

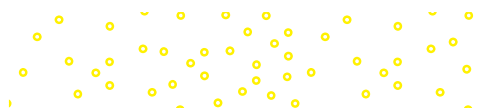


A TOPICAL APPROACH TO LIFE-SPAN DEVELOPMENT

Eleventh Edition

JOHN W. SANTROCK

University of Texas at Dallas





A TOPICAL APPROACH TO LIFE-SPAN DEVELOPMENT, ELEVENTH EDITION

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brief contents

SECTION 1	THE LIFE-SPAN PERSPECTIVE 1
	1 Introduction 2
	Appendix: Careers in Life-Span Development 43
SECTION 2	BIOLOGICAL PROCESSES, PHYSICAL DEVELOPMENT, AND HEALTH 47
	2 Biological Beginnings 48
	3 Physical Development and Biological Aging 90
	4 Health 128
	5 Motor, Sensory, and Perceptual Development 158
SECTION 3	COGNITIVE PROCESSES AND DEVELOPMENT 186
	6 Cognitive Developmental Approaches 187
	7 Information Processing 214
	8 Intelligence 253
	9 Language Development 281
SECTION 4	SOCIOEMOTIONAL PROCESSES AND DEVELOPMENT 307
	10 Emotional Development and Attachment 308
	11 The Self, Identity, and Personality 350
	12 Gender and Sexuality 385
	13 Moral Development, Values, and Religion 424
SECTION 5	SOCIAL CONTEXTS OF DEVELOPMENT 460
	14 Families, Relationships, and Parenting 461
	15 Peers and the Sociocultural World 503
	16 Schools, Achievement, and Work 541
SECTION 6	ENDINGS 576
	17 Death, Dying, and Grieving 577



McGraw Hill Education Psychology APA Documentation Style Guide

contents

Guide to Diversity, Equity, and Inclusion xi

About the Author xviii

Expert Consultants xix

Preface xxv

SECTION 1 THE LIFE-SPAN PERSPECTIVE 1



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CHAPTER 1 Introduction 2

The Life-Span Perspective 3

The Importance of Studying Life-Span
Development 3

Characteristics of the Life-Span Perspective 3

CONNECTING WITH CAREERS *Gustavo
Medrano, Clinical Psychologist* 7

Some Contemporary Concerns 7

**CONNECTING DEVELOPMENT TO
LIFE** *Improving Family Policy* 11

The Nature of Development 12

Biological, Cognitive, and Socioemotional
Processes 12

Periods of Development 13

CONNECTING WITH RESEARCH *Is There a
Best Time of Day to Conduct Research?* 15

The Significance of Age 17

Developmental Issues 19

Theories of Development 21

Psychoanalytic Theories 21

Cognitive Theories 23

Behavioral and Social Cognitive Theories 25

Ethological Theory 26

Ecological Theory 27

An Eclectic Theoretical Orientation 28

Research on Life-Span Development 29

Methods for Collecting Data 29

Research Designs 32

Time Span of Research 34

Conducting Ethical Research 36

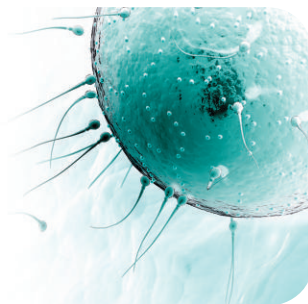
Minimizing Bias 36

CONNECTING WITH CAREERS *Pam Reid,
Educational and Development
Psychologist* 37

Reach Your Learning Goals 39

APPENDIX Careers in Life-Span Development 43

SECTION 2 BIOLOGICAL PROCESSES, PHYSICAL DEVELOPMENT, AND HEALTH 47



MedicalRF.com/Getty Images

CHAPTER 2 Biological Beginnings 48

The Evolutionary Perspective 49

Natural Selection and Adaptive Behavior 49

Evolutionary Psychology 49

Genetic Foundations of Development 52

The Collaborative Gene 52

Genes and Chromosomes 54

Genetic Principles 56

Chromosomal and Gene-Linked Abnormalities 57

CONNECTING WITH CAREERS *Jennifer
Leonhard, Genetic Counselor* 59

Heredity and Environment Interaction: The Nature-Nurture Debate 60

Behavior Genetics 60

CONNECTING DEVELOPMENT TO LIFE *Am I
an "I" or "We"?* 61

Heredity-Environment Correlations 61

The Epigenetic View and Gene \times Environment
(G \times E) Interaction 62

Conclusions about Heredity-Environment Interaction 63

Prenatal Development 64

The Course of Prenatal Development 64

Prenatal Diagnostic Tests 68

Hazards to Prenatal Development 69

Prenatal Care 76

Birth and the Postpartum Period 77

The Birth Process 77

The Transition from Fetus to Newborn 80

CONNECTING WITH CAREERS Linda Pugh, Perinatal Nurse 81

Low Birth Weight and Preterm Infants 81

Bonding 83

CONNECTING WITH RESEARCH How Are Preterm Infants Affected by Touch? 84

The Postpartum Period 84

Reach Your Learning Goals 87

CHAPTER 3

Physical Development and Biological Aging 90

Body Growth and Change 91

Patterns of Growth 91

Height and Weight in Infancy and Childhood 92

Puberty 93

Early Adulthood 97

Middle Adulthood 97

Late Adulthood 99

CONNECTING WITH CAREERS Sarah Kagan, Geriatric Nurse 100

The Brain 101

The Neuroconstructivist View 101

Brain Physiology 101

Infancy 103

Childhood 106

Adolescence 107

CONNECTING DEVELOPMENT TO LIFE Strategies for Helping Adolescents Reduce Their Risk-Taking Behavior 109

Adulthood and Aging 109

CONNECTING WITH RESEARCH The Nun Study 112

Sleep 113

Why Do We Sleep? 113

Infancy 113

Childhood 115

Adolescence and Emerging Adulthood 115

Adulthood and Aging 117

Longevity and Biological Aging 118

Life Expectancy and Life Span 118

Centenarians 120

Biological Theories of Aging 122

Reach Your Learning Goals 125

CHAPTER 4

Health 128

Health, Illness, and Disease 129

Children's Health 129

Adolescents' Health 130

CONNECTING WITH CAREERS Bonnie Halpern-Felsher, University Professor in Pediatrics and Director of Community Efforts to Improve Adolescents' Health 131

Emerging and Young Adults' Health 132

Health and Aging 132

CONNECTING WITH RESEARCH How Stressful is Caring for an Alzheimer Patient at Home? 137

Nutrition and Eating Behavior 139

Infancy 139

CONNECTING WITH CAREERS Dr. Faize Mustafa-Infante, Pediatrician 139

Childhood 141

CONNECTING DEVELOPMENT TO LIFE Helping Overweight Children Lose Weight 143

Adolescence 143

Adult Development and Aging 145

Exercise 148

Childhood and Adolescence 148

Adulthood 150

Aging and Longevity 150

Substance Use 152

Adolescence and Emerging Adulthood 152

Substance Use in Older Adults 155

Reach Your Learning Goals 156

CHAPTER 5

Motor, Sensory, and Perceptual Development 158

Motor Development 159

The Dynamic Systems View 159

Reflexes 160

Gross Motor Skills 161

CONNECTING DEVELOPMENT TO LIFE Parents, Coaches, and Children's Sports 166

Fine Motor Skills 167

Sensory and Perceptual Development 169

What Are Sensation and Perception? 169

The Ecological View 170

Visual Perception 170

CONNECTING WITH RESEARCH How Do Scientists Study the Newborn's Perception? 171

Hearing 177

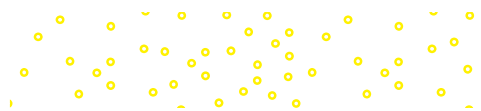
Other Senses 179

Intermodal Perception 181

Nature/Nurture and Perceptual Development 181

Perceptual-Motor Coupling 182

Reach Your Learning Goals 184



SECTION 3 COGNITIVE PROCESSES AND DEVELOPMENT 186



FG Trade/Getty Images

CHAPTER 6 Cognitive Developmental Approaches 187

Piaget's Theory of Cognitive Development 188

Processes of Development 188

Sensorimotor Stage 189

CONNECTING WITH RESEARCH *How Do Researchers Study Infants' Understanding of Object Permanence and Causality?* 192

Preoperational Stage 195

Concrete Operational Stage 198

Formal Operational Stage 198

CONNECTING DEVELOPMENT TO LIFE *Are Social Media an Amplification Tool for Adolescent Egocentrism?* 200

Applying and Evaluating Piaget's

Theory 201

Piaget and Education 201

Evaluating Piaget's Theory 202

Vygotsky's Theory of Cognitive

Development 204

The Zone of Proximal Development 204

Scaffolding 204

Language and Thought 205

Teaching Strategies 205

Evaluating Vygotsky's Theory 207

Cognitive Changes in Adulthood 208

Piaget's View 208

Realistic and Pragmatic Thinking 208

Reflective and Relativistic Thinking 209

Cognition and Emotion 209

Is There A Fifth, Postformal Stage? 209

Are There Cognitive Stages In Middle and Late Adulthood? 210

Reach Your Learning Goals 211

CHAPTER 7 Information Processing 214

The Information-Processing Approach 215

The Information-Processing Approach and Its

Application To Development 215

Speed of Processing Information 217

Attention 218

What Is Attention? 218

Infancy 219

Childhood and Adolescence 221

Adulthood 222

Memory 223

What Is Memory? 223

Infancy 224

Childhood 225

Adulthood 229

CONNECTING WITH RESEARCH *How Well Do Adults Remember What They Learned in High School and College Spanish?* 231

Thinking 232

What Is Thinking? 232

Infancy and Childhood 232

CONNECTING WITH CAREERS *Helen Hadani, Ph.D., Developmental Psychologist, Toy Designer, and Associate Director of Research for the Center for Childhood Creativity* 237

Adolescence 238

Adulthood 239

CONNECTING DEVELOPMENT TO LIFE *The Remarkable Helen Small* 243

Metacognition 245

What Is Metacognition? 245

Theory of Mind 245

Metacognition in Adolescence and Adulthood 248

Reach Your Learning Goals 249

CHAPTER 8 Intelligence 253

The Concept of Intelligence 254

What Is Intelligence? 254

Intelligence Tests 254

Theories of Multiple Intelligences 256

The Neuroscience of Intelligence 259

Controversies and Group Comparisons 260

The Influence of Heredity and Environment 260

CONNECTING WITH RESEARCH *Can Early Intervention in the Lives of Children Growing Up in Impoverished Circumstances Improve Their Intelligence?* 262

Group Comparisons and Issues 263

The Development of Intelligence 264

Tests of Infant Intelligence 264

CONNECTING WITH CAREERS *Toosje Thyssen Van Beveren, Infant Assessment Specialist* 265

Stability and Change in Intelligence Through

Adolescence 266

Intelligence in Adulthood 266

The Extremes of Intelligence and Creativity 271

Intellectual Disability 271

Giftedness 272

Creativity 274

CONNECTING DEVELOPMENT TO LIFE *Living a More Creative Life* 277

Reach Your Learning Goals 278

CHAPTER 9

Language Development 281

What Is Language? 282

Defining Language 282

Language's Rule Systems 282

How Language Develops 284

Infancy 284

CONNECTING WITH CAREERS Sharla Peltier, Speech Therapist 288

Early Childhood 288

CONNECTING WITH RESEARCH What Are the Effects of Communication Difficulties Between Hearing Parents and Deaf Children? 291

Middle and Late Childhood 293

CONNECTING WITH CAREERS Salvador Tamayo, Teacher of English Language Learners 297

Adolescence 297

Adulthood and Aging 298

Biological and Environmental Influences 299

Biological Influences 299

Environmental Influences 301

CONNECTING DEVELOPMENT TO LIFE How Parents Can Facilitate Infants' and Toddlers' Language Development 303

An Interactionist View of Language 304

Reach Your Learning Goals 304

SECTION 4

SOCIOEMOTIONAL PROCESSES AND DEVELOPMENT 307



Tim Macpherson/Cultura/Getty Images

CHAPTER 10

Emotional Development and Attachment 308

Exploring Emotion 309

What Are Emotions? 309

Emotion Regulation 310

Emotional Competence 311

Development of Emotion 312

Infancy 312

Early Childhood 315

Middle and Late Childhood 316

CONNECTING WITH CAREERS Melissa Jackson, Child Psychiatrist 319

Adolescence 319

Adult Development and Aging 320

Temperament 322

Describing and Classifying Temperament 322

Biological Foundations and Experience 323

Goodness of Fit and Parenting 326

CONNECTING DEVELOPMENT TO LIFE Parenting and the Child's Temperament 327

Attachment and Love 328

Infancy and Childhood 328

CONNECTING WITH CAREERS Wanda Mitchell, Child-Care Director 336

Adolescence 338

Adulthood 340

CONNECTING WITH RESEARCH How Can I Move On with Unrequited Love? 346

Reach Your Learning Goals 346

CHAPTER 11

The Self, Identity, and Personality 350

The Self 351

Self-Understanding and Understanding Others 351

Self-Esteem and Self-Concept 357

Self-Regulation 361

CONNECTING DEVELOPMENT TO LIFE Strategies for Effectively Engaging in Selective Optimization with Compensation 364

Identity 366

What Is Identity? 366

Erikson's View 366

Some Contemporary Thoughts on Identity 367

Developmental Changes 367

Identity and Social Contexts 369

CONNECTING WITH CAREERS Armando Ronquillo, High School Counselor 372

Personality 373

Trait Theories and the Big Five Factors of Personality 373

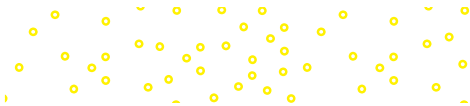
Views on Adult Personality Development 375

CONNECTING WITH RESEARCH Is an Individual's Personality Profile Linked to Their Diversity Orientation and Attitudes about Diversity? 376

Generativity 379

Stability and Change 379

Reach Your Learning Goals 382



CHAPTER 12

Gender and Sexuality 385

Biological, Social, and Cognitive Influences on Gender 386

- Biological Influences 386
- Social Influences 387
- Cognitive Influences 389

CONNECTING WITH RESEARCH *What Do Preschool Children Think about Gender and Occupations?* 390

Gender Stereotypes, Similarities, Differences, and Classification 391

- Gender Stereotyping 391
- Sex and Gender Similarities and Differences 391
- Gender-Role Classification 395
- Going Beyond Gender as Binary 396

CONNECTING WITH CAREERS *Stephanie Budge, Transgender Researcher and Psychotherapist* 397

Gender Development Through the Life Span 397

- Childhood 397
- Adolescence 398
- Adulthood and Aging 399

CONNECTING WITH CAREERS *Cynthia de las Fuentes, College Professor and Counseling Psychologist* 400

Exploring Sexuality 402

- Biological and Cultural Factors 402
- Sexual Orientation 403
- Sexually Transmitted Infections 405
- Forcible Sexual Behavior and Sexual Harassment 407

Sexuality Through the Life Span 409

- Childhood 409
- Adolescence and Emerging Adulthood 409

CONNECTING WITH CAREERS *Lynn Blankinship, Family and Consumer Science Educator* 415

CONNECTING DEVELOPMENT TO LIFE *Reducing Adolescent Pregnancy* 416

Adult Development and Aging 417

Reach Your Learning Goals 420

CHAPTER 13

Moral Development, Values, and Religion 424

Domains of Moral Development 425

- What Is Moral Development? 425
- Moral Thought 425
- Moral Behavior 429
- Moral Feeling 430
- Moral Personality 432
- Social Domain Theory 434

Contexts of Moral Development 435

- Parenting 436
- Schools 437
- Culture 439

Prosocial and Antisocial Behavior 440

- Prosocial Behavior 440

CONNECTING WITH RESEARCH *How Do Parent and Peer Relationships Influence Latinx Adolescents' Prosocial Behavior?* 441

- Antisocial Behavior 444

CONNECTING WITH CAREERS *Rodney Hammond, Health Psychologist* 446

Values, Religion, Spirituality, and Meaning in Life 448

- Values 448
- Religion and Spirituality 449

CONNECTING WITH CAREERS *Gabriel Dy-Liacco, Professor and Pastoral Counselor* 453

CONNECTING DEVELOPMENT TO LIFE *Religion and Coping* 454

- Meaning in Life 455

Reach Your Learning Goals 456

SECTION 5

SOCIAL CONTEXTS OF DEVELOPMENT 460



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CHAPTER 14

Families, Relationships, and Parenting 461

Family Processes 462

- Reciprocal Socialization 462
- Family as a System 463
- Sociocultural and Historical Influences 464

The Diversity of Adult Relationships and Families 465

- Single Adults 465
- Cohabiting Adults 466
- Married Adults 467
- Divorced Adults 472
- Remarried Adults 474
- LGBTQ Adults 475

Parenting 476

Parental Roles 476

CONNECTING WITH CAREERS *Janis Keyser, Parent Educator* 479

Parenting Styles and Discipline 479

CONNECTING WITH CAREERS *Darla Botkin, Marriage and Family Therapist* 483

Parent-Adolescent and Parent-Emerging Adult

Relationships 485

Working Parents 488

Children In Divorced Families 488

CONNECTING DEVELOPMENT TO LIFE *Communicating with Children About Divorce* 490

Stepfamilies 490

LGBTQ Families 491

Adoptive Parents and Adopted Children 492

CONNECTING WITH RESEARCH *What Role Might School Counselors Play in Transracial Adoption?* 493**Other Family Relationships 494**

Sibling Relationships and Birth Order 495

Grandparenting and Great-Grandparenting 496

Intergenerational Relationships 497

Reach Your Learning Goals 500**CHAPTER 15
Peers and the Sociocultural World 503****Peer Relations in Childhood and Adolescence 504**

