017; Copeland & others, 2013)
- Coverage of recent research in which adolescents who were bullied in both a direct way and through cyberbullying had more behavioral problems and lower self-esteem than their counterparts who were bullied in only one of these ways (Wolke, Lee, & Guy, 2017)
- Description of a recent teacher intervention in elementary and secondary schools to decrease bullying that focused on increasing bullies' empathy and condemning their behavior; the intervention was effective in increasing the bullies' intent to stop bullying, but blaming the bully had no effect (Garandeau & others, 2016)
- New research review that found anti-bullying interventions that focused on the whole school, such as Olweus', were more effective than interventions involving classroom curricula or social skills training (Cantone & others, 2015)
- New content on the *Every Student Succeeds Act (ESSA)* that became U.S. law in December 2015 (Rothman, 2016). This law replaces *No Child Left Behind* and while not totally eliminating state standards for testing students, reduces their influence. Also, a 2017 update on ESSA with the Trump administration planning to go forward with ESSA but giving states much more flexibility in its implementation (Klein, 2017).
- Coverage of a recent intervention (City Connects program) with first-generation immigrant children attending high-poverty schools that was successful in improving the children's reading and math skills (Dearing & others, 2016)
- New entry in Resources; *The African American Child* (2nd ed.) by Yvette Harris and James Graham (2014), which provides valuable knowledge about African American children and their families in many different contexts
- New entry in Resources, *Cyberbullying and the Wild, Wild Web* by J.A. Hitchcock (2016), which provides excellent advice about preventing cyberbullying and what to do if it happens

Chapter 14: Physical Development in Adolescence

- Inclusion of a recent study of Chinese girls that confirmed childhood obesity contributed to an earlier onset of puberty (Zhai & others, 2015)

- Description of a recent study that revealed child sexual abuse was linked to earlier pubertal onset (Noll & others, 2017)
- Description of a recent research review that concluded there is insufficient quality research to confirm that changing testosterone levels in puberty are linked to adolescent males' mood and behavior (Duke, Glazer, & Steinbeck, 2014)
- Coverage of a recent Korean study in which early menarche was associated with risky sexual behavior in females (Cheong & others, 2015)
- Inclusion of a recent study that found early maturation predicted a stable higher level of depression for adolescent girls (Rudolph & others, 2014)
- New research indicating that early-maturing girls are at increased risk for physical and verbal abuse in dating (Chen, Rothman, & Jaffee, 2017)
- Discussion of a recent study that revealed early-maturing Chinese boys and girls engaged in delinquency more than their on-time or late-maturing counterparts (Chen & others, 2015)
- New summary of the influence of early and late maturation on adolescent development
- New discussion of neurotransmitter changes in adolescence, focusing especially on an increase in dopamine production (Monahan & others, 2016)
- Coverage of a longitudinal study that found 11- to 18-year-olds who lived in poverty conditions had diminished brain functioning at 25 years of age (Brody & others, 2017). However, those adolescents whose families participated in a supportive parenting intervention did not show this diminished brain functioning.
- New discussion of two recent studies of sexting, one indicating the frequency of sexting by high school students (Strassberg, Cann, & Velarde, 2017), the other documenting that for Latino adolescents, sexting is associated with engaging in oral, vaginal, and anal sex (Romo & others, 2017)
- Updated data on the occurrence of various sexual activities among adolescents according to age, gender, and ethnicity, including updates for Figures 5 and 6 (Kann & others, 2016a)
- New commentary that while the majority of sexual minority adolescents have competent and successful developmental paths through adolescence, a recent large-scale study revealed that sexual minority youth engage in a higher prevalence of health-risk factors than youth who are not part of a sexual minority group (Kann & others, 2016b)
- Updated data on the percentage of adolescent males and females who engage in oral sex (Child Trends, 2015)
- Description of a recent study that found early sexual debut was associated with a number of problems, including sexual risk taking, substance use, violent victimization, and suicidal thoughts and attempts in both sexual minority and heterosexual adolescents (Lowry & others, 2017)
- Discussion of a recent study of Korean girls in which early menarche was associated with earlier initiation of sexual intercourse (Kim & others, 2017)
- Description of a recent Swedish study of more than 3,000 adolescents indicating that sexual intercourse prior to age 14 was linked to a number of risky sexual behaviors at age 18 (Kastbom & others, 2015)
- Inclusion of recent research in which adolescents who in the eighth grade reported greater parental knowledge and more rules about dating were less likely to initiate sex between the eighth and tenth grades (Ethier & others, 2016)
- Discussion of a recent study of parenting practices that found the factor that best predicted a lower level of risky sexual behavior by adolescents was supportive parenting (Simons & others, 2016)
- New research indicating that adolescent males who play sports engage in more risky sexual behavior, while adolescent females who play sports engage in less risky sexual behavior (Lipowski & others, 2016)
- Updated data on the percentage of adolescents who use contraceptives when they have sexual intercourse (Kann & others, 2016)
- Important new section on the increasing number of medical organizations and experts who have recently recommended that adolescents use long-acting reversible contraception (LARC), which consists of intrauterine devices (IUDs) and contraceptive implants (Diedrich, Klein, & Peipert, 2017; Society for Adolescent Medicine, 2017)
- Updated data on the ongoing substantial decrease in adolescent pregnancy rates in the United States, especially among Latinas and African Americans (Martin, Hamilton, & Osterman, 2015)
- Inclusion of a recent cross-cultural study of adolescent pregnancy rates in 21 countries (Sedgh & others, 2015)
- Discussion of a recent study in which a higher level of education for adolescent mothers improved the achievement of their children through the eighth grade (Tang & others, 2016)
- Coverage of a recent study of long-term life outcomes for African American teen versus nonteen mothers and fathers in a number of areas (Assini-Meytim & Green, 2015)
- New research on factors linked to repeated adolescent pregnancy (Dee & others, 2017; Maravilla & others, 2017)
- Updated commentary on recent concerns about increased government funding of abstinence-only sexual education programs (Donovan, 2017)
- Updated data on the percentage of U.S. adolescents who are obese (Centers for Disease Control and Prevention, 2015)
- Description of a recent study in which participation in family meals during adolescence reduced the likelihood of becoming overweight or obese in adulthood (Berge & others, 2015)
- New research indicating that having an increase in Facebook friends across two years in adolescence was

linked to an enhanced motivation to be thin (Tiggemann & Slater, 2017)