Exploring Peer Relations 504

Peer Statuses 507

Bullying 508

CONNECTING WITH RESEARCH *What Are the Long-Term Effects of Bullying on Children with Autism?* 509

Gender and Peer Relations 510

Adolescent Peer Relations 510

Friendship 512

Functions of Friendship 512

Friendship During Childhood 512

Friendship During Adolescence
and Emerging Adulthood 513**CONNECTING DEVELOPMENT TO LIFE** *Effective and Ineffective Strategies for Making Friends* 513

Friendship During Adulthood 515

Play and Leisure 516

Childhood 516

Adolescence 519

Adulthood 520

Aging and the Social World 521

Social Theories of Aging 521

Stereotyping of Older Adults 521

Social Support and Social Integration 522

Successful Aging 522

Sociocultural Influences 524

Culture 524

Socioeconomic Status and Poverty 530

Ethnicity 533

CONNECTING WITH CAREERS *Norma Thomas, Social Work Professor and Administrator* 537*Reach Your Learning Goals* 538**CHAPTER 16
Schools, Achievement, and Work 541****Schools 542**

Contemporary Approaches

to Student Learning and Assessment 542

Schools and Developmental Status 544

CONNECTING WITH CAREERS *Yolanda Garcia, Director of Children's Services, Head Start* 546

Educating Children with Disabilities 550

CONNECTING WITH CAREERS *Carissa Barnes, Special Education Teacher* 554

Socioeconomic Status and Ethnicity in Schools 555

CONNECTING WITH CAREERS *Ahou Vaziri, Teach for America Instructor* 556

Schools and the Coronavirus Pandemic 557

Achievement 558

Extrinsic and Intrinsic Motivation 558

Mastery Motivation and Mindset 559

Self-Efficacy 561

Goal Setting, Planning, and Self-Monitoring 561

Grit 562

Ethnicity and Culture 562

CONNECTING WITH RESEARCH *Do Parental Expectations Influence Black Boys' Math Scores?* 564**Careers, Work, and Retirement 566**

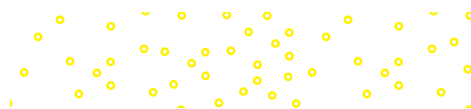
Career Development 566

CONNECTING WITH CAREERS *Grace Leaf, College/Career Counselor and College Administrator* 567

Work 567

CONNECTING DEVELOPMENT TO LIFE *Working During College* 569

Retirement 572

Reach Your Learning Goals 573

SECTION 6

ENDINGS

576



Russell Underwood/Corbis/Getty Images

CHAPTER 17

Death, Dying, and Grieving

577

The Death System and Cultural Contexts

578

The Death System and Its Cultural Variations

578

Changing Historical Circumstances

579

Defining Death and Life/Death Issues

580

Issues in Determining Death

580

Decisions Regarding Life, Death, and Health Care

580

CONNECTING WITH CAREERS

Kathy McLaughlin, Home Hospice Nurse

583

A Developmental Perspective on Death

583

Causes of Death

584

Suicide

584

Facing One's Own Death

586

Kübler-Ross' Stages of Dying

586

Perceived Control and Denial

588

The Contexts in Which People Die

588

Coping with the Death of Someone Else

589

Communicating with a Dying Person

589

CONNECTING DEVELOPMENT TO LIFE

Communicating with a Dying Person

589

Grieving

590

Making Sense of the World

592

Losing a Life Partner

592

CONNECTING WITH RESEARCH

Is Adjustment Different for Young and Middle-Aged Adults Who Lose a Life Partner?

593

Forms of Mourning

594

Reach Your Learning Goals

596

connect

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APA Documentation Style Guide

Glossary

G-1

References

R-1

Name Index

NI-1

Subject Index

SI-0

guide to diversity, equity, and inclusion

Special attention is given to diversity, equity, and inclusion (DEI) in this new edition, including updating preferred pronouns and terminology. Additionally, sources were cited from researchers publishing in such journals as *Current Psychology: A Journal for Diverse Perspectives on Psychological Issues*, ensuring the citations of studies and researchers represent diverse and global populations and topics. Following is a chapter-by-chapter list of the related topics along with new content and revisions involving DEI issues and research.

Chapter 1: Introduction

- Coverage of very recent projections for a decline of approximately one year in U.S. life expectancy in 2020, with a three- to four-year drop for African Americans and Latinxs because of the staggering number of deaths due to the COVID-19 pandemic (Andrasfay & Goldman, 2021)
- Updated rates of poverty that dropped considerably from 2018 to 2019 for African American, Latinx, and Asian American children and adolescents, including a much larger drop than for non-Latinx White children and adolescents (Semega & others, 2020)
- Inclusion of a recent research review of 3- to 19-year-old U.S. children and adolescents concluding that those living in low socioeconomic status (SES) settings were more likely to have higher levels of psychopathology (Peverill & others, 2021)
- Description of a recent focus of the Ascend two-generation program on the importance of parents' education, economic stability, and overall health for their children's well-being (Ascend, 2021; Aspen Institute, 2019)
- Main section, "Sociocultural Contexts and Diversity" (Kulich & others, 2021)
- Section on culture and cross-cultural studies (Bhawuk & Landis, 2021)
- Section on ethnicity (Gollnick & Chinn, 2021)
- *Connecting with Careers* profile of Gustavo Medrano, a clinical psychologist who specializes in bicultural and bilingual therapy for children, adolescents, and adults
- Content on discrimination and prejudice experienced by ethnic minority individuals (Clauss-Ehlers, Roysircar, & Hunter, 2021) including commentary about the killing of George Floyd and others by police
- Description of Adriana Umaña-Taylor and her colleagues' (Sladek, Umaña-Taylor, & others, 2020; Umaña-Taylor & Hill, 2020) research that indicates pride in one's ethnic identity group and exploration of ethnic identity development have positive outcomes
- Description of socioeconomic status and associated inequalities (Mayo & Wadsworth, 2020)

- Coverage of gender classification and transgender (Spizzirri & others, 2021)
- Discussion of social policy, including American activist Marian Wright Edelman's efforts to improve children's rights and quality of life
- Inclusion of content on the child poverty rate being higher in the United States than in other countries
- *Connecting Development to Life* interlude that includes recommendations for improving family policy in the United States (Crosby, 2021)
- Main section on reducing gender bias and cultural and ethnic bias in research on life-span development
- *Connecting with Careers* profile of Pam Reid, who has had a special interest in improving the lives of African American girls

Chapter 2: Biological Beginnings

- Inclusion of a recent study that found while XYY boys did not have more cognitive deficits than normal XY boys, they did have more externalizing and internalizing problems (Operto & others, 2019)
- New content on the number of children born worldwide with sickle-cell anemia and how stem cell transplantation is being explored in the treatment of infants with sickle-cell anemia (Cisneros & Thein, 2020)
- Coverage of a recent study in which African American and Latinx women reported almost twice as many barriers to prenatal care as non-Latinx White women (Fryer & others, 2021)
- New content on ethnic disparities in prenatal care and pregnancy with African American and Native American/Alaska Native women especially experiencing inadequate care (Petersen & others, 2019)
- Updated data on the percentage of U.S. infants who are born preterm, including ethnic variations (Martin & others, 2019)
- Updated data on the percentage of U.S. babies born with low birth weight, including ethnic variations (Martin & others, 2019)
- Cross-cultural content on the people (midwives, for example) who aid mothers in the birth of their babies

Chapter 3: Physical Development and Biological Aging

- Discussion of a recent research review of 30 studies in different countries around the world that revealed the age at which breast development began in girls (called thelarche) declined by almost 3 months per decade from 1977 to 2013 (Eckert-Lind & others, 2020)

- Coverage of a recent study that revealed menarche has been occurring at younger ages in recent years in Portugal (Queiroga & others, 2020)
- Description of a recent study of Chinese adolescents that revealed girls were more dissatisfied with their appearance than boys were, but boys were more dissatisfied with their sexual organs (Zhang & others, 2020)
- Inclusion of recent research in which higher social media use was linked to more negative body images for adolescents, more so for girls than for boys (Kelly & others, 2019)
- Updated data on gender and ethnic differences in life expectancy in the United States (Murphy & others, 2018; Xu & others, 2020)
- New discussion of the “Latinx Health Paradox,” which refers to Latinxs living 3.2 years longer than non-Latinx Whites despite having lower income and less education, as well as exploration of possible reasons for this difference (Brill, 2019; Tabler & others, 2020)
- Coverage of a recent study that supported the “Latinx Health Paradox,” in which older Latinx adults reported having better health than their non-Latinx White counterparts did (Olsen, Basu Roy, & Tseng, 2019)
- Description of cross-cultural variations in the experience of menopause
- Inclusion of content on poverty’s role in diminishing the brain functioning of children and adolescents
- Discussion of data comparing life expectancy in the United States to life expectancy in other countries (Geoba, 2019)

Chapter 4: Health

- New content indicating that children living in poverty have higher rates of accidents, asthma, and death than children from higher-income families (Kelleher, Reece, & Sandel, 2018)
- New coverage of ethnic disparities in health coverage and chronic health conditions in U.S. children (Carratala & Maxwell, 2020)
- New *Connecting with Careers* profile of Dr. Bonnie Halpern-Felsher, University Professor of Pediatrics and Director of Community Efforts to Improve Adolescents’ Health. Dr. Halpern-Felsher coordinates the STEP-UP program (Short-Term Research Experience for Underrepresented Persons), in which she has personally mentored and supervised 22 to 25 middle and high school students every year since 2007.
- New content on ethnic disparities in U.S. adults 20 years of age and older (Health United States, 2019)
- Inclusion of new data on ethnic variations in rates of Alzheimer disease (Alzheimer’s Association, 2020)
- Coverage of a recent study that revealed 3- to 4-year-old African American children and children who lived at or below the poverty level were more likely than other young children to engage in more than 1 hour of screen time daily (Kracht, Webster, & Staiano, 2020)
- Discussion of recent research indicating that infants in a WIC program had higher cognitive scores on the Bayley Scales of Infant Development (Lakshmanan & others, 2020)

- New description of the special concern created by COVID-19 for young children in low-income families who attend early child-care and education programs because many states closed these programs (which provide free meals and snacks) during the pandemic (Bauer & others, 2021)
- Updated data on obesity rates for different genders and ethnicities in the United States (Hales, 2020)
- Updated data on gender and ethnic variations in exercise during adolescence (Underwood & others, 2020)
- Coverage of poverty’s role in diminishing access to health care for children
- *Connecting with Careers* profile of Dr. Mustafa-Infante, who works at Mission Pediatrics in Riverside, California, and serves as a volunteer for Ayacucho Mission, a nonprofit organization that provides culturally sensitive medical care for people living in poverty in Ayacucho, Peru. In regard to her cultural background, Dr. Mustafa-Infante describes herself as a Latina doctor who has a Middle-Eastern name, reflecting her strong family commitments to both heritages.
- Discussion of cross-cultural comparisons of adolescents’ consumption of fast food
- Description of ethnic variations in overweight and obesity in the United States as well as cross-cultural comparisons

Chapter 5: Motor, Sensory, and Perceptual Development

- Recent research involving urban, predominately Latinx 6- to 11-year-olds that found low sports participation was linked to higher withdrawn and depressive symptoms (Matta & others, 2021)

Chapter 7: Information Processing

- Description of recent research with 8- to 18-month-old infants that revealed those from higher-SES families responded to more sophisticated cues for joint attention than infants from lower-SES families (Reilly & others, 2021)
- Inclusion of a recent study that revealed Latinx older adults who were more acculturated in the United States had better working memory than their less acculturated counterparts (Mendoza & others, 2021)
- Discussion of a recent study of older Mexican adults that revealed in addition to one’s own education, a spouse’s education also was associated with better cognitive ability (Saenz & others, 2020)
- Inclusion of a recent study of Puerto Rican older adults that found a higher level of cognitive complexity in work was associated with a lower risk of cognitive impairment (Anel & others, 2019)
- Description of a recent study of older Latinxs in which cardiovascular risk factors were linked to lower cognitive functioning (Tarraf & others, 2020)

Chapter 8: Intelligence

- Discussion of a recent study of 22 countries (including Argentina, China, France, India, Peru, Turkey, and the United States) that found variations in intelligence across countries

- were linked to income, educational attainment, health, and socioeconomic status (Lynn, Fuerst, & Kirkegaard, 2018)
- Coverage of cross-cultural variations in the Flynn Effect
- Content describing the increasing research interest in programs that seek to improve the experiences of children with low IQs, especially those in low-income circumstances (Schianti, Simeonsson, & Hall, 2021)
- *Connecting with Research* interlude exploring whether early intervention with children who are growing up in impoverished circumstances might improve their intelligence.
- Section on cross-cultural comparisons in intelligence
- Content on cultural bias in intelligence testing
- Discussion of research on stereotype threat, including recent content on studies that support the concept of stereotype threat (Crosby, 2021)
- Inclusion of content on culture-fair tests
- Description of ethnic variations in intelligence
- Coverage of Donna Ford's (2015a, b) view that African American, Latinx, and Native American children are underrepresented in gifted programs. Much of the underrepresentation involves the lower test scores for these children compared with non-Latinx White and Asian American children, which may be due to factors such as test bias and fewer opportunities to develop language skills such as vocabulary and comprehension.

Chapter 9: Language Development

- New discussion of English-speaking preschool children that revealed those from lower-income families had less advanced language-processing skills, as well as a smaller vocabulary and syntax deficiencies (Levine & others, 2020)
- Inclusion of recent research with low-income families in which 15-month-old infants whose mothers had a college education had much better language skills than their low-income counterparts whose mothers did not have a college education, and these differences were still present at 3 years of age (Justice & others, 2020)
- Coverage of a recent meta-analysis in which sensitive responsiveness by parents in low-SES families was more strongly linked to improvement in young children's language development than was the case in middle- and high-SES families (Madigan & others, 2019)
- Description of a recent study that found children living in extreme poverty had much lower vocabulary and reading comprehension (Lervag & others, 2019)
- New *Connecting with Research* interlude on the effects of communication difficulties between hearing parents and deaf children
- Cross-cultural research indicating that English is a noun-friendly language, while Korean and other Asian languages are verb-friendly languages
- *Connecting with Careers* profile of Sharla Peltier, a speech therapist in Manitoulin, Ontario, Canada, who works with Native American children in First Nations schools
- Discussion of research indicating that the extent to which phonological awareness is linked to reading skills varies across different languages
- Inclusion of recent research that found stronger Spanish language skills at 2 years of age were linked to better English language skills as well as maintenance of good language skills at 4.5 years of age (Marchman & others, 2020). These findings indicate that families who primarily speak Spanish should engage in activities that develop children's competence in Spanish while also encouraging opportunities to learn English.
- Coverage of the best way to teach English language learners (ELLs), many of whom in the United States are from immigrant families living in poverty
- *Connecting with Careers* profile of Salvador Tamayo, an ELL fifth-grade teacher at Turner Elementary School in West Chicago. He received a National Educator Award from the Milken Family Foundation for his work in educating ELLs, and he and his students have created several award-winning websites about the West Chicago City Museum, the local Latinx community, and the history of West Chicago.

Chapter 10: Emotional Development and Attachment

- Discussion of a recent study of low-income families in which having a difficult temperament at 0 to 12 months of age predicted behavior problems at 36 months (Maltby & others, 2019)
- Coverage of a recent study in which Latinx infants were at increased risk for obesity if their mothers had an anxious or avoidant insecure attachment style rather than a secure attachment style (Hepworth & others, 2021)
- Description of a recent cross-cultural study of more than 7,000 individuals in 25 countries that found support for the universality of Sternberg's triarchic theory of love (Sorokowski & others, 2021)
- Inclusion of cultural variations in emotional development (Suarez-Alvarez & others, 2020)
- Section on gender, culture, and temperament
- Discussion of Chinese children being more inhibited than U.S. and Canadian children
- Content on cross-cultural studies of attachment
- Description of the Aka pygmy culture in which fathers spend as much time as mothers in caring for infants
- Inclusion of content on cross-cultural comparisons of child care in which many European countries, especially those in Scandinavia, have led the way in providing government-funded child care
- *Connecting with Careers* profile of Wanda Mitchell, Center Director of the Hattie Daniels Day Care Center in Wilson, North Carolina
- Coverage of cross-cultural variations in dating, such as greater parental restrictions on dating for African American and Latinx adolescents than for non-Latinx White adolescents
- Discussion of cross-cultural variations in adult romantic relationships

Chapter 11: The Self, Identity, and Personality

- Description of a recent study in three countries—Brazil, Portugal, and Spain—that found parental warmth was a key factor in adolescent self-esteem in all three countries (Isabel Martinez & others, 2020)
- Inclusion of a longitudinal study with Mexican-origin adolescents that found a reciprocal relation between self-esteem and academic achievement (Zheng & others, 2020)
- Section on cross-cultural variations in identity development including the greater collectivist emphasis in Asian countries on fitting in with the group and connecting with others (Schwartz & others, 2020)
- Greatly expanded and updated content on ethnic and racial identity based on feedback from leading expert Kevin Cokley
- Content on bicultural identity, especially in different generations of U.S. immigrants
- New coverage of racial identity
- Inclusion of recent research on 13- to 17-year-old African American girls' racial socialization in which pride was linked to positive feelings about being Black, while oppressive messages about Black women were associated with depressive feelings (Stokes & others, 2020)
- Description of a recent study of 11- to 12-year-olds that found more frequent discrimination from peers was linked to lower ethnic-racial commitment (Del Toro, Hughes, & Way, 2021)
- Coverage of a recent study of adolescents that revealed on days when adolescents reported more negative peer ethnic/racial interaction, they had lower school engagement (Wang, 2021). Also in this study, on days when they reported more positive peer ethnic/racial interaction, they engaged in more prosocial behavior.
- Inclusion of a recent research review of Latinxs that concluded perceived discrimination was linked to poorer mental health but having a greater sense of ethnic pride attenuated this link (Andrade, Ford, & Alvarez, 2021)
- New discussion of the singular concept of ethnic-racial identity (ERI) (Atkin & others, 2021)
- Description of a recent study of Cherokee young adolescents' ERI that revealed both girls and boys reported strong positive attitudes about being a Cherokee (Hoffman, Kurtz-Coates, & Shaheed, 2021). However, youths' perceptions that others hold Cherokees in high regard decreased across the years.
- Coverage of a recent study that found Latinx youth had greater resilience in response to discrimination when they had more experiences with ethnic family socialization and had engaged in ethnic identity exploration and resolution (Martinez-Fuentes, Jager, & Umaña-Taylor, 2021)
- Discussion of a recent study of Latinx young adolescents that found higher resilience and school attachment predicted higher optimism (Taylor & others, 2020)
- Description of a recent study that revealed regardless of growing up in disadvantaged circumstances as a child, being optimistic as an adult was linked to being a non-smoker, having a healthy diet, and having a healthy body mass index (Non & others, 2020)

- New *Connecting with Research* interlude exploring whether an individual's personality profile is linked to their diversity orientation and attitudes about diversity

Chapter 12: Gender and Sexuality

- Extensive editing, revision, and updating based on leading expert Sabra Katz-Wise's feedback and comments, with special attention to contemporary use of various gender-related terms
- New *Connecting with Research* interlude focusing on what preschool children think about gender and careers
- Coverage of a recent study of 3- to 7-year-olds that found boys were more likely to engage in gender stereotyping than girls, especially with masculine stimuli such as toys, and to be sanctioned for not conforming to gender stereotypes (Skocajic & others, 2020)
- New commentary pointing out that categories such as gender and ethnicity intersect and create systems of power and privilege as well as oppression and discrimination
- Extensively edited, expanded, and updated coverage of transgender individuals
- New discussion of the term *two-spirit* that is used by some indigenous North Americans to refer to individuals who are perceived as having both male and female spirits within them
- New content indicating that 40 percent or more of transgender individuals have attempted suicide at least once in their lifetime (Dickey & Budge, 2020)
- Coverage of a recent study of transgender individuals in which gender affirmation was associated with a lower rate of suicidal ideation and psychological distress, while gender discrimination was linked to a higher rate of suicidal ideation and psychological distress (Lelutiu-Weinberger, English, & Sandanpitchai, 2020)
- Description of recent research that confirmed victimization and discrimination predicated increased suicidal ideation in transgender individuals, while community connectedness reduced suicidal ideation (Rabasco & Andover, 2021)
- Inclusion of a recent study that found a majority of transgender persons had experienced discrimination in the previous year and that those who encountered greater discrimination were more likely to develop depression and anxiety symptoms (Puckett & others, 2020)
- New commentary noting that because trans individuals experience considerable discrimination, it is important that society provide a more welcoming and accepting attitude toward them (Vargas, Huey, & Miranda, 2020)
- Coverage of a recent study that found psychotherapy targeting internalized stigma and non-affirmation experiences can be effective in reducing gender-related stress and increasing resilience (Budge, Sinnard, & Hoyt, 2020)
- New *Connecting with Careers* feature on Dr. Stephanie Budge, psychotherapist and researcher focusing on transgender issues
- Updated data on the number of people in the U.S. living with an HIV infection (1.2 million), with 1 in 7 of these individuals unaware that they have the infection (HIV.gov, 2020)
- Updated statistics indicating that in 2018, approximately 36,400 new HIV infections were diagnosed, with 69 percent

of those diagnoses occurring in men who were having sex with other men (HIV.gov)

- New content on the increasing interest in PrEP (pre-exposure prophylaxis) awareness, which involves taking a daily pill that can reduce the probability of getting HIV by as much as 90 percent (Restar & others, 2020)
- Coverage of a recent study that indicated women who had experienced sexual assault were more likely to subsequently have more academic problems and engage in fewer serious romantic relationships while in college and nine years later had more symptoms of depression, anxiety, and post-traumatic stress disorder (Rothman & others, 2020)
- Inclusion of recent research on acquaintance rape of college women that revealed 84 percent of the women knew their perpetrator and 65.5 percent encountered the perpetrator after the attack (Bell, Wolff, & Skolnick, 2021). Women who encountered their perpetrator after the attack reported more lifestyle changes and more severe symptoms of post-traumatic stress disorder.
- New content on the recent movement on many college campuses toward obtaining *affirmative consent* before engaging in sexual activity (Goodcase, Spencer, & Toews, 2020)
- Discussion of a recent study of young adults in which women (37.4 percent) were more likely to report having experienced sexual assault than men (22.4 percent) (Mumford & others, 2020)
- Updated national data (2019) from the Youth Risk Behavior Surveillance study on the timing of sexual intercourse in U.S. adolescents, including ethnic variations and the percentage of adolescents who have had sexual intercourse prior to 13 years of age (Underwood & others, 2020)
- Updated data on ethnic variations in the incidence of adolescent pregnancy, with significant declines among Latinx, African American, non-Latinx White, and Asian American adolescents (National Center for Health Statistics, 2019)
- Coverage of recent research on the percentage of adolescents who use condoms when they have sex, including ethnic variations (Szucs & others, 2020)
- Description of a study conducted from 2010 to 2017 that found increased use of long-acting reversible contraception (LARC), particularly by urban, educated, and higher-income women (Beshar & others, 2021)
- Update on AIDS incidence worldwide, with 88 percent of all children and adolescents with AIDS living in sub-Saharan Africa (UNAIDS, 2020)
- Updated data on ethnic variations in adolescent pregnancy, including declining rates of pregnancy in ethnic minority adolescents (Martin & others, 2021)

Chapter 13: Moral Development, Values, and Religion

- Inclusion of recommendations by leading expert Gustavo Carlo, whose many research studies focus on international groups and U.S. ethnic/racial groups, especially Latinx youth and families
- New *Connecting with Research* interlude on how parent and peer relationships influence Latinx adolescents' prosocial behavior

- New main section, "Culture"
- Description of differences in behavior between WEIRD (Western, Educated, Industrialized, Rich, and Democratic) cultures that emphasize individual rights and independent behavior and non-WEIRD cultures that are characterized by duty-based communal obligations and collective, interdependent behavior
- New coverage of the importance of familism in the moral development of children in Mexican and Latinx families (Carlo & Pierotti, 2020)
- Discussion of differences in morality within a culture, such as differences between people living in lower- and higher-SES contexts
- Inclusion of a recent study in 12 countries that found sharing increased from 4 to 12 years of age in each of the countries (Samek & others, 2020)
- Description of a recent study of lesbian and gay older adults that revealed those who engaged in volunteer work had better physical health, more positive mental health, and less psychological distress (Lyons & others, 2021)
- New content on a recent study that found neighborhood poverty was linked to delinquency in adolescence, especially through maternal stress and adverse childhood experiences (Wang, Choi, & Shin, 2020)

Chapter 14: Families, Relationships, and Parenting

- Main section, "Sociocultural and Historic Influences"
- New data indicating that African American adults (47 percent) are much more likely to be single than non-Latinx White adults (28 percent) and Latinx adults (27 percent) (Brown, 2020)
- New content indicating that at lower SES levels, couples are more likely to cohabit and give birth prior to marriage and less likely to marry at all (Karney, 2021)
- New content noting that cohabitation is increasing in China and Taiwan but still rare in Japan and South Korea
- Coverage of a recent study that found men had a higher level of marital satisfaction than women across a number of countries (Sorokowski, Kowal, & Sorokowska, 2019). In this study, marital satisfaction was similar among Muslims, Christians, and atheists.
- New comparison of age at first marriage in a number of developed countries, with individuals in Sweden getting married latest and those in Israel and Turkey earliest
- New content and data on the percentage of individuals from different ethnic groups who are married (U.S. Census Bureau, 2019)
- New content and data on the percentages of newlyweds and all married people who are married to someone from a different ethnic group, percentages that have dramatically increased in recent years (Livingston & Brown, 2017)
- Coverage of recent research on Mexican married older adults in which spousal support was associated with less loneliness while spousal strain was linked to more loneliness three years later (Saenz, 2021)

- New content on ethnic variations in divorce rates, including the fact that among Latinxs, 30 percent of women and 27 percent of men become divorced in their lifetime
- Section on contextual aspects of parenting styles, including an explanation of Ruth Chao's term "training parents" in reference to the parenting style found in many Asian American families
- Discussion of cross-cultural variations in the use of corporal punishment
- New data on the increasing number of countries that are banning the use of corporal punishment (Global Initiative to End All Corporal Punishment of Children, 2020)
- Description of gender and ethnic variations in parental granting of autonomy to adolescents (Tran & Rafaelli, 2020)
- Discussion of the influence of socioeconomic status in the lives of children in divorced families
- Inclusion of recent research indicating that lesbian mothers, heterosexual mothers, and gay fathers reported higher parenting competence than heterosexual fathers (Farr & Vazquez, 2020a)
- Coverage of a U.K. longitudinal study of gay father, lesbian mother, and heterosexual parent families when their children reached early adolescence that found few differences among the three family styles and concluded that better parenting quality and parental mental health were linked to fewer adolescent problems (McConnachie & others, 2021)
- Section on the changing landscape of adoptive parents and adopted children in terms of diversity in a number of areas
- New *Connecting with Research* interlude on potential roles of school counselors in working with transracially adopted children and adolescents

Chapter 15: Peers and the Sociocultural World

- Coverage of a recent study in the United States and China that found parents' increased restriction of peer interaction predicted a decrease in children's adjustment over time (Xiong & others, 2020)
- Description of a recent study of more than 15,000 U.S. high school students that found African American and Latinx adolescents were less likely to have experienced school bullying and cyberbullying than non-Latinx White adolescents (Webb & others, 2021)
- Main section on the relevance of culture for the study of life-span development
- Section on individualist and collectivist cultures, including a number of relevant research studies
- Expanded coverage of what the term *culture* means, including content on how everyone has a culture (with multiple examples provided)
- Description of the World Health Organization's (WHO) recommendation that 3- to 4-year-old children should engage in no more than 1 hour of screen time daily (Willumsen & Bull, 2020)
- Inclusion of recent research on 13- to 18-year-olds in the United States and the United Kingdom that revealed significant

gender differences in the types of digital media they used (Twenge & Martin, 2020)

- Discussion of a recent large-scale study of more than 32,000 15-year-olds in 37 countries that found problematic social media use and low social support were the best predictors of low levels of satisfaction with life (Walsh & others, 2020)
- Section on aging and culture that includes comparisons of different cultures' views of aging
- Main section on socioeconomic variations in families and neighborhoods
- Main section on consequences of socioeconomic status for children and adolescents
- Coverage of a recent study in which lower SES was linked to less cortical surface area in the brains of adolescents as well as less effective working memory (Judd & others, 2020). The SES factor most responsible for the lower level of brain functioning was less parental education.
- Inclusion of a recent Chinese study that found low family SES was linked to children's low academic achievement, with a key factor being low parental involvement in children's schooling (Zhang & others, 2020)
- Main section on poverty
- Updated data on the percentage of U.S. adults below the poverty line with varying degrees of education (Duffin, 2019)
- Updated data on the percentage of single-mother families living in poverty (34 percent), which was nearly 5 times that of their married counterparts (6 percent) (U.S. Census Bureau, 2019)
- Coverage of intervention studies that seek to improve the lives of children and adolescents living in poverty conditions
- Section on SES, poverty, and aging
- Inclusion of a recent study of older adults in which poverty was a risk factor for earlier death (Guimaraes & Andrade, 2020)
- Main section on ethnicity
- New opening commentary in the section on ethnicity focusing on the importance of not using a deficit model in studying ethnic minority adolescents and of recognizing not just stressors but also the positive aspects of their lives (Weissmark & others, 2020)
- Updated data on the percentage of children and adolescents (18 and younger) from different ethnic groups in the United States (U.S. Census Bureau, 2018)
- New discussion of Yoonsun Choi and her colleagues' (Choi & Hahn, 2017; Choi & others, 2020a, b, c) research on generational differences in Filipino Americans and Korean Americans, as well as younger Asians' belief that older Asians place too much emphasis on education
- Coverage of a recent study in which immigrant children who were separated from their parents had lower literacy skills and more psychological problems than those who had migrated with their parents (Lu, He, & Brooks-Gunn, 2020). Also in this study, a protracted period of separation and prior undocumented status of parents further increased the children's disadvantages.
- New content on multi-ethnic/racial individuals and the discrimination they often encounter (Tan & others, 2019; Woo & others, 2020)

- New description of the positive outcomes when adolescents have a positive ethnic identity (Umaña-Taylor & others, 2020)
- Inclusion of content on how Latinx families are embracing the importance of education in their children's and adolescents' development
- New discussion of a recent study in which Latinx adolescents showed enhanced resilience against discrimination encounters when they had more family ethnic socialization experiences and engaged in greater identity exploration and resolution (Martinez-Fuentes, Jager, & Umaña-Taylor, 2021)
- Coverage of how poverty affects the development of ethnic minority children and adolescents
- New main section, "Racism and Discrimination"
- New coverage of Black Lives Matter and the killing of George Floyd in Minneapolis as well as discussion of past and current examples of racism and discrimination in the United States
- New discussion of how to talk with children about racism based on the Intentional Parenting for Equity and Justice program proposed by Diane Hughes and her colleagues (Hughes, Fisher, and Cabrera, 2020)
- Inclusion of new content based on BIPOC (Black, Indigenous, and other People of Color) parents' emphasis on how their children and youth can stay safe during interactions with the police
- Recommendation of a recent book that helps BIPOC parents talk with their children and youth about race: *The ABCs of Survival* (National Black Child Family Institute, 2021)
- New quotation from Mahatma Gandhi: "Our ability to reach unity in diversity will be the beauty and the test of our civilization"
- New content on the dramatic increase in ethnic diversity that is predicted to occur among older adults (U.S. Census Bureau, 2019)
- Section on ethnicity and aging
- *Connecting with Careers* feature on Norma Thomas, social work administrator and educator
- New data indicating that poverty rates for African American older adults have declined since 1975 but are still far too high (Congressional Research Service, 2019)

Chapter 16: Schools, Achievement, and Work

- New coverage of an experimental study with young children in a high-poverty area that found those who attended Montessori programs over a three-year period fared better in academic achievement, social understanding, and mastery orientation than those who attended other early childhood programs (Lillard & others, 2017)
- Description of a recent study in which a social-emotional learning program and a coordinated interactive reading program were used to enrich Head Start curricula, an intervention that resulted in the children having significantly fewer conduct problems and negative emotional symptoms, as well as better peer relations in adolescence (Bierman & others, 2021)
- Coverage of a recent study of 3- to 4-, 5- to 6-, and 8- to 9-year-olds that found children in foster care who participated in Head Start programs had better cognitive, socioemotional, and health outcomes than their foster care counterparts who did not attend Head Start programs (Lee, 2020)
- Updated data on school dropout rates, which continue to drop considerably (National Center for Education Statistics, 2020)
- Description of recent research that found African American children and adolescents are being classified with ADHD more than non-Latinx Whites and Latinxs (Zablotski & Alford, 2020)
- Inclusion of recent research indicating that African American children and adolescents with ADHD are often underdiagnosed while those engaging in disruptive behavior are often over-diagnosed (Fadus & others, 2020)
- Coverage of recent research indicating that low socioeconomic status is linked to ADHD and inferior brain functioning (Machlin, McLaughlin, & Sheridan, 2020)
- New content on the dramatic increase in the percentage of children who are autistic (Centers for Disease Control and Prevention, 2020) and the percentage of autistic children who are receiving special education services (National Center for Education Statistics, 2020)
- Inclusion of the 2019 Trends in International Mathematics and Science Study (TIMSS) of math and science achievement in a number of countries, with East Asian countries taking 19 of the top five spots in fourth- and eighth-grade science and fourth- and eighth-grade math. Singapore was number one in three of the four comparisons.
- Update on the percentage of full-time and part-time students who are working while going to college (National Center for Education Statistics, 2018)
- Discussion of a recent analysis indicating that healthy, well-educated, high-income older adults can continue working longer than lower-income older adults who work in physically demanding jobs (United Income, 2019)
- New *Connecting with Research* interlude on the relationship between parental expectations and Black boys' math scores

Chapter 17: Death, Dying, and Grieving

- Cross-cultural comparisons of death in multiple places in the chapter
- Description of the countries in the world where assisted suicide is legal
- Updated data on the percentage of U.S. adolescents who seriously consider suicide each year and attempt suicide each year, including gender and ethnicity figures (Underwood & others, 2020)
- Cross-cultural comparisons of adolescent suicide
- Updated data on gender and ethnic differences in adult suicides, with males and Native Americans/Alaska Natives having the highest suicide rates (National Center for Health Statistics, 2020)
- Ethnic comparisons of suicide in adulthood
- Discussion of a recent study of 38 countries in which early sexual intercourse (at 12 to 15 years of age) in 32 of the countries was linked to increased suicide attempts, and having sexual intercourse with multiple partners increased the risk further (Smith & others, 2020)
- Inclusion of a recent research review of widowed Latinxs that found risk factors for diminished well-being were being a man, undergoing financial strain, experiencing cultural stressors, having an undocumented legal status, losing one's partner at a younger age, and having poor physical health (Garcini & others, 2021)

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 in the School of Behavioral and Brain Sciences 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.