- Updated national data on adolescents' exercise patterns, including gender and ethnic variations (Kann & others, 2016)
- Updated data on significant gender differences in exercise during adolescence, with females exercising far less than males (YRBSS, 2016)
- Coverage of recent research indicating that a combination of regular exercise and a diet plan results in weight loss and enhanced executive function in adolescents (Xie & others, 2017)
- Inclusion of recent research in which an exercise program of 180 minutes per week improved the sleep patterns of obese adolescents (Mendelson & others, 2016)
- Discussion of a recent study in which a high-intensity exercise program decreased depressive symptoms and improved the moods of depressed adolescents (Carter & others, 2016)
- Description of a recent research review that identified memory as the cognitive factor that was most often improved by exercise in adolescence (Li & others, 2017)
- Coverage of a large-scale study of more than 270,000 adolescents from 1991–2012 that found adolescents have been decreasing the amount of sleep they get in recent years (Keyes & others, 2015)
- Description of recent Swedish studies of 16- to 19-year-olds in which shorter sleep duration was associated with a greater likelihood of school absences, and shorter sleep duration and sleep deficits were linked to having a lower grade point average (Hysing & others, 2015, 2016)
- Discussion of a recent experimental study in which restricting adolescents' sleep to five hours for five nights and then restoring it to ten hours for two nights negatively affected their sustained attention, especially in the early morning (Agostini & others, 2017)
- Inclusion of a recent national study of more than 10,000 13- to 18-year-olds that found a number of factors involving sleep timing and duration were associated with increased rates of anxiety, mood, substance abuse, and behavioral disorders (Zhang & others, 2017)
- Coverage of a longitudinal study of adolescents in which poor sleep patterns were linked to an increased likelihood of drinking alcohol and using marijuana four years later (Miller, Janssen, & Jackson, 2017)
- Discussion of a recent study that revealed early school start times were linked to a higher vehicle crash rate by adolescent drivers (Vorona & others, 2014)
- Inclusion of the recent recommendation by the American Academy of Pediatrics that schools institute start times from 8:30 to 9:30 a.m. to improve students' academic performance and quality of life (Adolescent Sleep Working Group, AAP, 2014)
- Updated coverage of the Monitoring the Future study's assessment of drug use by secondary school students, with 2016 data on U.S. eighth-, tenth-, and twelfth-graders (Johnston & others, 2017)
- New content on e-cigarette use by adolescents, which now surpasses traditional cigarette smoking among eighth-, tenth-, and twelfth-grade students (Johnston & others, 2017)
- Description of a longitudinal study in which earlier age at first use of alcohol was linked to increased risk of heavy alcohol use in early adulthood (Liang & Chikritzhs, 2015)
- New research that revealed early- and rapid-onset trajectories of alcohol, marijuana, and substance use were associated with substance use in early adulthood (Nelson, Van Ryzin, & Dishion, 2015)
- New website entry in Resources, http://kidshealth.org/en/parents/adolescence.html#, which provides excellent advice for parents, helping them understand, guide, and converse with teens about many topics, including puberty, sleep problems, body image, and drugs

Chapter 15: Cognitive Development in Adolescence

- New discussion of a recent meta-analysis that concluded greater use of social networking sites was linked to a higher level of narcissism (Gnambs & Appel, 2017)
- Revised discussion of information processing in adolescence based on recommendations by leading expert Valerie Reyna
- Coverage of a recent study that found adolescent binge drinkers had working memory deficits (Carbia & others, 2017)
- Discussion of a recent study in which adolescents took greater risks when they were with three same-aged peers than when they were alone (Silva, Chein, & Steinberg, 2016)
- Updated coverage of the fuzzy-trace theory dual-process model of adolescent decision making (Brust-Renck & others, 2017; Reyna & others, 2015; Reyna & Zayas, 2014)
- Inclusion of information about a recent experiment that showed encouraging gist-based thinking about risks (along with factual information) reduced self-reported risk taking up to one year after exposure to the curriculum (Reyna & Mills, 2014)
- Updated data on the goals of first-year college students in relation to the relative importance they assign to developing a meaningful philosophy of life versus becoming very well off financially (Eagan & others, 2016)
- Coverage of a recent study of young adolescent Chinese students that revealed engaging in more gratitude was associated with higher well-being at school (Ekema-Agbaw, McCutchen, & Geller, 2016)
- Description of a recent study that revealed adolescents who had a lower level of spirituality were more likely to engage in substance use (Debnam & others, 2016)
- Discussion of recent research on African American adolescent girls that found those who reported that religion was of low or moderate importance to them had an earlier sexual debut than did their counterparts who indicated that religion

was extremely important to them (George Dalmida & others, 2017)
- New content on why the transition to high school may produce problems for students (Eccles & Roeser, 2015)
- Updated data on school dropouts, including the dramatic decrease in dropout rates for Latino adolescents in recent years (National Center for Education Statistics, 2016)
- Inclusion of new information on the Bill and Melinda Gates Foundation's (2011, 2016) funding of a new generation of digital courseware to improve students' learning
- Updates on the expansion of "I Have a Dream" programs to 28 states plus Washington, DC, and New Zealand ("I Have a Dream Foundation," 2017)
- Coverage of recent research in which immigrant adolescents who participated in extracurricular activities improved their academic achievement and increased their school engagement (Camacho & Fuligni, 2015)
- Discussion of a recent Australian study that found participation in extracurricular activities during the eighth grade was linked to a lower likelihood of binge drinking through the eleventh grade (Modecki, Barber, & Eccles, 2014)