In 2010, he created the UT-Dallas Santrock undergraduate travel scholarship, an annual award that is given to outstanding undergraduate students majoring in developmental psychology to enable them to attend research conventions. In 2019, he created an endowment that will provide the travel awards for students at UT-Dallas for decades to come. Additionally, Dr. Santrock and his wife, Mary Jo, created a permanent endowment that will provide academic scholarships for six to ten undergraduate psychology students per year, with preference given to those majoring in developmental psychology.

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. He also has conducted research on children's self-control. John has authored these exceptional McGraw Hill texts: *Psychology* (7th edition), *Children* (15th edition), *Child Development* (15th edition), *Adolescence* (18th edition), *Life-Span Development* (18th edition), and *Educational Psychology* (7th edition).

For many years, John was involved in tennis as a player, teaching professional, and a 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



John Santrock (back row middle) with 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. A number of the students shown here attended the meeting of the Society for Research in Child Development.

Courtesy of Jessica Serna

consecutive wins (137) in any NCAA Division I sport. John has been married for four decades to his wife, Mary Jo, who created and directed the first middle school program for children with learning disabilities and behavioral disorders in the Clarke County Schools in Athens, Georgia, when John was a professor at the University of Georgia. More recently, Mary Jo has worked as a Realtor. John and Mary Jo have two daughters—Tracy and Jennifer—both of whom are Realtors after long careers in technology marketing and medical sales, respectively. In 2016, Jennifer became only the fifth female to have been inducted into the SMU Sports Hall of Fame. John and Mary Jo have one granddaughter, Jordan, age 28, 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 16, and Luke, age 15. In the last decade, John also has spent time painting expressionist art.

**With special appreciation to my mother,
Ruth Santrock, and my father, John Santrock.**

expert consultants

Life-span 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 in this field. To solve this problem, author John Santrock has sought the input of leading experts about content in a number of areas of life-span 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:

Karen Adolph
David Almeida
Karlene Ball
John Bates
Martha Ann Bell
Jay Belsky
James Birren
Dante Cicchetti
Pamela Cole
Kirby Deater-Deckard
Susanne Denham
James Garbarino
Linda George

Gilbert Gottlieb
Elena Grigorenko
Scott Hofer
William Hoyer
Janet Shibley Hyde
Rachel Keen
Jennifer Lansford
James Marcia
Linda Mayes
Patricia Miller
David Moore
Daniel Mroczek
Darcia Narváez

Charles Nelson
Crystal Park
Denise Park
Ross Parke
Glenn Roisman
Carolyn Saarni
K. Warner Schaie
Robert J. Sternberg
Elizabeth Stine-Morrow
Ross Thompson
Doug Wahlsten
Allan Wigfield
Philip David Zelazo

Following are the expert consultants for the eleventh edition, who (like those of previous editions) literally represent a *Who's Who* in the field of life-span development.



James Graham Dr. James Graham is a leading expert on the community aspects of ethnicity, culture, and development. He obtained his undergraduate degree from Miami University and received master's and doctoral degrees in developmental psychology from the University of Memphis. Dr. Graham's current position is Professor of Psychology, The College of New Jersey (TCNJ). His research addresses the social-cognitive aspects of relationships between group and dyadic levels across developmental periods in community-based settings. Three interdependent dimensions of his research program examine (1) populations that are typically understudied, conceptually limited, and methodologically constrained; (2) 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. He is the co-author of *The African American Child: Development and Challenges* (2nd ed.) and *Children of Incarcerated Parents: Theoretical, Developmental, and Clinical Issues*. Dr. Graham has presented his work at a variety of international and national conferences and has published articles in a wide range of journals, including *Social Development*, *Child Study Journal*, *Behavior Modification*, *Journal of Multicultural Counseling and Development*, and *American Journal of Evaluation*.

"John Santrock seamlessly integrates the latest research on children's, adolescents', and adults' physical, cognitive, and social processes in an ever-evolving multicultural society. In the newest edition of the book, Santrock systematically connects with students across multiple learning modalities to the latest research, developmental processes, and real-world phenomena personally and professionally. This book is an excellent resource for students in psychology and other social science fields. Once

again, I am impressed with Santrock's sensitivity to the impact of culture, ethnicity, and socioeconomic status on child and adolescent development. Today, this is particularly important as we navigate the effects of events such as the coronavirus pandemic and movements for diversity, equity, and inclusion across various contexts. This text will be a great start to becoming a bit more knowledgeable and aware of the challenges and opportunities people will encounter in this increasingly multicultural society. This text will help students learn to analyze, compare, and contrast alternative perspectives of individuals domestically and globally with the major principles and theories of life-span development in cognitive, socio-emotional, and social/contextual domains. This text will also help students understand the latest research regarding societal values about ethnicity, socioeconomic, and gender issues in development and how they influence individual development and shape social policy in our increasingly diverse culture."

—James Graham, The College of New Jersey

(photo): Courtesy of Lauren H. Adams



Amanda Rose Dr. Amanda Rose is a leading expert on children's socioemotional development. She currently is a Professor in the Department of Psychological Sciences at the University of Missouri–Columbia. Dr. Rose obtained her doctorate in developmental psychology from the University of Illinois. Her research focuses on friendships in childhood and adolescence, with particular attention to differences between girls and boys and to implications for emotional adjustment. She has published in a wide range of journals, including *Developmental Psychology*, *Child Development*, and *Psychological Bulletin*, and has held grants from the National Institute of Mental Health. Dr. Rose was awarded the Early Scientific Achievement Award from the Society for Research in Child Development and recently was awarded the University of Missouri's Chancellor's Award for Outstanding Research and Creative Activity. She also recently became a fellow in the American Psychological Association.

"The chapters 'Gender and Sexuality' and 'Peers and the Sociocultural World' have a strong framework and are clear and well-written at the stage appropriate for students at this level. I was pleased with the extent to which the chapters addressed diversity, in terms of race/ethnicity, SES, and culture. I thought the chapters did a great job at covering contemporary work. If I were teaching life-span development, I would definitely consider using John Santrock's 11th edition of A Topical Approach to Life-Span Development."

—Amanda Rose, University of Missouri–Columbia

(photo): University of Missouri, College of Arts & Science



Koraly Pérez-Edgar Dr. Koraly Pérez-Edgar is a leading expert on children's and adolescent's socioemotional development. She is currently the McCourtney Professor of Child Studies and a Professor of Psychology at Penn State University. Dr. Pérez-Edgar obtained her master's degree and Ph.D. from Harvard University. Her research examines trajectories of early socioemotional development from infancy through adolescence, focusing on early-appearing temperament traits and their impact on the ways children respond to and engage with their environment. Dr. Pérez-Edgar has taken a multi-method approach to her research that involves direct observation of behavior, cognitive measures, stationary and mobile eye-tracking, psychophysiology, and neuroimaging. She is a Fellow of the Association for Psychological Science (APS) and the recipient of numerous awards, including a Cattell Sabbatical Award. Dr. Pérez-Edgar also is an associate editor of the leading journals *Child Development* and *Emotion*. In addition, she is the co-editor with Nathan Fox of *Behavioral Inhibition: Integrating Theory, Research, and Clinical Perspectives* and co-editor with Vanessa LoBue and Kristin Buss of *The Handbook of Emotional Development*.

"John Santrock's A Topical Approach to Life-Span Development encompasses the core constructs of life-span development in a way that is both engaging and rigorous. The discussions are concrete so that new students can understand and internalize the complex constructs."

However, the text then places these constructs in a more conceptual context, which should help students draw a more nuanced view of how aspects of development are multidimensional and interconnected within individuals, across contexts, and across time."

—Koraly Pérez-Edgar, Penn State University

(photo): Courtesy Koraly Pérez-Edgar



Susan Courtney Dr. Susan Courtney is a leading expert in cognitive neuroscience. She obtained her Ph.D. in Bioengineering from the University of Pennsylvania and then did postdoctoral training in cognitive neuroscience and neuroimaging at the National Institute of Mental Health in Bethesda, Maryland.

Dr. Courtney is currently Professor of Psychological and Brain Sciences at Johns Hopkins University. Her research focuses on the neural systems underlying attention, working memory, and cognitive control in young healthy adults, older adults, and individuals with multiple sclerosis. Dr. Courtney's research involves a combination of methodologies, including cognitive behavioral analysis, functional magnetic resonance imaging, diffusion imaging, and electroencephalography. Her current research projects seek to understand individual differences in cognitive performance, specifically addressing why cognitive abilities are preserved in some older individuals and substantially decline in others. The research focuses on the role of rapid, task-related changes in synchronized oscillatory activity that enables communication of currently relevant information among distant brain areas. The goal of this research is to understand and potentially prevent or ameliorate

aging-related cognitive decline. Dr. Courtney is a member of the Society for Neuroscience and the Organization for Human Brain Mapping and serves as a reviewer of manuscripts for multiple journals, as well as of grants for the NIH, NSF, and other organizations. Her research has been published in leading research journals, such as *Science*, *Nature*, *Neuron*, and *Neurobiology of Aging*.

"Overall, the strength of the text reflected in the two chapters I read ('Physical Development and Biological Aging' and 'Information Processing') includes the very broad perspective covering a wide range of topics related to development and aging. The inclusion of many specific research results also is a strength. . . . There has clearly been an effort by John Santrock to include many recent examples of important research findings."

—Susan Courtney, Johns Hopkins University

(photo): Courtesy of Serena Faruquee



Gustavo Carlo Dr. Gustavo Carlo is leading developmental scholar who studies children's and adolescents' prosocial and moral development. He obtained his Ph.D. from the Department of Psychology at Arizona State University and currently is Professor at the School of Education at the University of California–

Irvine. He was previously the Millsap Endowed Professor of Diversity and Multicultural Studies at the University of Missouri–Columbia and Distinguished Professor at the University of Nebraska–Lincoln. His research on prosocial and moral development focuses on parenting, sociocognitive, socioemotive, and culture-related (discrimination, values, and ethnic identity, for example) influences. Many of his projects focus on international groups and U.S. ethnic/racial groups, including Latinx youth and families. Dr. Carlo has published more than 200 books, chapters, and research papers; received research grants from several agencies, including the NSF, NIH, and Templeton Foundation; and serves on multiple journal editorial boards. He is a Fellow of the American Psychological Association and the American Psychological Society. In 2018, he received the Outstanding Mentor Award from the Society for Research on Adolescence. Dr. Carlo currently serves as a member of Governing Council of the Society for Research in Child Development, as Associate Editor of the *International Journal of Behavioral Development*, and as co-editor of the forthcoming *APA Handbook of Adolescent Development*.

"The chapter 'Moral Development, Values, and Religion' has good breadth and depth. It's great to see the integrative approach, which covers prosocial, moral, and religious development in one chapter. The chapter 'Peers and the Sociocultural World' has excellent coverage of peer influence. . . . the chapters provide a great overview of major theories and research."

—Gustavo Carlo, University of California–Irvine

(photo): Courtesy of Gustavo Carlo



Virginia Marchman Dr. Virginia Marchman is a leading expert on children's language development. She currently is a Research Associate at the Stanford University Language Learning Laboratory and 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 the *Journal of Speech, Language & Hearing Research* and *Child Development*. Her 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. Dr. Marchman’s current studies explore links between children’s language processing skill, early learning environments, and individual differences in monolingual and bilingual English-Spanish learners from diverse backgrounds.

“The language chapter in this new edition again delivers an overview of the many puzzles that characterize the field of language development that is both comprehensive and nuanced. Importantly, the material is grounded in traditional issues that are at the core of key debates that form the foundation of the field. At the same time, the chapter captures new developments in both methodology and theory that reflect how the field has changed over the years. It is especially important that the material is grounded in the real world in ways that link the field of language development to students’ own personal and professional lives.”

—Virginia Marchman, Stanford University

(photo): Courtesy of Craig T. Salling



Germine Awad Dr. Germine Awad is an Associate Professor in the Department of Educational Psychology at the University of Texas at Austin. Dr. Awad’s scholarship is characterized by three interrelated areas of inquiry: prejudice and discrimination, identity and acculturation, and more recently, body image among women of color. She has also written in the area of multicultural research methodology. The majority of her research is guided by the questions “*What factors lead to discrimination against ethnic minorities?*” and “*What impacts perceptions of experienced discrimination?*” The two populations that she has primarily focused on are Arab/Middle Eastern Americans and African Americans. Although overt discrimination towards ethnic minorities has decreased over the years, the practice of more covert, subtle forms of prejudice remains. The events of September 11, 2001, however, reintroduced more explicit forms of prejudice towards Arab/Middle Eastern Americans, and those perceived to be Muslim, complicating the dialogue on discrimination in the United States. Dr. Awad is concerned with how prejudicial attitudes and ideology impact attitudes towards ethnic minorities generally and within specific domains such as the workplace and higher education. In addition, she examines how racial/ethnic identity and acculturation impact ethnic minorities’ perception of discrimination. Most recently, she has expanded her identity and acculturation research to the study of body image concerns among women of color.

(photo): Courtesy of Germine Awad



Kevin Cokley Dr. Kevin Cokley holds the Oscar and Anne Mauzy Regents Professorship for Educational Research and Development in the College of Education at the University of Texas at Austin. He is a Fellow of the University of Texas System and University of Texas Academy of Distinguished Teachers,

Director of the Institute for Urban Policy Research & Analysis, and Professor of Educational Psychology and African and African Diaspora Studies. His research and teaching can be broadly categorized in the area of African American psychology, with a focus on racial identity and understanding the psychological and environmental factors that impact African American students’ academic achievement. Dr. Cokley studies the psychosocial experiences of African American students and students of color and is currently exploring the impostor phenomenon and its relationship to mental health and academic outcomes. He was elected to Fellow status in the American Psychological Association for his contributions to ethnic minority psychology and counseling psychology. He is the recipient of the Charles and Shirley Thomas Award for mentoring ethnic minority students. He holds the title of Distinguished Psychologist and received the Scholarship Award from the Association of Black Psychologists.

(photo): Courtesy of Kevin Cokley



Sabra Katz-Wise Dr. Sabra L. Katz-Wise is an Assistant Professor in Adolescent/Young Adult Medicine at Boston Children’s Hospital (BCH), in Pediatrics at Harvard Medical School (HMS), and in Social and Behavioral Sciences at the Harvard T. H. Chan School of Public Health. She also co-directs the

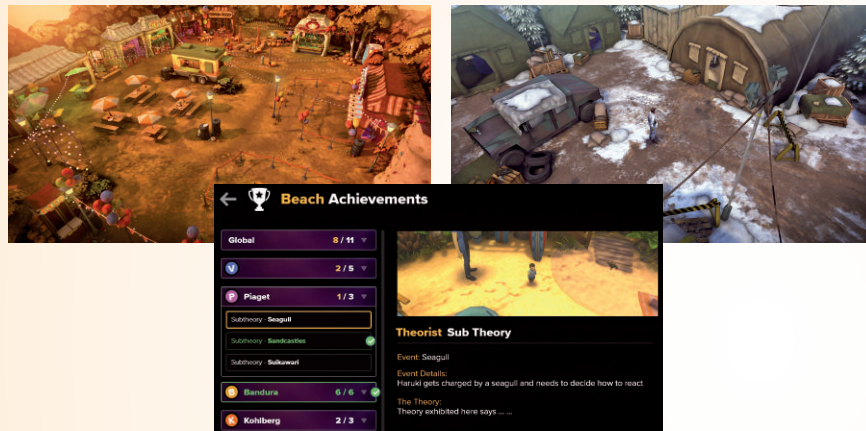
Harvard SOGIE (Sexual Orientation Gender Identity and Expression) Health Equity Research Collaborative and she is a Senior Faculty Advisor for the BCH Office of Health Equity and Inclusion. Dr. Katz-Wise’s research investigates sexual orientation and gender identity development, sexual fluidity, health inequities related to sexual orientation and gender identity in adolescents and young adults, and psychosocial functioning in families with transgender youth. She is currently working on an NIH-funded community-based study to develop an intervention to support families with transgender youth. In addition to research, Dr. Katz-Wise is involved with advocacy efforts at BCH to improve the workplace climate and patient care for LGBTQ individuals, including her leadership role on the Queer Council for the BCH Rainbow Alliance Diversity and member of the BCH Equity, Diversity, and Inclusion Council. She also serves on the HMS LGBT Advisory Committee and is a Faculty Fellow in the HMS Sexual and Gender Minority Health Equity Initiative.

(photo): Courtesy of Sabra Katz-Wise

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 Connect is a digital assignment and assessment platform that strengthens the link between faculty, students, and coursework, helping everyone accomplish more in less time. *Connect Psychology* 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.



Apply Concepts and Theory in an Experiential Learning Environment

An engaging and innovative learning game,

Quest: Journey Through the Lifespan® provides students with opportunities to apply content from their human development curriculum to real-life scenarios. Students play unique characters who range in age and make decisions that apply key concepts and theories for each age as they negotiate events in an array of authentic environments. Additionally, as students analyze real-world behaviors and contexts, they are exposed to different cultures and intersecting biological, cognitive, and socioemotional processes. Each quest has layered replayability, allowing students to make new choices each time they play—or offering different students in the same class different experiences. Fresh possibilities and outcomes shine light on the complexity of and variations in real human development. This new experiential learning game includes follow-up questions, assignable in Connect and auto-graded, to reach a higher level of critical thinking.