Chapter 16: Socioemotional Development in Adolescence

- Revisions based on recommendations from leading expert Kate McLean
- New coverage of the narrative approach to identity, which involves having individuals tell their life stories and evaluate the extent to which the stories are meaningful and integrated (Adler & others, 2017; Maher, Winston, & Ur, 2017)
- Inclusion of a recent study that examined identity domains using both identity status and narrative approaches with the interpersonal domain (especially dating and friendship aspects) frequently mentioned (McLean & others, 2016). In the narrative approach, family stories were common.
- Coverage of two recent studies that found a strong and positive ethnic identity was linked to a lower incidence of substance abuse and psychiatric problems (Anglin & others, 2017; Grindal & Nieri, 2016)
- New discussion of recent longitudinal studies that revealed the ethnic identity of adolescents is influenced by positive and diverse friendships (Rivas-Drake & others, 2017; Santos & others, 2017)
- New main section on gender classification
- Changes in the discussion of gender based on feedback from leading expert Stephanie Budge
- New coverage of the gender classification category of transgender (Budge & others, 2017; Moradi & others, 2016; Savin-Williams, 2017)
- Inclusion of a recent research review that concluded transgender youth are more likely to have depression, suicide attempts, and eating disorders than their non-transgender peers (Connolly & others, 2016). This discussion also highlights some of the reasons for the higher rate of these disorders in transgender individuals (Zucker, Lawrence, & Kreukels, 2016).
- Inclusion of recent research with fifth- to eighth-graders in which higher grades were associated with a higher level of parental monitoring (Top, Liew, & Luo, 2017)
- Description of recent research in which higher parental monitoring reduced negative peer influence on adolescent risk-taking (Wang & others, 2016)
- Coverage of a recent meta-analysis that found a higher level of parental monitoring and rule enforcement were linked to later initiation of sexual intercourse and increased use of condoms by adolescents (Dittus & others, 2016)
- New research on 10- to 18-year-olds in which lower disclosure to parents was linked to antisocial behavior (Chriss & others, 2015)
- Description of recent research that found snooping was a relatively infrequent parental monitoring technique (compared with solicitation and control) but was a better indicator of problems in adolescent and family functioning (Hawk, Becht, & Branje, 2016)
- Inclusion of a recent study that revealed from 16 to 20 years of age, adolescents perceived that they had increasing independence and a better relationship with their parents (Hadiwijaya & others, 2017)
- Coverage of a recent study that revealed insecure attachment to mothers was linked to becoming depressed and remaining depressed at 15 to 20 years of age (Agerup & others, 2015)
- Discussion of a recent study of Latino families that revealed a higher level of secure attachment with mothers during adolescence was linked to a lower level of heavy drug use (Gattamorta & others, 2017)
- New research of a longitudinal study that found a secure base of attachment knowledge in adolescence and emerging adulthood was predicted by observations of maternal sensitivity across childhood and adolescence (Waters, Ruiz, & Roisman, 2017)
- Coverage of recent research indicating that most adolescents have a fairly stable attachment style but that attachment stability increases in adulthood (Jones & others, 2017). Also in this study, family conflict and parental separation/divorce were likely candidates for undermining attachment stability.
- Description of a study in which high levels of parent-adolescent conflict were associated with lower levels of empathy across a six-year period (Van Lissa & others, 2015)
- Inclusion of a recent study that found higher levels of parent-adolescent conflict were linked to higher anxiety, depression, and aggression, and lower self-esteem (Smokowski & others, 2017)
- New research on Chinese American families that revealed parent-adolescent conflict was linked to a sense of alienation between parents and adolescents, which in turn was related to more depressive symptoms,

delinquent behavior, and lower academic achievement (Hou, Kim, & Wang, 2016)

- Discussion of a recent study that found boys were more likely to be influenced by peer pressure involving sexual behavior than were girls (Widman & others, 2016)
- Coverage of a recent research review that concluded good peer relationships were an important factor in achieving a positive identity (Ragelienė, 2016)
- Description of recent research in which adolescents adapted their smoking and drinking behavior to reflect that of their best friends (Wang & others, 2016b)
- Inclusion of recent research on adolescent girls that found friends' dieting predicted whether adolescent girls would engage in dieting or extreme dieting (Balantekin, Birch, & Savage, 2017)
- Discussion of a recent study that found friendship quality was linked to the quality of romantic relationships in adolescence (Kochendorfer & Kerns, 2017)
- Inclusion of recent research in which having a supportive romantic relationship in adolescence was linked with positive outcomes for adolescents who had a negative relationship with their mother (Szwedo, Hessel, & Allen, 2017)
- Discussion of recent research that revealed mother-daughter conflict in Mexican American families was linked to an increase in daughters' romantic involvement (Tyrell & others, 2016)
- Description of a recent study comparing Asian, Latino, and non-Latino immigrant adolescents in which immigrant Asian adolescents had the highest level of depression, lowest self-esteem, and experienced the most discrimination (Lo & others, 2017)
- Inclusion of a recent research review in which a higher level of media multitasking was linked to lower levels of school achievement, executive function, and growth mindset in adolescents (Cain & others, 2016)
- Discussion of a recent study in which heavy media multitaskers were less likely to delay gratification and more likely to endorse intuitive, but wrong, answers on a cognitive reflection task (Schutten, Stokes, & Arnell, 2017)
- Coverage of recent research that found less screen time was linked to adolescents' better health-related quality of life (Wang & others, 2016a) and that a higher level of social media use was associated with a higher level of heavy drinking by adolescents (Brunborg, Andreas, & Kvaavik, 2017)
- Updated data on the percentage of adolescents who use social networking sites and engage in text messaging daily (Lenhart, 2015a, b)
- New content indicating that at 12 years of age, 5.2 percent of females and 2 percent of males had experienced first-onset depression (Breslau & others, 2017). Also in this study, the cumulative incidence of depression from 12 to 17 years of age was 36 percent for females and 14 percent for boys.
- Inclusion of a recent study that revealed adolescents who were isolated from their peers and whose caregivers emotionally neglected them were at significant risk for developing depression (Christ, Kwak, & Lu, 2017)
- Description of a recent meta-analysis in which adolescent females who were obese were more likely to have depression (Quek & others, 2017)
- Coverage of a recent study in which having friends who engage in delinquency is associated with early onset and more persistent delinquency (Evans, Simons, & Simons, 2016)
- Inclusion of a recent study of more than 10,000 children and adolescents revealing that a family environment characterized by poverty and child maltreatment was linked to entering the juvenile justice system in adolescence (Vidal & others, 2017)
- Inclusion of recent research in which having callous-unemotional traits predicts an increased risk of engaging in delinquency for adolescent males (Ray & others, 2017)
- New content on the link between low academic success and delinquency (Mercer & others, 2015) and the association of cognitive factors, such as low self-control, with delinquency (Fine & others, 2016)
- Discussion of a recent study that revealed family therapy improved juvenile court outcomes beyond what was achieved in non-family based treatment, especially in reducing criminal behavior and re-arrests (Dakof & others, 2015)
- New coverage of the roles of stress and loss in adolescent depression and inclusion of a recent study that found adolescents who became depressed were characterized by a sense of hopelessness (Weersing & others, 2016)
- Inclusion of recent research indicating that adolescents who were being treated in a suicide clinic experienced lower family cohesion than nonclinical adolescents and adolescents who were treated in a general psychiatric clinic (Jakobsen, Larson, & Horwood, 2017)
- New description of a recent study that found adolescent girls' greater experience of interpersonal dependent stress was linked to their higher level of rumination, which accounted for higher levels of depressive symptoms in girls compared with boys (Hamilton & others, 2015)
- Description of a recent study in which family therapy improved juvenile court outcomes beyond what was achieved in non-family-based treatment (Dakof & others, 2015)
- Inclusion of recent research that revealed positive parenting characteristics were associated with less depression in adolescents (Smokowski & others, 2015)
- New information from a research review that concluded SSRIs show clinical benefits for adolescents at risk for moderate and severe depression (Cousins & Goodyer, 2015)
- Updated data on the percentage of U.S. adolescents who seriously consider suicide each year (Kann & others, 2016)
- Discussion of recent research indicating that the most significant factor in a first suicide attempt during adolescence was major depressive episode, while for children it was child maltreatment (Peyre & others, 2017)

- Inclusion of recent research in which both depression and hopelessness were predictors of whether adolescents would repeat a suicide attempt across a six-month period (Consoli & others, 2015)
- Description of two recent studies that revealed maltreatment during childhood was linked with suicide attempts in adulthood (Park, 2017; Turner & others, 2017)
- Coverage of a recent study that found child maltreatment was linked to adolescent suicide attempts (Hadland & others, 2015)
- New research in which a lower level of school connectedness was associated with increased suicidal ideation in female and male adolescents, and with suicide attempts by female adolescents (Langille & others, 2015)
- New coverage of the most recent research on the Fast Track program in which one-third of its reduction in later crime outcomes in emerging adulthood was accounted for by improvements in social and self-regulation skills at 6 to 11 years of age (Sorensen, Dodge, and the Conduct Problems Prevention Research Group, 2016)
- New entry in Resources, *Age of Opportunity* by Laurence Steinberg (2014), which provides valuable information for parents, teachers, and other adults who work with adolescents

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EXPERT CONSULTANTS

As I develop a new edition of this text, I consult with leading experts in their respective areas of child and adolescent development. Their invaluable feedback ensures that the latest research, understandings, and perspectives are presented throughout the text. Their willingness to devote their time and expertise to this endeavor is greatly appreciated. Coverage of the Expert Consultants who contributed to this edition, along with their biographies and commentary, can be found on pages xii–xiii.

REVIEWERS

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prologue

If I had my child to raise over again

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If I had my child to raise over again,
I'd finger paint more, and point the finger less.
I'd do less correcting, and more connecting.
I'd take my eyes off my watch, and watch with my eyes.
I would care to know less, and know to care more.
I'd take more hikes and fly more kites.
I'd stop playing serious, and seriously play.
I would run through more fields, and gaze at more stars.
I'd do more hugging, and less tugging.
I would be firm less often, and affirm much more.
I'd build self-esteem first, and the house later.
I'd teach less about the love of power,
And more about the power of love.

—Diane Loomans

section one

In every child who is born, under no matter what circumstances, and of no matter what parents, the potentiality of the human race is born again.

—James Agee
American Writer, 20th Century

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The Nature of Children's Development

Examining the shape of childhood allows us to understand it better. Every childhood is distinct, the first chapter of a new biography in the world. This book is about children's development, its universal features, its individual variations, its nature at the beginning of the twenty-first century. *Children* is about the rhythm and meaning of children's lives, about turning mystery into understanding, and about weaving together a portrait of who each of us was, is, and will be. In Section 1 you will read "Introduction."

chapter 1

INTRODUCTION

chapter **outline**

1 Why Is Caring for Children Important?

Learning Goal 1 Explain why it is important to study children's development, and identify five areas in which children's lives need to be improved.