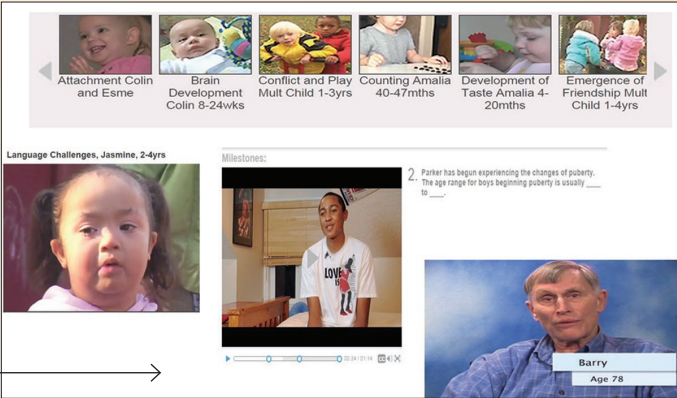
Diversity, Equity, and Inclusion

Substantial discussion in this edition is devoted to addressing issues of diversity, equity, and inclusion. When relevant, each chapter includes citations of studies and topical coverage that represent diverse U.S. and global populations. A complete listing of diversity, equity, and inclusion coverage can be found on pages xi–xvii.

In addition, each chapter includes a *Connecting with Research* feature, many of which highlight underrepresented researchers or research topics to reflect the diversity of the human experience. For example, the *Connecting with Research* interlude in the chapter on language development features Dr. Poorna Kushalnagar and her study on the effects of communication difficulties between hearing parents and deaf children.

Real People, Real World, Real Life

At the higher end of Bloom’s taxonomy (analyze, evaluate, create), the **McGraw Hill Milestones** video series is an observational tool that allows students to experience life as it unfolds, from infancy to late adulthood. This groundbreaking, 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 Psychology, Milestones also includes interviews with adolescents and adults to reflect development throughout the entire life span. New to this edition, Milestones are available in a more engaging, WCAG-compliant format. Ask your McGraw Hill representative about this new upgrade!

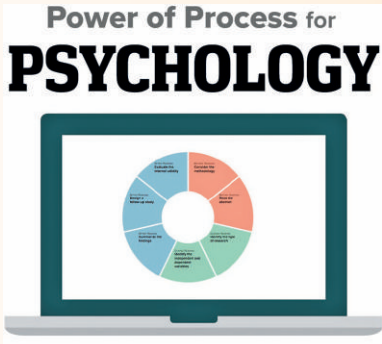


Develop Effective Responses

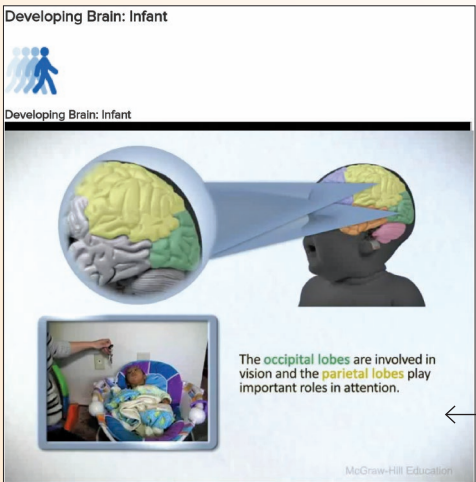
McGraw Hill’s new **Writing Assignment Plus** tool delivers a learning experience that improves students’ written communication skills and conceptual understanding with every assignment. Assign, monitor, and provide feedback on writing more efficiently and grade assignments within McGraw Hill Connect. Writing Assignment Plus gives you time-saving tools with a just-in-time basic writing and originality checker.

Prepare Students for Higher-Level Thinking

Also at the higher end of Bloom’s taxonomy, **Power of Process** for Psychology helps students improve critical thinking skills and allows instructors to assess these skills efficiently and effectively in an online environment. Available through Connect, pre-loaded journal articles are available for instructors to assign. Using a scaffolded framework such as understanding, synthesizing, and analyzing, Power of Process moves students toward higher-level thinking and analysis.



McGraw Hill connect



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. Complete with audio narration, Concept Clips focus on topics such as object permanence and conservation, as well as theories and theorists like Bandura’s social cognitive theory, Vygotsky’s sociocultural theory, and Kuhl’s language development theory.

Connect Media Sources to Content

Also at the lower end of Bloom's and located in Connect, **NewsFlash** is a multi-media assignment tool that ties current news stories, TedTalks, blogs, and podcasts to key psychological principles and learning objectives. Students interact with relevant news stories and are assessed on their ability to connect the content to the research findings and course material. NewsFlash is updated twice a year and uses expert sources to cover a wide range of topics, such as emotion, personality, stress, drugs, COVID-19, abilities and disabilities, social justice, stigma, bias, inclusion, gender, LGBTQA+, and many more.

Better Data, Smarter Revision, Improved Results


SMARTBOOK™

McGraw Hill's **SmartBook** helps students distinguish the concepts they know from the concepts they don't, while pinpointing the concepts they are about to forget. 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.

SmartBook is optimized for mobile and tablet use and is accessible for students with disabilities. Content-wise, measurable and observable learning objectives help improve student outcomes. SmartBook personalizes learning to individual student needs, continually adapting to pinpoint knowledge gaps and focus learning on topics that need the most attention. Study time is more productive and, as a result, students are better prepared for class and coursework. For instructors, SmartBook tracks student progress and provides insights that can help guide teaching strategies.

Online Instructor Resources

The resources listed here accompany *A Topical Approach to Life-Span Development*, Eleventh 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 Test Builder This comprehensive Test Bank includes more than 1,500 multiple-choice, short answer, and essay questions. Organized by chapter, the questions are designed to test factual, applied, and conceptual knowledge. New to this edition and available within Connect, Test Builder is a cloud-based tool that enables instructors to format tests that can be printed and administered within a Learning Management System. Test Builder offers a modern, streamlined interface for easy content configuration that matches course needs without requiring a download. Test Builder enables instructors to:

- Access all test bank content from a particular title
- Easily pinpoint the most relevant content through robust filtering options
- Manipulate the order of questions or scramble questions and/or answers
- Pin questions to a specific location within a test
- Determine your preferred treatment of algorithmic questions
- Choose the layout and spacing
- Add instructions and configure default settings

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.

Remote Proctoring New remote proctoring and browser-locking capabilities are seamlessly integrated within Connect to offer more control over the integrity of online assessments. Instructors can enable security options that restrict browser activity, monitor student behavior, and verify the identity of each student. Instant and detailed reporting gives instructors an at-a-glance view of potential concerns, thereby avoiding personal bias and supporting evidence-based claims.


connect + **proctorio**

preface

Making Connections . . . From My Classroom to *A Topical Approach to Life-Span Development* to You

Having taught life-span development for three decades now, I’m always looking for ways to improve my course and *A Topical Approach to Life-Span Development*. Just as McGraw Hill looks to those who teach the life-span development course for input, I ask the approximately 225 students in my life-span development course 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 life-span 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 life-span development course, which, in turn, I incorporated into *A Topical Approach to Life-Span Development*:

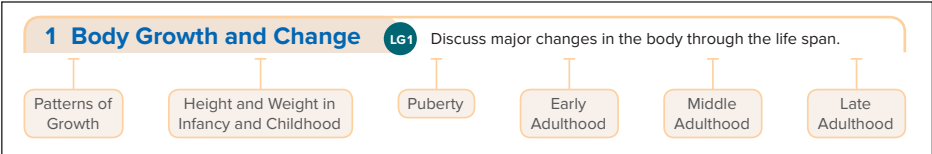
- 1. Connecting with today’s students** To help students learn about life-span development more effectively.
- 2. Connecting research to what we know about development** To provide students with the best and most recent theory and research in the world today about each of the periods of the human life span.
- 3. Connecting topical processes in development** To guide students in making *topical connections* across different aspects of development through the life span.
- 4. Connecting development to the real world** To help students understand ways to *apply* content about the human life span to the real world and improve people’s lives; and to motivate them to think deeply about *their own personal journey through life* and better understand who they were, are, and will be.

Connecting with Today’s Students

In *A Topical Approach to Life-Span Development*, I recognize that today’s students are as different in some ways from the learners of the last generation as today’s discipline of life-span development is different from the field 30 years ago. Students 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 page xxiv) and the learning goals system.

The Learning Goals System

My students often report that the life-span development course is challenging because of the amount of material covered. To help today’s students focus on the key ideas, the Learning Goals System I developed for *A Topical Approach to Life-Span Development* provides extensive learning connections throughout the chapters. The learning system connects the chapter opening outline, learning goals for the chapter, mini-chapter maps that open each main section of the chapter,



reach your learning goals

Introduction

1 The Life-Span Perspective

LG1

Discuss the distinctive features of a life-span perspective on development.

The Importance of Studying Life-Span Development

Characteristics of the Life-Span Perspective

Some Contemporary Concerns

- Development is the pattern of change that begins at conception and continues through the life span. It includes both growth and decline.
- Studying life-span development helps prepare us to take responsibility for children, gives us insight about our own lives, and gives us knowledge about what our lives will be like as we age.
- The life-span perspective includes the following basic concepts: development is lifelong, multidimensional, multidirectional, and plastic; its study is multidisciplinary; it is embedded in contexts; it involves growth, maintenance, and regulation; and it is a co-construction of biological, sociocultural, and individual factors.
- Three important sources of contextual influences are (1) normative age-graded influences, (2) normative history-graded influences, and (3) nonnormative life events.
- Health and well-being, parenting, education, sociocultural contexts and diversity, and social policy are all areas of contemporary concern that are closely tied to life-span development.
- Important dimensions of the sociocultural context include culture, ethnicity, socioeconomic status, and gender.

personal journey through life. *Reach Your Learning Goals*, at the end of the 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* questions at the end of major chapter sections.

Connecting Research to What We Know about Development

Over the years, it has been important for me to include the most up-to-date research available. I continue that 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 life-span development is conducted and how it influences our understanding of the discipline. This edition includes a number of new issues that highlight a more diverse group of researchers and topics, such as “How do parent and peer relationships influence Latinx adolescents’ prosocial behavior?” and “Is an

individual’s personality profile linked to their diversity orientation and attitudes about diversity?” A complete list of related topics can be found in the “Guide to Diversity, Equity, and Inclusion on pages xi to xvii.

The tradition of obtaining detailed, extensive input from a number of leading experts in different areas of life-span development also continues in this edition. Biographies and photographs of the leading experts in the field of life-span development appear on pages xix to xxi. Additionally, McGraw Hill’s new Board of Advisors for Diversity, Equity, and Inclusion played a pivotal role in suggesting many of the updates for this new edition. Finally, the research discussions have been updated in every area and topic. I expended every effort to make this edition of *A Topical Approach to Life-Span Development* as contemporary and up-to-date as possible. To that end, there are more than 1,500 citations from 2019, 2020, 2021, and 2022. Chapter-by-chapter highlights of new research content are listed on pages xxix–lvi.

connecting with research

Do Parental Expectations Influence Black Boys’ Math Scores?



Courtesy Lawrence Jackson

Lawrence Jackson

Key Points:

- Black male adolescents
- parental expectations
- math skills

Researcher Lawrence Jackson, who strives to be an inspiration to other Black boys/men, found extra motivation to pursue a career in psychology from his observations that there were few Black researchers at national conventions (Gradworld FSU, 2019). His research explores the factors that influence young Black boys’ academic achievement. In one study, he explored the associations among what Black high school students expected of themselves regarding educational achievement, what their parents expected of them, and the student’s performance on a math test (Jackson & others, 2020).

The data for the research came from the large-scale High School Longitudinal study sponsored by the National Center for Education Statistics. Among the 23,000 students from 944 high schools who participated in the study, the focus was on Black boys in ninth grade, resulting in 1,282 participants for this particular analysis. A standardized test of algebraic skills was used as a measure of current academic performance. Also, students’ and parents’ expectations for the future educational attainment of the student were assessed. Both the parents and students were asked the following question: “How far in school do you think he/you will get?” The response options were:



How do parents’ and adolescents’ educational expectations influence their education?

Digital Vision/Getty Images

- 8 = Complete master’s degree
- 9 = Start professional degree
- 10 = Complete professional degree

The findings indicated that the parents’ educational expectations for their children were slightly higher than what their children expected. Most parents responded between 2.64 and 9.2, with their average score at 5.92. Placed in context of the responses to the expectation question, this reveals that most parents expected their child to complete high school, and on average they basically expected the completion of a bachelor’s degree. Most of the Black boys responded between 1.54 and 8.88, with their average score of 5.21. This reveals that the students were less certain than their parents that they would complete high school or attain a bachelor’s degree.

xxvi

Preface

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Connecting Developmental Processes

Too often we forget or fail to notice the many connections from one point or topic in development to another. **Developmental Connections**, which appear multiple times in each chapter, point readers to where the topic is discussed in a previous or subsequent chapter. *Developmental Connections* highlight links across topics and age periods of development and connections between biological, cognitive, and socioemotional processes. These key developmental processes are typically discussed in isolation from each other, and students often fail to see their connections. Included in the *Developmental Connections* is a brief description of the backward or forward connection.

Also, a *Connect* question appears in the section self-reviews—*Review, Connect, Reflect*—so students can practice making connections between topics. For example, students are asked to connect a chapter's discussion of the gender-intensification hypothesis to what they have already read about identity development in adolescence.

developmental connection

Brain Development

Developmental changes in the adolescent's brain may be related to increased risk taking. Connect to "Physical Development and Biological Aging."

Connecting Development to the Real World

In addition to helping students make research and developmental connections, *A Topical Approach to Life-Span Development* shows the important connections between the concepts discussed and the real world. In recent years, students in my life-span development course have increasingly told me that they want more of this type of information. In this edition, real-life connections are explicitly made through *Connecting Development to Life*, the *Milestones* program that helps students watch life as it unfolds, and *Connecting with Careers*.

Connecting Development to Life, along with a variety of life-span connecting boxed features, describes the influence of development in a real-world context on topics including *Helping Overweight Children Lose Weight*, *Working During College*, and *Communicating with a Dying Person*.

The *Milestones* program, described on page xxiii, shows students what developmental concepts look like by letting them watch actual humans develop. Starting from infancy, students track several individuals, seeing them achieve major developmental milestones, both physically and cognitively. Clips continue through adolescence and adulthood, capturing attitudes toward issues such as family, sexuality, and death and dying.

Connecting with Careers profiles careers ranging from an educational psychologist to a toy designer to a marriage and family therapist to a teacher of English language learners to a home

connecting development to life

Are Social Media an Amplification Tool for Adolescent Egocentrism?

Earlier generations of adolescents did not have social media to connect with large numbers of people; instead, they connected with fewer people, either in person or via telephone. Might today's teens be drawn to social media and its virtually unlimited friend base to express their imaginary audience and sense of uniqueness? A research analysis concluded that amassing a large number of friends (audience) may help to validate adolescents' perception that their life is on stage and everyone is watching them (Psychster Inc, 2010). A look at a teen's home Twitter® comments may suggest to many adults that what teens are reporting is often rather mundane and uninteresting as they update to the world at large what they are doing and having, such as: "Studying heavy. Not happy tonight." or "At Starbucks with Jesse. Lattes are great." Possibly for adolescents, though, such tweets are not trivial but rather an expression of the personal fable's sense of uniqueness (Psychster Inc, 2010).

One study of social networking sites found that the indiscriminate monologue communication from one to many, in which the diverse interests of others are not considered, that often occurs on such sites as Facebook® may produce an egocentric tendency that undermines prosocial behavior (Chiou, Chen, & Liao, 2014).

A recent meta-analysis concluded that a greater use of social networking sites was linked to a higher level of narcissism (Gnambs & Appel, 2018).



In what ways might frequent use of social media, such as Facebook®, influence adolescents' cognitive development?
Andrey_Popov/Shutterstock

connecting with careers

Ahou Vaziri, Teach for America Instructor

Ahou Vaziri was a top student in author John Santrock's educational psychology course at the University of Texas at Dallas where she majored in Psychology and Child Development. The following year she served as a teaching intern for the educational psychology course, then applied to Teach for America and was accepted. Vaziri was assigned to work in a low-income area of Tulsa, Oklahoma, where she taught English to seventh- and eighth-graders. In her words, "The years I spent in the classroom for Teach for America were among the most rewarding experiences I have had thus far in my career. I was able to go home every night after work knowing that I truly made a difference in the lives of my students."

After her two-year teaching experience with Teach for America, Vaziri continued to work for the organization in their recruitment of college students to become Teach for America instructors. Subsequently, she moved into a role that involved developing curricula for Teach for America. Recently she earned a graduate degree in counseling from Southern Methodist University and currently is pursuing her doctoral degree in counseling psychology at the University of North Texas. During her graduate studies, she is continuing to work toward improving children's lives.



Ahou Vaziri with her students in the Teach for America program.
What is Teach for America?
Courtesy of Ahou Vaziri

hospice nurse, each of which requires knowledge about human development.

A number of new profiles appear in this and recent editions. These include Gustavo Medrano, a clinical psychologist who works at the Family Institute at Northwestern University, especially providing therapy for Latinx children; Dr. Bonnie Halpern-Felsher, a university pediatrics professor and director of community efforts to improve adolescents' health; Dr. Melissa Jackson, a child and adolescent psychiatrist who provides therapy for children with a number of psychological disorders, including ADHD, anxiety, depression, and post-traumatic stress disorder; Carissa Barnes, a special education teacher; and Ahou Vaziri, a Teach for America instructor and curriculum designer.

The careers highlighted extend from the Careers Appendix that provides a comprehensive overview of careers in life-span development to show students where knowledge of human development could lead them.

Part of applying development to the real world is understanding its impact on oneself. An important goal I have established for my life-span development course and this text is to motivate students to think deeply about their own journey of life. To further encourage students to make personal connections to content in the text, *Reflect: Your Own Personal Journey of Life* appears in the end-of-section review in each chapter. This feature involves a question that 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, students are asked:

Imagine what your development would have been like in a culture that offered fewer or distinctly different choices. How might your development have been different if your family had been significantly richer or poorer than it was when you were growing up?