The Importance of Studying Children's Development
Improving the Lives of Children

2 What Characterizes Development?

Learning Goal 2 Discuss processes, periods, cohort effects, and issues in development.

Biological, Cognitive, and Socioemotional Processes
Periods of Development
Age and Cohort Effects
Issues in Development

3 How Is Child Development a Science?

Learning Goal 3 Summarize why research is important in child development, the main theories of child development, and research methods, designs, and challenges.

The Importance of Research
Theories of Child Development
Research Methods for Collecting Data
Research Designs
Research Challenges

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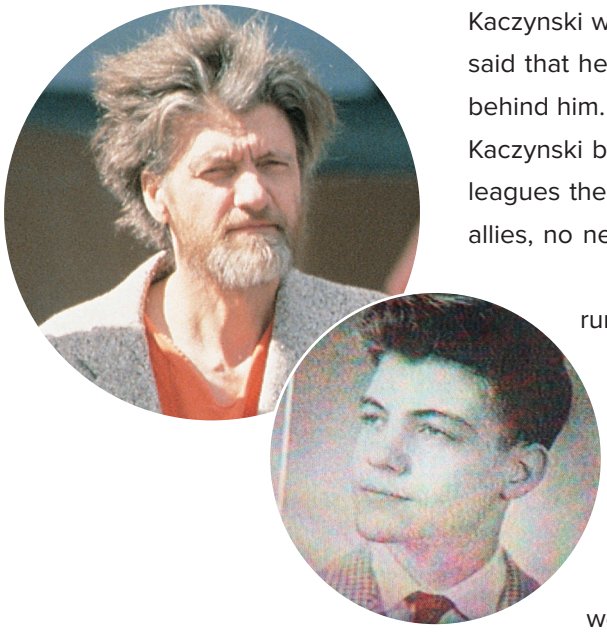
Ted Kaczynski, the convicted Unabomber, traced his difficulties to growing up as a genius in a kid's body and not fitting in when he was a child.
©Seanna O'Sullivan



Ted Kaczynski, about age 14.
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What might be some reasons Alice Walker was able to overcome trauma in her childhood and develop in impressive ways?
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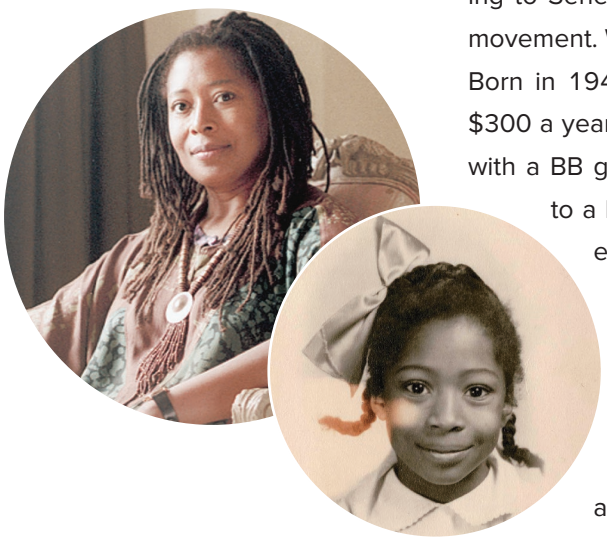

Alice Walker, about age 8.
Courtesy of Alice Walker

Ted Kaczynski sprinted through high school, not bothering with his junior year and making only passing efforts at social contact. Off to Harvard at age 16, Kaczynski was a loner during his college years. One of his roommates at Harvard said that he avoided people by quickly shuffling by them and slamming the door behind him. After obtaining his Ph.D. in mathematics at the University of Michigan, Kaczynski became a professor at the University of California at Berkeley. His colleagues there remember him as hiding from social circumstances—no friends, no allies, no networking.

After several years at Berkeley, Kaczynski resigned and moved to a rural area of Montana where he lived as a hermit in a crude shack for 25 years. Town residents described him as a bearded eccentric. Kaczynski traced his own difficulties to growing up as a genius in a kid's body and sticking out like a sore thumb in his surroundings as a child. In 1996, he was arrested and charged as the notorious Unabomber, America's most wanted killer. Over the course of 17 years, Kaczynski had sent 16 mail bombs that left 23 people wounded or maimed and 3 people dead. In 1998, he pleaded guilty to the offenses and was sentenced to life in prison.

A decade before Kaczynski mailed his first bomb, Alice Walker spent her days battling racism in Mississippi. She had recently won her first writing fellowship, but rather than use the money to follow her dream of moving to Senegal, Africa, she put herself into the heart and heat of the civil rights movement. Walker had grown up knowing the brutal effects of poverty and racism. Born in 1944, she was the eighth child of Georgia sharecroppers who earned $300 a year. When Walker was 8, her brother accidentally shot her in the left eye with a BB gun. Because her parents had no car, it took them a week to get her to a hospital. By the time she received medical care, she was blind in that eye, and it had developed a disfiguring layer of scar tissue. Despite the counts against her, Walker overcame pain and anger and went on to win a Pulitzer Prize for her book *The Color Purple*. She became not only a novelist but also an essayist, a poet, a short-story writer, and a social activist.

What leads one individual, so full of promise, to commit brutal acts of violence and another to turn poverty and trauma into a rich literary harvest? If you have ever wondered why people turn out the way they do, you have asked yourself the central question we will explore.

preview

Why study children? Perhaps you are, or will be, a parent or teacher, and responsibility for children is, or will be, a part of your everyday life. The more you learn about children, the better you can guide them. Perhaps you hope to gain an understanding of your own history—as an infant, as a child, and as an adolescent. Perhaps you accidentally came across the course description and found it intriguing. Whatever your reasons, you will discover that the study of child development is provocative, intriguing, and informative. In this chapter, we explore why caring for children is so important, describe historical changes in the study of children's development, examine the nature of development, and outline how science helps us to understand it.

1 Why Is Caring for Children Important?

LG1 Explain why it is important to study children's development, and identify five areas in which children's lives need to be improved.

The Importance of Studying Children's Development

Improving the Lives of Children

Caring for children is an important theme of this text. To think about why caring for children is such an important theme, we will explore why it is beneficial to study children's development and identify some areas in which children's lives need to be improved.

Just what do we mean when we speak of an individual's development? **Development** is the pattern of change that begins at conception and continues throughout the life span. Most development involves growth, although it also includes decline.

THE IMPORTANCE OF STUDYING CHILDREN'S DEVELOPMENT

How might you benefit from examining children's development? Perhaps you are, or will be, a parent or teacher and you want to learn about children so that you can become a better parent or educator. Perhaps you hope to gain some insight about how your childhood experiences have shaped the person you are today. Or perhaps you think that the study of children's development might raise some provocative issues. Whatever your reasons for reading this book, you will discover that the study of children's development is fascinating and filled with information about who we are and how we came to be this way.

As we indicated earlier, most human development involves growth, but it also includes decline. For example, think about how your ability to speak and write your native language has grown since you were a young child. But your ability to achieve a high level of competence in learning to speak a new language has probably declined (Thomas & Johnson, 2008). In this book, we examine children's development from the point of conception through adolescence. You will see yourself as an infant, as a child, and as an adolescent—and be stimulated to think about how those years influenced you.

We reach backward to our parents and forward to our children and through their children to a future we will never see, but about which we need to care.

—Carl Jung
Swiss Psychoanalytic Theorist, 20th Century

IMPROVING THE LIVES OF CHILDREN

If you were to pick up a newspaper or magazine in any U.S. town or city, you might see headlines like these: "Political Leanings May Be Written in the Genes," "Mother Accused of Tossing Children into Bay," "Gender Gap Widens," and "FDA Warns About ADHD Drug." Researchers are examining these and many other topics of contemporary concern. The roles that health and well-being, parenting, education, and sociocultural contexts play in children's development, as well as how social policy is related to these issues, are a special focus of this edition.

Ah! What would the world be to us
If the children were no more?
We should dread the desert behind us
Worse than the dark before.

—Henry Wadsworth Longfellow
American Poet, 19th Century

Health and Well-Being Does a pregnant woman endanger her fetus if she has a few beers a week? How does a poor diet affect a child's ability to learn? Are children getting less exercise today than in the past? What roles do parents and peers play in whether adolescents

development The pattern of movement or change that begins at conception and continues through the human life span.

connecting with careers

Luis Vargas, Clinical Child Psychologist

Luis Vargas is the director of the Clinical Child Psychology Internship Program and a professor in child and adolescent psychiatry at the University of New Mexico School of Medicine. Vargas obtained an undergraduate degree in psychology from Trinity University in Texas and a Ph.D. in clinical psychology at the University of Nebraska–Lincoln.

Vargas' work includes assessing and treating children, adolescents, and their families, especially when a child or adolescent has a serious mental disorder. He also trains mental health professionals to provide culturally responsive and developmentally appropriate mental health services. In addition, he is interested in cultural and assessment issues involving children, adolescents, and their families. He co-authored (with Joan Koss-Chioino, a medical anthropologist) *Working with Latino Youth: Culture, Context, and Development* (Koss-Chioino & Vargas, 1999).

Vargas' clinical work is heavily influenced by contextual and ecological theories of development (which we discuss later in this chapter). His first undergraduate course in human development, and subsequent courses in development, contributed to his decision to pursue a career in clinical child psychology.

Luis Vargas conducts a child therapy session.
Courtesy of Luis Vargas

For more information about the work of clinical child psychologists, see the Careers in Child Development Appendix.

abuse drugs? Throughout this text we discuss many questions like these regarding health and well-being. Investigating these questions, and exploring possible answers, is an important goal for just about everyone.

Health professionals today recognize the influence of lifestyles and psychological states on health and well-being (Blake, 2017; Hales, 2018; Insel & Roth, 2016; Rolfes, Pinna, & Whitney, 2018). In every chapter of this edition, issues of health and well-being are integrated into our discussion.

Clinical psychologists are among the health professionals who help people improve their well-being. In this chapter's *Connecting with Careers* profile, you can read about clinical psychologist Luis Vargas, who helps adolescents with problems. The Careers Appendix for this text describes the education and training required to become a clinical psychologist and to pursue other careers in child development.

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Parenting Can two gay men raise a healthy family? Are children harmed if both parents work outside the home? Do adopted children fare as well as children raised by their biological parents? How damaging is divorce to children's development? We hear many questions like these related to pressures on the contemporary family (Cicchetti, 2017; Lockhart & others, 2017; Walsh, DeFlorio, & Burnham, 2017). We examine these questions and others that provide a context for understanding factors that influence parents' lives and how effectively they rear their children. How parents, as well as other adults, can make a positive difference in children's lives is a major theme of this edition.

You might become a parent someday or might already be one. You should take seriously the importance of rearing your children, because they are the future of our society. Good parenting takes considerable time. If you plan to become a parent, commit yourself day after day, week after week, month after month, and year after year to providing your children with a warm, supportive, safe, and stimulating environment that will make them feel secure and allow them to reach their full potential as human beings. The poster shown on this page, which states "Children learn to love when they are loved," reflects this theme.

Understanding the nature of children's development can help you become a better parent (Carlo & others, 2017; Gershoff, Lee, & Durant, 2017; Nieto & Bode, 2018). Many parents learn parenting practices from their parents. Unfortunately, when parenting practices and child-care strategies are passed from one generation to the next, both desirable and undesirable ones are usually perpetuated. This book and your instructor's lectures in this course can help you become more knowledgeable about children's development and decide which practices in your own upbringing you should continue with your children and which you should abandon.