In addition, students are asked a number of personal connections questions in the photograph captions.

Content Revisions

A significant reason why *A Topical Approach to Life-Span Development* 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 1,500 citations from 2019, 2020, 2021, and 2022.

This new edition is being released at a time when the world is well over a year into the COVID-19 pandemic health crisis, as more and more people are getting vaccinated and parts of the world are slowly returning to pre-pandemic status while other areas are still battling the raging virus. We are already seeing a great deal of research in many related topics, which are mentioned throughout this edition. Additionally, a new main section “Schools and the Coronavirus Pandemic” has been added on how K-12 and college education had to be quickly redesigned to address this challenge and some of the immediate outcomes.

Also since the last edition published, a number of events have occurred that have exposed the results of discrimination, systemic racism, and intolerance in the United States and throughout the world. *A Topical Approach to Life-Span Development* has historically covered these important issues and related research and, beyond many significant updates, this edition also includes a number of new *Connecting with Research* interludes that highlight researchers and their research in the areas of diversity, equity, and inclusion. Additionally, related topics can be easily found by using the “Guide to Diversity, Equity, and Inclusion” on pages xi to xvii.

Following is a sample of the many chapter-by-chapter changes that were made in this new edition of *A Topical Approach to Life-Span Development*.

Chapter 1: Introduction

- New commentary about how projected increases in the older population in countries around the world will require countries to develop innovative policies and expanded services for housing, employment, health care, and transportation (Carstensen, 2015, 2019)
- Updated data on life expectancy in the United States (Arias & Xu, 2019)
- New description of how in 2019, for the first time in U.S. history, there were more individuals over the age of 60 than under the age of 18
- Coverage of very recent projections for a decline of approximately one year in the average U.S. life expectancy in 2020, with a three- to four-year drop for African Americans and Latinxs because of the staggering number of deaths during the COVID-19 pandemic (Andrasfay & Goldman, 2021)
- Inclusion of new content on how the COVID-19 pandemic has disproportionately harmed older adults, making them more vulnerable to contracting a severe or deadly version of the disease, as well as uprooting their lives by isolating them from family and friends (Jowell, Carstensen, and Barry, 2020)
- Updated poverty rates that dropped considerably from 2018 to 2019 for African American, Latinx, and Asian American children and adolescents, including a much larger drop than for non-Latinx White children and adolescents (Semega & others, 2020)
- Coverage of a recent research review of 3- to 19-year-old U.S. children and adolescents indicating that those living in low-socioeconomic-status (SES) settings were likely to have higher levels of psychopathology (Peverill & others, 2021)
- Inclusion of a recent focus of the Ascend two-generation program on the importance of parents’ education, economic stability, and overall health for their children’s well-being (Ascend, 2021; Aspen Institute, 2019)
- Description of a recent research study that found older adults who were more conscientious and emotionally stable were less cognitively vulnerable (Duchek & others, 2020)
- Coverage of a recent study revealing that at 65 years of age, individuals’ happy life expectancy was 25 percent more than their cognitive impairment life expectancy, and at age 85 their happy life expectancy doubled to 50 percent greater than their cognitive impairment life expectancy (Bardo & Lynch, 2021)
- Inclusion of research data collected in April 2020 from 18- to 76-year-olds in which older adults reported more frequent positive emotions and less frequent and intense negative emotions than younger adults, despite being more aware of the risks posed to them by the COVID-19 pandemic (Carstensen, Shavitz, & Barnes, 2020)
- Discussion of recent research across 150 countries indicating that health is a better predictor of life satisfaction in individuals 58 years and older than in younger age groups (Joshani & Jovanovic, 2021)
- Important new section, “Are Age Ranges for Adult Periods of Development Changing?”
- New section, “Age Range for Middle Age,” that focuses on a changing middle age that appears to be beginning later and lasting longer for an increasing number of people
- Description of a recent study of 44- to 64-year-olds who reported feeling younger than they actually were and wanting to be younger than their chronological age (Shinan-Altman & Werner, 2019). In this study, participants said that old age doesn’t begin until 69 years of age.
- New section “Changing Late Adulthood,” noting that older adults constitute an increasing percentage of the total population as fertility rates decrease and improving lifestyles and medical discoveries are increasing life expectancy (Freund, 2020; Staudinger, 2020)
- Inclusion of recent research indicating that an adult’s biological age was a good predictor of whether they would have a stroke recurrence (Soriano-Tarraga & others, 2021)
- Expanded and updated information on the use of eye-tracking to assess cognitive exploration (D’Souza & others, 2020) and language acquisition in infants (Egger, Rowland, & Bergmann, 2020)

Chapter 2: Biological Beginnings

- Updated and revised content based on feedback from leading experts David Moore and Charles Nelson
- Expanded criticism of evolutionary psychology indicating that it is very difficult to offer direct proof of an argument to support this view
- Updated content on genome-wide association studies of obesity (Warner & others, 2021), depression (Wu & others, 2021), autism (Searles Quick, Wang, & State, 2021), and Alzheimer disease (Serrano-Pozo, Das, & Hyman, 2021)
- Updated and expanded coverage of gene linkage analysis to include its use in studying cancer (Wang & others, 2021), bipolar disorder (Umehara & others, 2021), suicide (Sokolowski & Wasserman, 2020), and glaucoma (Trivli & others, 2020)
- Expansion of gene expression discussion to include loneliness (Brown & others, 2020)
- Updated and expanded research on how diet (Ramos-Lopez & others, 2021), tobacco use (Sugden & others, 2019), and sleep (Lehtinen & others, 2019) can modify the expression of genes through the process of methylation
- Inclusion of recent research indicating that methylation is involved in stress (Gatta & others, 2021), hypertension (Amenyah & others, 2021), colorectal cancer (Alvizo-Rodriguez & others, 2020), breast cancer (Xu & others, 2020), leukemia (Kingsley & others, 2020), obesity (Gomez-Alonso & others, 2021), depression (Lapato & others, 2021), and attention deficit hyperactivity disorder (Kim & others, 2020)
- Updated and expanded coverage of susceptibility genes, including those involved in COVID-19 (Sang & others, 2021), arthritis (Reynard & Barter, 2020), colorectal cancer (Yuan & others, 2021), cardiovascular disease (Liang & others, 2020), and Parkinson disease (Langmyhr & others, 2021)
- Coverage of recent researching indicating that *FOXO3A* may serve as a novel blood marker for early detection of Alzheimer disease (Pradhan & others, 2020)
- Updated and expanded research on gene-gene interaction to include immune system functioning (Kostel Bal & others, 2020), cancer (Lee & others, 2021), and obesity (Jung & others, 2020)
- Inclusion of a recent study that found while XYY boys did not have more cognitive deficits than normal XY boys, they did have more externalizing and internalizing problems (Operto & others, 2019)
- New content on the number of children born worldwide with sickle-cell anemia and how stem cell transplantation is being explored in the treatment of infants with sickle-cell anemia (Cisneros & Thein, 2020)
- Coverage of a recent research review concluding that variations in the 5-HTTLPR gene may contribute to the tendency to ruminate when individuals face life stress (Scaini & others, 2021)
- Discussion of three recent studies indicating that the short version of the 5-HTTLPR gene is linked to greater risk of depression in individuals with coronary heart disease (Zhang & others, 2020), stroke (Wang & others, 2020), and Parkinson disease (Cheng & others, 2020)
- New commentary about neurogenesis being largely complete by about the end of the fifth month of prenatal development (Borsani & others, 2019)
- Description of a recent global analysis that concluded mandatory folic acid fortification of flour or wheat was reaching only 23 percent of total possible prevention (Kancherla & others, 2021)
- New coverage of cell-free fetal DNA in maternal blood and its testing as early as 10 weeks into the first trimester of pregnancy to identify disorders such as Down syndrome (Guseh, 2020)
- Inclusion of a recent study using non-invasive fetal diagnosis that revealed fetal sex at 4.5 weeks (D'Aversa & others, 2018)
- Coverage of a recent review of 17 meta-analyses that concluded maternal caffeine consumption during pregnancy was linked to a higher occurrence of miscarriage, stillbirth, low birth weight, and childhood acute leukemia (James, 2021)
- Description of a recent meta-analysis that found higher maternal caffeine intake during pregnancy was associated with childhood overweight and obesity (Jin & Qiao, 2021)
- Inclusion of recent research in which children with FASD had impairments in verbal comprehension, perceptual-motor coordination, processing speed, attention, executive function, and language development (Lange & others, 2021)
- Discussion of a recent study that confirmed a significant risk for suicidal behavior in adolescents with FASD (O'Connor & others, 2019)
- Inclusion of a recent study that revealed maternal alcohol use during pregnancy was associated with offsprings' mental health problems, such as anxiety, depression, and emotional problems, even at low to moderate levels of consumption (Easey & others, 2019)
- Description of a recent study that found a number of negative cognitive and behavioral outcomes for infants in the first year of life as a consequence of prenatal exposure to cigarette smoke: negative affect, poorer attention, greater excitability, and more irritability (Froggatt, Covey, & Reissland, 2020)
- Coverage of recent research in which maternal cigarette smoking during pregnancy was associated with lower academic achievement in offspring at 16 years of age (Kendler & others, 2021)
- Inclusion of a recent analysis that concluded smoking cessation at any point during pregnancy improved fetal outcomes (American College of Obstetricians and Gynecologists, 2020). Also in this analysis, the greatest benefits for the fetus occurred when the smoking cessation took place prior to 15 weeks of gestation.
- Discussion of a recent study that revealed environmental tobacco smoke during pregnancy was associated with preterm birth (Chen & others, 2021)
- New coverage of a recent study in which chronic exposure to e-cigarette aerosols was linked to low birth weight in offspring (Orzabal & others, 2019)

- Description of a longitudinal study in which prenatal cocaine exposure was linked to early use of marijuana, arrest history, conduct disorder, and emotion regulation problems at 21 years of age (Richardson & others, 2019)
- Discussion of recent research that found newborns born to mothers who used marijuana during pregnancy were more likely to be born preterm or low birth weight (Haight & others, 2021; Petrangelo & others, 2019)
- Inclusion of a recent study in which marijuana use during pregnancy was associated with an increased rates of chronic obstructive pulmonary disease in 4-year-old children (Villarreal & others, 2019)
- Coverage of recent research indicating that marijuana use during pregnancy is linked to a higher level of psychopathology (internalizing and externalizing problems) and a lower level of gray matter volume in the brains of offspring (Paul & others, 2021)
- Description of a recent study indicating that marijuana use by pregnant women increased from 6 percent to 11 percent in California following its legalization in that state (Lee & others, 2021)
- Inclusion of a recent analysis noting that approximately one-third of women of reproductive age are obese (Moholdt & Hawley, 2020)
- Coverage of a recent study that found obesity in pregnancy was linked to an increased risk of asphyxia-related complications in preterm birth (Mitha & others, 2020)
- Discussion of a recent meta-analysis in which offspring of women who were overweight or obese had an increased risk of developing childhood diabetes and obesity (Hidayat, Zou, & Shi, 2019)
- Description of a recent study that indicated higher maternal pregnancy-related anxiety was linked to more emotional symptoms, peer relationship problems, and overall child difficulties at 4 years of age (Acosta & others, 2020)
- Coverage of a recent study in which individuals whose mothers reported having higher levels of stress during pregnancy were at a higher risk of developing psychiatric disorders, such as mood disorders, later in life (Brannigan & others, 2019)
- Inclusion of recent research in which pregnancy after 35 years of age was associated with diabetes, hypertension, and having a cesarean section (Montori & others, 2021). Also, in this research, after 40 years of age, pregnancy was linked to a higher risk for fetal death, neonatal ICU admission, and postpartum hemorrhage (Montori & others, 2021)
- Description of a recent study that revealed daily e-cigarette smokers had a lower sperm count than non-users (Holmboe & others, 2020)
- Discussion of a recent meta-analysis that concluded paternal smoking before and during pregnancy was linked to increased risk of childhood leukemia (Cao, Lu, & Lu, 2020)
- Coverage of recent research that revealed the mother's perceived stress during pregnancy was elevated when the father was physically and verbally aggressive toward her (Kashanian & others, 2021). Also, her stress was lower when the father was emotionally and financially supportive and when he participated in prenatal care visits.
- Inclusion of a recent study in which African American and Latinx women reported almost twice as many barriers to prenatal care as non-Latinx White women (Fryer & others, 2021)
- Discussion of a recent large-scale study that found women who participated in CenteringPregnancy had offspring that were less likely to be born preterm or low birth weight (Cunningham & others, 2019)
- Inclusion of recent research that indicated women who participated in CenteringPregnancy used pain relief less during labor and were more likely to breast feed their infants (Rijnders & others, 2019)
- Description of a recent study in which yoga was effective in reducing depressive symptoms in pregnant women (Ng & others, 2019)
- Coverage of a recent research review that concluded pregnant women's exercise was linked to a lower incidence of preterm birth (Mate & others, 2020)
- New content on ethnic disparities in prenatal care and pregnancy, with African American and Native American/Alaska Native women especially experiencing inadequate care (Petersen & others, 2019)
- Updated data on the percentage of births taking place in different settings, with the largest percentage increase occurring in homes (MacDorman & Leclercq, 2019)
- Updated data on the percentage of U.S. births attended by a midwife, which increased to 9.1 percent in 2017 (Center for Health Statistics, 2019)
- Update on the percentage of U.S. births that were cesarean deliveries (31.9 percent in 2018) (Martin & others, 2019)
- Coverage of a recent study in which one hour of traditional Thai massage decreased the duration of the first and second stages of labor (Sananpanichkul & others, 2019)
- Description of a recent study of 27,000 women in which those using waterbirth had more favorable outcomes for themselves and that their newborns were less likely to be placed in a NICU or to have heart rate abnormalities and respiratory complications (Snapp & others, 2020)
- Discussion of a recent research review in which women who used waterbirth perceived it to be a positive experience (Feeley, Cooper, & Burns, 2021)
- Inclusion of a recent study that indicated Apgar scores at 5 and 10 minutes after birth provide prognostic information about preterm infants' ability to survive (Cnattingius, Johansson, & Razaz, 2020)
- Updated data on the percentage of U.S. infants who are born preterm, including ethnic variations (Martin & others, 2019)
- Updated data on the percentage of U.S. babies born at low birth weights, including ethnic variations (Martin & others, 2019)
- Description of a recent Japanese study of very low birth weight infants that found 6.2 percent had birth defects, with the most common being chromosomal abnormalities, heart defects, and malformation of the digestive system (Kawasaki & others, 2021)

- Inclusion of a recent national study of 6- to 11-year-old children in which those born preterm had higher rates of developmental delay, intellectual disability, speech/language disorder, learning disability, and ADHD (Kelly & Li, 2019)
- Discussion of a recent study that revealed lower academic trajectories for very preterm born children in elementary school (Twilhaar & others, 2019)
- Description of a recent research review of preterm and low birth weight infants that found those who received maternal kangaroo care for at 2 to 6 hours a day gained more weight than those who did not get the care (Charpak, Montealegre-Pomar, & Bohorquez, 2021). However, the weight gain effect disappeared when infants received only 2 hours or less per day of this care.
- Coverage of a recent large-scale experimental study in India in which low birth weight infants were randomly assigned to receive kangaroo care or standard care, with the low birth weight infants who received kangaroo care having higher survival rates in the first month of life as well as 180 days later (Mazunder & others, 2019)
- Inclusion of recent research with preterm infants that found those who received massage therapy had a significant daily weight gain and an increase in bone mineral density (Elmoneim & others, 2021)
- Coverage of recent research showing that in the postpartum period, women who engage in light-to-moderate physical activity are less likely to experience poor sleep quality (Matenchuk & Davenport, 2021)
- Description of a recent meta-analysis that revealed the prevalence of postpartum depression in fathers was 9 percent in the first month after birth and 8 percent one to three months after birth (Rao & others, 2020)
- Inclusion of recent research in Japan indicating that 11.2 percent of fathers had postpartum depression one month following delivery (Nishigori & others, 2020)

Chapter 3: Physical Development and Biological Aging

- Coverage of a recent meta-analysis that found recombinant growth hormone replacement therapy was effective in eliciting metabolic changes in children with growth hormone deficiency (Yuan & others, 2021)
- Inclusion of a recent study in Taiwan that found the average age of menarche had declined 0.43 years per decade in the past 30 years (Chow & others, 2021)
- Discussion of a recent research review of 30 studies in different countries around the world that revealed the age at which breast development began in girls (called thelarche) declined by almost 3 months per decade from 1977 to 2013 (Eckert-Lind & others, 2020)
- Coverage of a recent study of 11- to 14-year-olds that revealed those who felt negative about their body image because of social media had higher rates of depressive symptoms, online social anxiety, more difficulty in finding friends, and were more socially isolated (Charmaraman & others, 2021). Also in this study, those who followed celebrities

checked social media more often and were more likely to have depressive symptoms and online social anxiety.

- Description of a recent study of adolescent boys that indicated a high level of testosterone was linked to less delay of gratification (Laube, Lorenz, & van den Bos, 2019)
- Inclusion of a recent study of early adolescent boys in Japan that found a lower level of testosterone was associated with social withdrawal (Hayashi & others, 2020)
- Discussion of a recent study that revealed age of menarche has declined in recent years in Portugal (Queiroga & others, 2020)
- Coverage of recent research that found obesity was associated with earlier pubertal onset (Busch & others, 2020)
- Description of a recent study of Chinese adolescents that revealed girls were more dissatisfied with their appearance than boys were, but boys were more dissatisfied with their sexual organs (Zhang & others, 2020)
- Inclusion of a recent study of young adolescents in which girls had a more negative body image when they identified with an idealized social media portrayal (Rodgers & others, 2020)
- Coverage of recent research in which higher social media use was linked to more negative body images for adolescents, more so for girls than boys (Kelly & others, 2019)
- Updated content indicating that in 2017–2018, middle-aged adults had a higher obesity rate (44.8 percent) than younger (40.0 percent) and older adults (42.8 percent) (Hales & others, 2020). Also, middle-aged men had a higher obesity rate (46.4 percent) than middle-aged women (43.3 percent) (Hales & others, 2020).
- New commentary noting that for individuals who are 30 percent or more overweight, the probability of dying in middle adulthood increases by 40 percent
- Inclusion of a recent study in which smoking and diabetes were risk factors for accelerated loss of muscle mass in middle-aged women (Lee & Choi, 2019)
- Coverage of a recent meta-analysis that concluded older adults who have sarcopenic obesity are at increased risk of adverse musculoskeletal outcomes such as falls and fractures than individuals with sarcopenia, obesity, or neither condition (Gandham & others, 2021)
- Inclusion of recent research with individuals 55 years of age and younger indicating that those with hypertension had lower scores on a memory test (Teles de Menezes & others, 2021)
- Discussion of a recent study in which most of Life's Simple 7 actions were linked to greater longevity (van Oort & others, 2021)
- Description of a recent study of middle-aged adults that found higher cardiorespiratory fitness predicted lower cardiovascular disease risk (Swainson, Ingle, & Carroll, 2019)
- Discussion of a recent study that revealed lower body mass index, less exercise, frequent alcohol drinking, and a meat-based diet were risk factors for lung cancer in never-smoking women (Ko & others, 2020)
- Coverage of a recent study of more than 300,000 women that found late menopause was associated with an increased risk of breast cancer (Gottschalk & others, 2020)

- Description of recent MRI research documenting the role of both the left and right hemispheres in language development (Bosseler & others, 2021). In this study of 18- to 27-month-olds, attention in the right frontal cortex was important in left-lateralized word learning.
- Discussion of recent research documenting that attention (Bartolomeo & Seidel Malkinson, 2019) and emotion (Gainotti, 2019) are predominantly right hemisphere activities
- Coverage of MRI research demonstrating that both the right and left hemispheres are involved in the control and processing of emotions (Baja & Killgore, 2021)
- Inclusion of some changes in the development of the brain from infancy through the childhood years based on comments by leading experts Charles Nelson and Martha Ann Bell
- New description of aspects of brain activity that can be assessed by the brain imaging technique fNIRS in infancy, including face processing, perception, attention, and memory (Anderson & others, 2020)
- Coverage of a follow-up of children that revealed those who had lived in a Romanian orphanage during their first few years of life but were later placed in stable foster care showed improved brain functioning after being transferred to foster care (Debnath & others, 2020)
- Discussion of a recent study of 9- to 10-year-olds in which children with a high body mass index has less cortical thickness, which was linked to a lower level of executive function (Laurent & others, 2020)
- Inclusion of recent research indicating that emerging cognitive control in children is mainly supported by the development of distributed neural networks in which the prefrontal cortex is central (Chevalier & others, 2019)
- Description of a recent study in which reduced amygdala-prefrontal connectivity occurred in children with autism spectrum disorder (Ibrahim & others, 2019)
- Discussion of recent research with 9- to 23-year-olds in which similar brain aging patterns were found for girls and boys, although the brain changes in girls occurred approximately one year earlier than in boys (Brouwer & others, 2021)
- Coverage of recent research indicating that the corpus callosum continues to thicken well into the third decade of life (Danielsen & others, 2020). In this study, the corpus callosum showed protracted decline in the mid-to-late fifties, followed by further decline in subsequent decades.
- New content on increased connectivity of brain regions at the onset of emerging adulthood and discussion of recent research indicating that connectivity between the frontal cortex and hippocampus increased from adolescence to emerging and early adulthood, with this connectivity linked to improvement in higher-level cognition, especially in problem solving and planning (Calabro & others, 2020)
- Coverage of recent research indicating that brain atrophy occurs less in women than men (Kirov & others, 2021)
- Inclusion of recent research with mice indicating that chronic stress followed by social isolation decreases hippocampal neurogenesis (Du Preez & others, 2021)
- Description of recent research in which sleep-specific brain activity restored performance by actively refining brain plasticity (Nissen & others, 2021)
- Discussion of World Health Organization (WHO) recommendations for how much quality sleep infants 0 to 3 months, 4 to 11 months, and 1 to 2 years of age should get daily (Willumsen & Bull, 2020)
- Inclusion of research information indicating that a lower quality of infant sleep is linked to inconsistent bedtime routines (Covington & others, 2019), maternal depression (Cook & others, 2020), and higher amounts of screen time (Chen & others, 2019)
- Description of a recent research review concluding that the neurotransmitter serotonin plays an important role in SIDS (Cummings & Leiter, 2020)
- Discussion of a study of 732 cases of SIDS that found bed-sharing occurred in 53 percent of the deaths (Drake & others, 2019)
- Coverage of a recent study in which shorter sleep duration in infancy was linked to lower cognitive and language development at 2 years of age (Smithson & others, 2018)
- Inclusion of WHO's recommendation that 3- to 4-year-old children should get 10 to 13 hours of good-quality sleep daily, which may include a nap, with consistent sleep and wake-up times (Willumsen & Bull, 2020)
- Description of a recent study linking quality parenting (harmonious and reciprocal) to preschool children's longer sleep duration (Dubois-Comtois & others, 2019)
- New content linking sleep problems to children's obesity (Poorolajal & others, 2020) and ADHD (Bioulac & others, 2020)
- Updated data indicating that U.S. adolescents are not getting nearly enough sleep, with recent national research showing a 7 percent decline in total sleep time over a period of four years (Kann & others, 2018)
- Discussion of research indicating that frequency of phone calls, mobile phone dependency, and tablet use were linked to sleep problems in adolescence (Cabre-Riera & others, 2019)
- Inclusion of a recent study of college students in which sleep deprivation was linked to a lower grade point average and delayed college graduation (Chen & Chen, 2019)
- Description of a recent study that found poorer sleep quality was associated with smartphone dependence and less effective stress management (Wang & others, 2019)
- Coverage of the National Sleep Foundation's (2020) recommendation that emerging and young adults should get 7 to 9 hours of sleep per night
- New content on the National Sleep Foundation's (2019) explanation of why pulling an all-nighter to cram for an exam is not likely to be a good idea
- New commentary that the National Sleep Association (2020) recommends middle-aged adults get 7 to 9 hours of sleep daily and that older adults get 7 to 8 hours daily
- Inclusion of a recent Norwegian study of individuals 40 years of age and older in which 42 percent of women and 52 percent

of men got less than 7 hours of sleep per night (Sivertsen & others, 2021)

- New description of a recent study of middle-aged adults that indicated lower sleep quality was linked to a lower level of executive function, lower processing speed, increased learning difficulty, and poorer memory recall (Kaur & others, 2019)
- New content on how not only sleeping too little but also sleeping too much can be an indicator of health problems
- Discussion of a recent study that revealed older adults with major depression reported having poor sleep quality (Pye & others, 2021)
- New coverage of how sleep difficulties are increasingly recognized as a risk factor for Alzheimer disease (Andre & others, 2021)
- Inclusion of a recent study of older adults that found a higher frequency and duration of sleep awakenings throughout the night were linked to a increased frailty and shorter longevity (Guida & others, 2021)
- Description of a recent study of individuals 60 years of age and older that revealed for those sleeping 7 hours or less per night, replacing 30 minutes of sedentary activity with 30 minutes of moderate or vigorous physical activity resulted in improved cognitive function (Wei & others, 2021)
- Updated data on life expectancy in the United States (Xu & others, 2020)
- Updated data on gender and ethnic differences in life expectancy in the United States (Murphy & others, 2018; Xu & others, 2020)
- New discussion of the “Latinx Health Paradox,” which refers to Latinxs living 3.2 years longer than non-Latinx Whites despite having lower income and less education, including reasons why this may occur (Brill, 2019; Tabler & others, 2020)
- Coverage of a recent study that supported the “Latinx Health Paradox,” in which older Latinx adults reported better health than their non-Latinx White counterparts did (Olsen, Basu Roy, & Tseng, 2019)
- Inclusion of recent data on the number (82,000) of centenarians alive in the world (Buchholz, 2020) and a recent (2020) list of the world’s oldest living people, including the observation that the 50 oldest individuals were women
- Updated data on life expectancy for individuals 65 years of age (including gender differences) and for individuals 100 years old (Murphy & others, 2018)
- Update as of June 2020 on the oldest living person in the world (Kane Tanaka, 117, in Japan)
- Coverage of a recent research review that concluded lifestyle interventions involving exercise and diet are linked to a slowing of telomere shortening (Qiao & others, 2020)
- Inclusion of a recent study of older adults in which maintaining a healthy body weight was linked to reduced oxidative stress (Anusruti & others, 2020)
- New content indicating that mitochondria play an important role in neuronal plasticity (Lees & others, 2020)
- Expanded and updated content on the role of sirtuins in diabetes, Alzheimer disease, and Parkinson disease (Liu & others, 2020; Shieh & others, 2020)

- Inclusion of new content indicating that SIRT 6 is involved in DNA repair and greater longevity (Das, 2021)
- New content on the emergence of new viral diseases that have severe health consequences and have attacked the immune system function of older adults. The COVID-19 pandemic in 2020 highlights the capacity of viral diseases to decimate the already declining immune system function of older adults (Salimi & Hamlyn, 2020).

Chapter 4: Health

- New commentary that the COVID-19 pandemic caused many parents to postpone taking their children to their physician’s office for routine checkups and timely immunizations
- New content on how the COVID-19 pandemic disrupted medical care for children and adolescents
- Inclusion of a recent study in which children and adolescents were 70 percent less likely to visit a general hospital emergency department after the COVID-19 pandemic emerged than before it appeared (Goldman & others, 2021)
- New description of how the COVID-19 pandemic intensified mental health concerns for adolescents (Saggioro de Figueiredo & others, 2021)
- Updated description of the causes of death in childhood, with the leading cause of death in U.S. 1- to 9-year-olds being unintentional injury (Heron, 2019)
- New content indicating that children living in poverty have higher rates of accidents, asthma, and death than children from higher-income families (Kelleher, Reece, & Sandel, 2018)
- New coverage of ethnic disparities in health insurance coverage and chronic health conditions among U.S. children (Carratala & Maxwell, 2020)
- Discussion of a recent national study that found children with a smoker in the home were 30 percent more likely have an asthma diagnosis than children who did not have a smoker in the home (Xie & others, 2021)
- Coverage of a recent study in which young children exposed to environmental tobacco smoke were more likely to have hyperactive and conduct problem symptoms than their counterparts who were not exposed to smoke (Gatzke-Kopp & others, 2019)
- Inclusion of recent research indicating that adolescents with poor-quality friendships during the previous year were more likely to subsequently engage in delinquency (Cho & Galehan, 2020)
- New *Connecting with Careers* profile of Dr. Bonnie Halpern-Felsher, University Professor of Pediatrics and Director of Community Efforts to Improve Adolescents’ Health
- Description of a recent study of college students in which regularly eating breakfast was associated with having a higher grade point average (GPA), while regularly eating fast food was linked to having a lower GPA (Reuter, Forster, & Brister, 2020)
- New coverage of ethnic health disparities in U.S. adults 20 years of age and older (Health United States, 2019)

- New content on the large number of older adults who have died because of the coronavirus, with the greatest risk of death for individuals 85 years of age and older (Centers for Disease Control and Prevention, 2020b). Key reasons for increased mortality risk include the fact that older adults are more likely to have underlying health conditions, such as heart disease or kidney disease, and also have a declining immune system that is less effective in fighting the virus.
- Inclusion of a recent Swiss study that found post-menopausal women were consuming large amounts of vegetables but insufficient calcium and dairy products (Lanyan & others, 2020)
- Revised definition of dementia (Alzheimer's Association, 2020)
- Coverage of a recent Chinese study in which medium to high levels of physical activity were linked to a lower incidence of dementia in 60- to 65-year-olds (Wu & others, 2020)
- Updated data on the percentage of older adults with Alzheimer disease and expanded facts about Alzheimer disease in 2020, including new data on ethnic variations (Alzheimer's Association, 2020)
- New description of the ApoE2 allele being the strongest protective gene for Alzheimer disease (Serrano-Pozo, Das, & Hyman, 2021)
- Inclusion of recent research that indicated differences in ApoE4 and ApoE2 alleles were associated with methylation variations in the blood, especially lipid and cholesterol processes (Walker & others, 2021)
- New content on the role of mitochondrial dysfunction as an early event in Alzheimer disease (Yang & others, 2020a)
- Updated estimate on the percentage of individuals 65 years of age and older in the United States who have mild cognitive impairment (Alzheimer's Association, 2020)
- Discussion of a recent research review that concluded cognitive and physical interventions can improve the cognitive and physical function of individuals with mild cognitive impairment (Yang & others, 2020)
- Coverage of the extensive research effort underway to discover drugs that will decrease or remove plaques and tangles in the brain (Zetterberg & Bredlin, 2021)
- New commentary that in the United States 50 percent of the help provided by caregivers for older adults is given to individuals with Alzheimer disease (Alzheimer's Association, 2020)
- New content on the very high percentage of deaths from the coronavirus pandemic that occurred in nursing homes and the accompanying increased concern about the quality of nursing homes in the United States
- Update on breast feeding rates continuing to increase in the United States based on 2017 data (Centers for Disease Control and Prevention, 2020)
- Description of a research review that concluded breast feeding benefits the development of the immune system that provides defenses for fighting off disease (Nolan, Parks, & Good, 2019)
- Discussion of a recent study that revealed breast-fed infants were less likely to develop a fever in the first six months of their lives (Saeed, Haile, & Cherlok, 2020)
- Inclusion of recent research indicating that breast feeding during infancy was associated with increased vegetable intake and avoidance of sugar-sweetened beverages in childhood but not in adolescence (Kheir & others, 2021)
- Coverage of a recent meta-analysis in which breast feeding was linked to a higher level of cardiovascular fitness in children 4 to 18 years old (Berlanga-Macias & others, 2020)
- New discussion of recent conclusions by the American College of Obstetricians and Gynecologists (ACOG) committee (2021) noting that women who breast feed have a reduced risk for breast cancer, ovarian cancer, type 2 diabetes, and hypertensive cardiovascular disease
- Description of a recent national study that found children's dietary quality decreased between 6 months and 4 years of age (Hamner & Moore, 2020)
- Discussion of a recent study that found positive parenting emphasizing praise for healthy eating behavior improved young children's eating behavior and helped them to lose weight better than negative comments from parents (Rotman & others, 2020)
- Coverage of a recent study that revealed 3- to 4-year-old African American children and children who lived at or below the poverty level were more likely to engage in more than 1 hour of screen time daily, compared with other young children (Kracht, Webster, & Staiano, 2020)
- Inclusion of recent research indicating that infants in a WIC program had higher cognitive scores on the Bayley Scales of Infant Development (Lakshmanan & others, 2020)
- New discussion of the special concern in 2020 about the well-being of young children in low-income families who attend early child care and education programs as many states closed these programs (which provide free meals and snacks) to reduce the spread of the coronavirus (Bauer & others, 2021)
- New data on the millions of children under 5 years of age (38 million) and children and adolescents 5 to 19 years of age (more than 340 million) who are overweight or obese worldwide (World Health Organization, 2020)
- Discussion of a recent study in which a higher level of parental monitoring was linked to adolescents having a healthier diet and reduced likelihood of being overweight (Kim & others, 2019)
- Inclusion of recent research with 10- to 17-year-olds in which obesity was linked to poor academic and coping skills (Gill & others, 2021)
- Updated data from 2017–2018 on the percentage of U.S. adults who are obese, which continues to increase and is now at 42.4 percent (Hales & others, 2020)
- Updated data on obesity rates for gender and ethnicity in the United States (Hales, 2020)
- Inclusion of recent research in which women, especially those who were overweight, reported increased anxiety, depression, and loneliness during the COVID-19 pandemic (Lofrano-Prado & others, 2021)