What are some questions that need to be answered when thinking about improving U.S. schools?

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Education There is widespread agreement that something needs to be done to improve the education of our nation's children (Borich, 2017; Bredekamp, 2017; Johnson & others, 2018; Morrison, 2018). A number of questions are involved in improving schools. For example, are they failing to teach children how to read and write and calculate adequately? Should there be more accountability in schools, with effectiveness of student learning and teaching assessed by formal tests? Should teachers have higher expectations for children? Should schooling involve less memorization and more attention to the development of children's ability to process information efficiently? In this text, we examine such questions about the state of education in the United States and consider recent research on solutions to educational problems.

How Would You...?

If you were a **psychologist,** how would you explain the importance of examining sociocultural factors in developmental research?

Sociocultural Contexts and Diversity Health and well-being, parenting, and education—like development itself—are all shaped by their sociocultural context (Cummings & others, 2017; Duncan, Magnuson, & Votruba-Drzal, 2017). The term **context** refers to the settings in which development occurs. These settings are influenced by historical, economic, social, and cultural factors (Masumoto & Juang, 2017). Four contexts to which we pay special attention in this text are culture, ethnicity, socioeconomic status, and gender.

Culture encompasses the behavior patterns, beliefs, and all other products of a specific group of people that are passed on from generation to generation. Culture results from the interaction of people over many years (Masumoto & Juang, 2017). A cultural group can be as large as the United States or as small as an isolated Appalachian town. Whatever its size, the group's culture influences the behavior of its members. **Cross-cultural studies** compare aspects of two or more cultures. The comparison provides information about the degree to which development is similar, or universal, across cultures, or is instead culture-specific (Chen & Liu, 2016; Vignoles & others, 2016).

Ethnicity (the word *ethnic* comes from the Greek word for "nation") is rooted in cultural heritage, nationality, race, religion, and language. African Americans, Latinos, Asian Americans, Native Americans, Polish Americans, and Italian Americans are a few examples of ethnic groups. Diversity exists within each ethnic group (Gollnick & Chinn, 2017; Gonzales & others, 2016; Nieto & Bode, 2018).

Relatively high rates of minority immigration have contributed to the growth in the proportion of ethnic minorities in the U.S. population (Cano & others, 2017; Chaudry & others, 2017). In 2014, 62 percent of children 18 years and younger were non-Latino White; by 2060, this figure is projected to decrease to 44 percent (Colby & Ortman, 2015). In 2014 in the United States, 17 percent were Latino but in 2060 that figure is projected to increase to 29 percent. Asian Americans are expected to be the fastest-growing ethnic group of children: In 2014, 5 percent were Asian American and that figure is expected to grow to 9 percent in 2060. The percent of African American children is anticipated to increase slightly from 2014 to 2060 (12.4 to 13 percent).

Contrary to stereotypes, not all African Americans live in low-income circumstances; not all Latinos are Catholics; not all Asian Americans are high school math whizzes. A special concern is the discrimination and prejudice experienced by ethnic minority children (Spencer & Swanson, 2016).

context The settings, influenced by historical, economic, social, and cultural factors, in which development occurs.

culture The behavior patterns, beliefs, and all other products of a group that are passed on from generation to generation.

cross-cultural studies Comparisons of one culture with one or more other cultures. These comparisons provide information about the degree to which children's development is similar, or universal, across cultures, and the degree to which it is culture-specific.

ethnicity A characteristic based on cultural heritage, nationality, race, religion, and language.

(a)

(b)

(*a*) These two Korean-born children on the day they became U.S. citizens represent the dramatic increase in the percentage of ethnic minority children in the United States. (*b*) Inderjeet Poolust, 5, from India celebrates being one of 27 schoolchildren who recently became U.S. citizens at an induction ceremony in Queens, New York.

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developmental **connection**

Socioeconomic Status

Growing up in poverty is linked to negative outcomes for children's language skill. Connect to "Cognitive Development in Infancy."

Socioeconomic status (SES) refers to a person's position within society based on occupational, educational, and economic characteristics. Socioeconomic status implies certain inequalities. Generally, members of a society have (1) occupations that vary in prestige, with some individuals having more access than others to higher-status occupations; (2) different levels of educational attainment, with some individuals having more access than others to better education; (3) different economic resources; and (4) different levels of power to influence a community's institutions. These differences in people's ability to control resources and to participate in society's rewards produce unequal opportunities (Orth, 2017; Yoshikawa & others, 2017).

socioeconomic status (SES) An individual's position within society based on occupational, educational, and economic characteristics.

Gender

Gender is another key dimension of children's development. **Gender** refers to the characteristics of people as males and females. Few aspects of our development are more central to our identity and social relationships than gender (Brannon, 2017; Helgeson, 2017). How you view yourself, your relationships with other people, your life, and your goals are shaped to a great extent by whether you are male or female and how your culture defines the proper roles of males and females.

Each of these dimensions of the sociocultural context—culture, ethnicity, SES, and gender—helps to mold how an individual develops through life, as discussions in later chapters demonstrate. We explore, for example, questions such as the following:

- Do infants around the world form attachments with their parents in the same way, or do these attachments differ from one culture to another?
- Does poverty influence the likelihood that young children will be provided with fewer educational opportunities than children growing up in more affluent families?
- Is there a parenting style that is universally effective, or does the effectiveness of different types of parenting depend on the ethnic group or culture?
- If adolescents from minority groups identify with their ethnic culture, is that likely to help or hinder their socioemotional development?

We discuss sociocultural contexts and diversity in each chapter. In addition, a *Connecting with Diversity* interlude appears in every chapter. See the first *Connecting with Diversity* interlude, which focuses on gender, families, and children's development around the world.

Ann Masten with a homeless family who is participating in her research on resilience. She and her colleagues have found that good parenting skills and good cognitive skills (especially attention and self-control) improve the likelihood that children in challenging circumstances will do better when they enter elementary school.

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Source	Characteristic
Individual	Good intellectual functioning Appealing, sociable, easygoing disposition Self-confidence, high self-esteem Talents Faith
Family	Close relationship to caring parent figure Authoritative parenting: warmth, structure, high expectations Socioeconomic advantages Connections to extended supportive family networks
Extrafamilial Context	Bonds to caring adults outside the family Connections to positive organizations Attending effective schools

FIGURE **1**

CHARACTERISTICS OF RESILIENT CHILDREN AND THEIR CONTEXTS

Resilience, Social Policy, and Children's Development

Some children develop confidence in their abilities despite negative stereotypes about their gender or their ethnic group. And some children triumph over poverty or other adversities. They show resilience. Think back to the chapter-opening story about Alice Walker. In spite of racism, poverty, her low socioeconomic status, and a disfiguring eye injury, she went on to become a successful author and champion for equality.

Are there certain characteristics that cause children like Alice Walker to be resilient? Are there other characteristics that influence children to behave like Ted Kaczynski, who despite his intelligence and education became a killer? After analyzing research on this topic, Ann Masten (2001, 2006, 2009, 2013, 2014a, b, 2015, 2016a, b, 2017; Masten & Cicchetti, 2016; Masten & Kalstabakken, 2017; Masten & others, 2015) concludes that a number of individual factors, such as good intellectual functioning, influence resiliency. In addition, as Figure 1 shows, the families and extrafamilial contexts of resilient children tend to show certain features. For example, resilient children are likely to have a close relationship to a caring parent figure and bonds to caring adults outside the family.

Should governments take action to improve the contexts of children's development and aid their resilience? **Social policy** is a government's course of action designed to promote the welfare of its citizens. The shape and

connecting with diversity

Gender, Families, and Children's Development

Around the world, the experiences of male and female children and adolescents continue to be quite different (Brown & Larson, 2002; UNICEF, 2017, 2018). Except in a few areas, such as Japan, the Philippines, and Western countries, males have far greater access to educational opportunities than females. In many countries, adolescent females have less freedom to pursue a variety of careers and engage in various leisure acts than males. Gender differences in sexual expression are widespread, especially in India, Southeast Asia, Latin America, and Arab countries—where there are far more restrictions on the sexual activity of adolescent females than of males. In certain areas around the world, these gender differences do appear to be narrowing over time. In some countries, educational and career opportunities for women are expanding, and in some parts of the world control over adolescent girls' romantic and sexual relationships is weakening. However, in many countries females still experience considerable discrimination, and much work is needed to bridge the gap between the rights of males and females.

In certain parts of the world, children grow up in closely knit families with extended-kin networks "that provide a web of connections and reinforce a traditional way of life" (Brown & Larson, 2002, p. 6). For example, in Arab countries, adolescents are required to adopt strict codes of conduct and loyalty. However, in Western countries such as the United States, children and adolescents are growing up in much larger numbers in divorced families and stepfamilies. Parenting in Western countries has become less authoritarian than it was in the past.

Doly Akter, age 17, lives in a slum in Dhaka, Bangladesh, where sewers overflow, garbage rots in the streets, and children are undernourished. Nearly two-thirds of young women in Bangladesh get married before they are 18. Doly organized a club supported by UNICEF in which girls go door-to-door to monitor the hygiene habits of households in their neighborhood. This has led to improved hygiene and health in the families. Also, her group has managed to stop several child marriages by meeting with parents and convincing them that it is not in their daughter's best interests. When talking with parents, they emphasize the importance of staying in school and how this will improve their daughter's future. Doly says that the girls in her UNICEF group are far more aware of their rights than their mothers ever were (UNICEF, 2007).
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Some of the trends that are occurring in many countries around the world "include greater family mobility, migration to urban areas, family members working in distant cities or countries, smaller families, fewer extended-family households, and increases in mothers' employment" (Brown & Larson, 2002, p. 7). Unfortunately, many of these changes may reduce the ability of families to provide time and resources for children and adolescents.

scope of social policy related to children are tied to the political system. The values held by citizens and elected officials, the nation's economic strengths and weaknesses, and partisan politics all influence the policy agenda (McQueen, 2017; Ruck, Peterson-Badali, & Freeman, 2017; Sommer & others, 2016).

When concern about broad social issues is widespread, comprehensive social policies often result. Child labor laws were established in the early twentieth century not only to protect children but also to provide jobs for adults; federal child-care funding during World War II was justified by the need for women laborers in factories; and Head Start and other War on Poverty programs in the 1960s were implemented to decrease intergenerational poverty.

Out of concern that policy makers are doing too little to protect the well-being of children, researchers increasingly are undertaking studies that they hope will lead to wise and effective decision making about social policy (Gonzales & others, 2016; Israelashvili & Romano, 2017; McQueen, 2017; Wadsworth & others, 2016). Children who grow up in poverty represent a special concern (Duncan, Magnuson, & Votruba-Drzal, 2017; Mendoza & others, 2017). In 2014, 21.1 percent of U.S. children under 18 years of age were living in families with incomes below the poverty line, with African American and Latino families with children having especially high rates of poverty (more than 30 percent) (DeNavas-Walt & Proctor, 2015). In 2014, 12.7 percent of non-Latino White children were living in poverty. The poverty rate for U.S. children did drop 1.5 percent in 2015 to 19.7 percent (Proctor, Semega, & Kollar, 2016). The 19.7 percent figure represents an increase from 2001 (14.5 percent) but reflects a slight drop from a peak of 23 percent in 1993.

gender The characteristics of people as females or males.

social policy A government's course of action designed to promote the welfare of its citizens.