- New main section on overweight and obesity in older adults, including recent data showing that obesity has a slightly lower incidence in older adults than in middle-aged adults (Centers for Disease Control and Prevention, 2020)
- Coverage of recent research indicating that overweight and obesity in older adults is linked to earlier death (Zhang & others, 2019)
- Inclusion of new content on links between obesity and acceleration of aging (Noale, Limongi, & Magi, 2020)
- Discussion of recent research in which calorie restriction reduced inflammation in normal brain aging and in some neurodegenerative disorders such as Alzheimer disease (Fontana & others, 2020)
- Description of the World Health Organization's (2019) recent guidelines for 3- to 4-year-olds' physical activity, which they emphasized should be 3 hours per day in a variety of physical activities of any intensity, of which at least 60 minutes should be moderate- to vigorous-intensity physical activity, spread throughout the day
- Discussion of recent research indicating that regular physical activity combined with a high calcium intake improved the bone health of 3- to 18-year-olds (Yang & others, 2020)
- Inclusion of a recent research review of 27 studies involving children in which aerobic exercise was associated with reductions in body fat, fasting insulin, and inflammatory markers, as well as increased physical fitness (Lee, 2021)
- Description of a recent research review that concluded physical activity interventions improve cognitive performance (especially executive function) in overweight or obese children (Sun & others, 2021)
- Updated data on the continuing dramatic gender difference in exercise during adolescence, with 30.9 percent of adolescent males engaging in 60 minutes or more of physical activity in each of the last 7 days, compared with only 15.4 percent of their female counterparts (Underwood & others, 2020)
- Updated data on ethnic variations in exercise during adolescence (Underwood & others, 2020)
- Coverage of a recent experimental study that found a 12-week jump rope exercise program was effective in improving obese adolescent girls' body composition, blood pressure, insulin level, and self-regulation (Kim & others, 2020)
- Inclusion of recent research on adolescents with major depressive disorder (MDD) indicating that engaging in aerobic exercise for 12 weeks lowered their depressive symptoms (Jaworska & others, 2019)
- New description of a Chinese study in which adolescents showed more depressive symptoms after the appearance of COVID-19, but engaging in more physical activity during the quarantine helped to buffer the association between the pandemic and depressive symptoms (Ren & others, 2021)
- Discussion of a recent study that confirmed older adults who engage in regular exercise have higher levels of life satisfaction (Cho & Kim, 2020)
- Inclusion of a recent meta-analysis that concluded elastic band resistance training improved older adults' lower-body function and muscle mass (Herda & Nabavizadeh, 2021)
- Description of a recent meta-analysis that confirmed that physically active older adults have a greater likelihood of living longer (Cunningham & others, 2020)
- Coverage of a recent research review that concluded exercise is the most effective behavioral intervention for improving mitochondrial health (Memme & others, 2021)
- Inclusion of a study of middle-aged adults indicating that their estimated age based on exercise stress testing was a better predictor of how long they would live than their chronological age (Harb & others, 2020)
- Discussion of a recent meta-analysis that concluded moderate to vigorous physical exercise reduces depressive symptoms in older adults with an average age of 82 years (Klil-Drori & others, 2020)
- Description of a recent research review of community-dwelling older adults that indicated greater physical exercise was associated with larger brain volume (less brain atrophy) in the hippocampal, temporal lobe, and frontal lobe regions (Domingos, Pego, & Santos, 2021)
- Coverage of a recent meta-analysis that concluded physical exercise training, especially aerobic exercise, improved working memory, executive function, and cognitive flexibility in cognitively healthy older adults (Xiong & others, 2021)
- New content on the lack of exercise by many older adults, with about one in three men and one in two women engaging in no physical exercise by age 75 (Centers for Disease Control and Prevention, 2020)
- Coverage of a longitudinal study that found binge drinking in the twelfth grade was linked to driving while impaired (DWI), riding with an impaired driver (RWI), blackouts, and riskier driving up to 4 years later (Vaca & others, 2020)
- Updated national data on the extent of illicit drug use by U.S. eighth, tenth, and twelfth graders, which is now leveling off (Johnston & others, 2021; Miech & others, 2020). However, if marijuana use is subtracted from overall illicit drug use, there has been a significant decline in adolescent drug use.
- Updated national data on the dramatic increase in the rates of U.S. adolescents who are vaping nicotine, which greatly surpass their rates of regular cigarette smoking (Johnston & others, 2021)
- Description of recent research indicating that not only is e-cigarette smoking a gateway to subsequent combustible cigarette smoking, but it is also a gateway to marijuana use (Fadus, Smith, & Squegia, 2019)
- New coverage of marijuana use in adolescence, which has been increasing considerably in recent years (Johnston & others, 2021)
- Inclusion of recent research that found deviant peer affiliation was linked to multiple substance use (Greenwood & others, 2021)
- New description of a recent study of 15- to 25-year-olds that indicated online peer group affiliation and belonging were linked to stimulant and opioid use (Miller & others, 2021)
- Updated data on binge drinking in college students (Schulenberg & others, 2019)

- Updated data on when binge drinking peaks in the 18- to 30-year age range (Schulenberg & others, 2019)
- New content on the increasing use of marijuana by college students (Schulenberg & others, 2019)
- Inclusion of a recent meta-analysis that found resveratrol (found in red wine) is associated with lower systolic blood pressure (Weaver & others, 2021)
- New discussion of resveratrol's effect on reducing pulmonary arterial hypertension (Mirhadi & others, 2021)
- Coverage of recent research in which resveratrol suppressed tumor growth (Brockmueller & others, 2021)

Chapter 5: Motor, Sensory, and Perceptual Development

- Inclusion of recent research that found gross and fine motor skills early in infancy were linked to communication skills at 2 years of age (Valla & others, 2020)
- Recent research on urban predominately Latinx 6- to 11-year-olds that found low sports participation was linked to higher withdrawn and depressive symptoms (Matta & others, 2021)
- Updated and expanded content on the use of eye-tracking in research involving infants' attention (D'Souza & others, 2020), memory (Edgin & others, 2020), face processing (Wagner & others, 2020), intermodal perception (Ogren & Johnson, 2020), language (Franklin, Wright, & Holmes, 2020), object categorization (LaTourrette & Waxman, 2020), and understanding of others' needs (Koster & others, 2019)
- Coverage of a recent study that found infants' looking times were highest for blue hues and lowest for yellow-green hues (Skelton & Franklin, 2020)
- Updated and expanded discussion of infant pain
- New discussion of research on goal-directed problem solving that involves a coordination of perception and action, including a recent study of preschool children and adults solving a problem of inserting differently shaped objects into corresponding holes in a box (Ossmy & others, 2020). The research found differences in the way the preschool children and adults solved the problem, which involved planning a real-time cascade of perception and action.
- Inclusion of recent research with 8- to 10-year-olds indicating that better gross motor skills were linked to a higher level of visual working memory (van der Fels & others, 2020)
- Coverage of a recent study revealing that experiencing a second hip fracture decreased the longevity of older adults (Trevisan & others, 2020)
- Discussion of recent research that indicated proprioceptive training reduced falls and improved balance and mobility in older adults (Espejo-Antunez & others, 2020)
- Description of a recent study in which exergames improved the mobility and balance of older adults (Pacheco & others, 2020)
- Coverage of a recent study that found declines in visual acuity, contrast sensitivity, and depth perception were associated with cognitive decline in older adults (Swenor & others, 2019)

- Inclusion of a recent study in which hearing impairment was associated with accelerated cognitive decline in older adults (Alattar & others, 2019)
- Discussion of a recent study of older adults in which implementation of hearing aid use was linked to stable or improved executive function (Sarant & others, 2020)
- Description of recent research with individuals 65 years of age and older that found those with olfactory dysfunction died earlier (Choi & others, 2021)
- Coverage of a recent study in which older adults with a dual sensory impairment involving vision and hearing had more depressive symptoms than their counterparts who did not have a dual sensory impairment (Han & others, 2019)
- Inclusion of a recent study of older adults in which high levels of pain were associated with memory impairment (van der Leeuw & others, 2018)
- Description of a recent study that revealed an inability to smell some odors, such as peppermint, was linked to cognitive decline in older adults (Liang & others, 2020)

Chapter 6: Cognitive Developmental Approaches

- Inclusion of a longitudinal study that found attention at 5 months of age was related to A-not-B performance at 10 months and also to executive function in early childhood and reading competence at 6 years of age (Blankenship & others, 2019)
- Description of a recent study of adolescent motorcycle gangs in Indonesia in which their sense of invulnerability was strongly linked to how aggressive they were (Saudi, Hartini, & Barber, 2018)
- In the coverage of Vygotsky's theory, new discussion of a recent study that revealed mothers who engaged in sensitive parenting had children who used more private speech (Day & Smith, 2019)
- New commentary about one cognitive domain—wisdom—that might improve in older adults

Chapter 7: Information Processing

- Coverage of research with 8- to 12-year-olds that found faster processing speed predicted higher language abilities, such as expressive vocabulary (Park & others, 2020)
- Discussion of recent research indicating that slower processing speed was linked to children having ADHD or a learning disability (Kramer & others, 2020)
- Coverage of a recent German study of 40- to 85-year-olds that found higher processing speed was related to greater life satisfaction (Siedlecki & others, 2020)
- Inclusion of recent research that found drivers 70 years of age and older with slower visual processing speed were more likely to have crashes (Swain & others, 2021)
- Description of recent research with fifth-graders in which faster processing speed was linked to better reading fluency and comprehension (Gerst & others, 2021)

- New content indicating that joint attention especially improves between 9 and 12 months of age (Boyer, Harding, & Bertenthal, 2020)
- Description of a recent study in which joint attention was a key factor linking positive parenting with executive function in infants in low-income families (Brandes-Aitken & others, 2020)
- Inclusion of a recent study in which impaired initiation of joint attention at 12 months was linked to subsequent diagnosis of autism spectrum disorder and language delay at age 3 (Franchini & others, 2019)
- Description of recent research with 8- to 18-month-old infants that revealed those from higher-SES families responded to more sophisticated cues for joint attention than infants from lower-SES families (Reilly & others, 2021)
- Coverage of a recent study of 4- to 5-year-olds in which two weeks of training on action-like mini games improved the young children's visuo-spatial attention skills (Nava, Focker, & Gori, 2020)
- Discussion of a recent study that found executive attention was a good predictor of self-regulation (Tiego & others, 2020)
- Description of recent research with 4- to 6-year-olds in which better attention was linked to improved math skills (Cueli & others, 2020)
- Coverage of a recent study in which heavier media multi-tasking was linked to greater attention lapses and increased forgetting (Madore & others, 2020)
- Expanded coverage of controlling attention in adolescence (Brooker & others, 2020)
- Inclusion of a recent study in which executive attention training improved the selective attention and divided attention of older adults (Yang & others, 2019)
- Discussion of a recent research review that linked game-based training to improved selective attention in older adults (Wang & others, 2021)
- Description of a longitudinal study that followed individuals from 1.5 to 16 years of age and found that the age of first memory increased from 40 to 52 months as adolescents aged from 12 to 16 years of age (Reese & Robertson, 2019). In this study, individual differences in age of first memory were linked to the extent to which mothers had engaged in elaborative reminiscing.
- Inclusion of recent research with preschool children in which better working memory was linked to improved number knowledge (Traverso & others, 2021)
- Description of recent research with first- to third-graders in which working memory improvement predicted gains in math problem-solving skills in bilingual children (Swanson, Arizemendi, & Li, 2021)
- Coverage of research indicating that children with ADHD have working memory deficits (Kofler & others, 2020; Valladares & others, 2020)
- Discussion of recent research confirming that working memory is a foundational cognitive ability, with the frontoparietal network playing a key role in its development (Rosenberg & others, 2020)
- Inclusion of a recent study that revealed Latinx older adults who were more acculturated in the United States had better working memory than their less-acculturated counterparts (Mendoza & others, 2021)
- Coverage of a recent study in which a cognitive training program that increased frontal and parietal lobe brain activity improved older adults' working memory (Gajewski & Falkenstein, 2018)
- Description of a recent study that found longer encoding time improved older adults' working memory (Bartsch, Loaiza, & Oberauer, 2019)
- New discussion of a recent study in which age-related decline in episodic memory impaired access to specific autobiographical events and the details involved (Peters, Fan, & Sheldon, 2019)
- New content on the "reminiscence bump" in autobiographical memories in which older adults often remember more than would be expected from their second and third decades of life (Kowalski & McCord, 2020)
- Coverage of a recent study of 60- to 88-year-olds that revealed the first-time experience of a memory, how important the memory was, and the memory's emotional salience were associated with the reminiscence bump (Wolf & Zimprich, 2020)
- Description of recent research with older adults in which those with mild cognitive impairment showed slower reaction time but had largely preserved implicit memory (Hong & others, 2020)
- Inclusion of recent research indicating that older adults with good retrieval strategies did not show any deficits in source memory (Salhi & Bergstrom, 2020)
- Description of a recent study in which individuals with mild cognitive impairment had impaired prospective memory (Lejeunesse & others, 2020)
- Coverage of a recent study that found a higher level of executive function was related to skill in learning new words (Kapa & Erikson, 2020)
- Discussion of a recent study of preschool children in which lower levels of executive function were associated with inattention and hyperactivity (Landis & others, 2021)
- Description of a recent study in which a lower level of executive function in preschool children was linked to the onset and worsening of attention deficit hyperactivity disorder and depression at 6 to 12 years of age (Hawkey & others, 2019)
- Coverage of a recent study of preschool children in which conditions of socioeconomic disadvantage exerted a stressful influence on parent-child interactions and impaired young children's emergent executive function skills (Baker & Brooks-Gunn, 2020)
- Discussion of a recent study that found children's executive function was a key factor linking early-life family income to later academic achievement (Deer, Hastings, & Hostinar, 2020)
- Inclusion of a recent study of different components of executive function in which inhibition and working memory were associated with children's mindfulness (Geronimi, Arellano, & Woodruff-Borden, 2020)

- Coverage of a recent series of meta-analyses that sought to identify interventions that were most likely to improve children's executive function and found (a) for typically developing children, mindfulness training was effective, and (b) for non-typically-developing children (including those with neurodevelopmental or behavioral problems), strategy teaching focused on self-regulation and biofeedback-enhanced relaxation were the most effective interventions (Takacs & Kassai, 2019)
- Inclusion of a recent study of individuals 10 to 86 years of age in which executive function increased in adolescence and into early adulthood, followed by reductions in working memory and inhibition during the thirties and forties and continued declines in late adulthood (Ferguson, Brunsdon, & Bradford, 2021)
- Discussion of a recent study of older adults in which the highest of four executive function groups was differentiated from the lowest of the four groups by the following factors: education, more novel cognitive activity, lower pulse pressure, younger age, faster gait, lower BMI, and better balance (Caballero & others, 2021)
- Description of a recent study of cognitively healthy older adults that indicated regular physical exercise training, especially aerobic exercise, improved the following key components of executive function—working memory, cognitive flexibility, and cognitive inhibition (Xiong & others, 2021)
- Coverage of a recent study that revealed executive function in older adults increased their sense of control over obstacles that interfered with their ability to attain goals, which in turn was associated with greater life satisfaction (Toh, Yang, & Hartanto, 2020)
- Discussion of recent research in which executive function was linked to positive mood in older adults (Cotter & others, 2020)
- Inclusion of a recent study in which mindful parenting was effective in improving children's social decision making (Wong & others, 2019)
- Description of a recent study in which highly educated older adults had better executive function than their less-educated counterparts, which was associated with slower age-related reduction in executive function (Chen & others, 2019)
- Discussion of a recent research review of 20 executive function training studies which concluded that such training promotes cognitive and neural plasticity in older adults (Nguyen, Murphy, & Andrews, 2019)
- Inclusion of a recent study involving 53- to 86-year-olds in which present-moment attention was linked to better affective well-being (Mahio & Windsor, 2021)
- Coverage of recent research in which a mindfulness-awareness program improved the working memory and divided attention of older adults with mild cognitive impairment (Yu & others, 2021)
- Description of recent research with middle-aged and older adults in which higher mindfulness was associated with more positive aging expectations (Fiocco & Meisner, 2020)
- Discussion of a recent study of older Mexican adults that revealed in addition to one's own education, a spouse's education also was associated with better cognitive ability (Saenz & others, 2020)
- Coverage of recent research indicating that a higher level of education has a strong effect on older adults' working memory (Saito & others, 2020)
- Inclusion of a recent study of Puerto Rican older adults that revealed a higher level of cognitive complexity in work was associated with a lower risk of cognitive impairment (Andel & others, 2019)
- Description of a recent study of older Latinxs that found cardiovascular risk factors were linked to lower cognitive function (Tarraf & others, 2020)
- Coverage of a recent study that revealed high blood pressure was associated with lower cognitive function in older adults (Naharci & Katipoglu, 2021)
- Discussion of a recent study of older adults that found depression was linked to lower executive attention, memory, and language performance (MacAulay & others, 2020)
- Inclusion of recent research that indicated the risk of cognitive decline was lower in older adults who engaged in either moderate-to-high intensity exercise or low-intensity exercise (Endeshaw & Goldstein, 2021)
- Coverage of research involving two different samples of older adults in which a higher level of cognitive activity was related to better cognitive functioning (Casaletto & others, 2020)
- Coverage of a study of more than 1,000 middle-aged and older adults in which overall cognitive decline accelerated considerably at 3.7 years on average before death (Wilson & others, 2020). In the same study, terminal decline accounted for a significant percentage of decline in specific cognitive processes—for example, 70 percent of the decline in episodic memory.
- Discussion of the Mayo Clinic Study of Aging (Krell-Roesch & others, 2019) in which engaging in a higher number of mentally stimulating activities (book reading, computer use, social activities, game playing, and craft activities) was associated with a decreased risk of mild cognitive impairment
- Coverage of a recent study of older adults in China that linked high levels of both cognitive activity and physical activity with greater capacity to maintain and preserve cognitive function (Wu & others, 2021)
- Inclusion of a recent research review that concluded low levels of social isolation characterized by high engagement in social activity and large social networks were linked to better cognition (memory and executive function, for example) in older adults (Evans & others, 2019)
- New commentary noting that cognitive gains from cognitive training games are typically constrained to the specific task being assessed and do not generalize to broader cognitive function (Rogers, Blocker, & Dupuy, 2020)
- Coverage of a recent study of older adults that found an in-home exergame training program improved their executive function (Adcock & others, 2020)
- Description of a recent study of 7- and 8-year-olds in which task-specific metacognitive monitoring skills in noticing one's own errors and learning from mistakes were linked to superior performance in arithmetic (Bellon, Fias, & DeSmelt, 2019)

Chapter 8: Intelligence

- New description of Sternberg's (2021a, b) view of successful intelligence that emphasizes the importance of setting and accomplishing personally meaningful goals. His view also stresses that goal setting involves exploring and figuring out one's own strengths and weaknesses and capitalizing on the strengths while also correcting or improving on the weaknesses.
- New coverage of a recent meta-analysis in which emotional intelligence was the third best predictor of academic performance, following general intelligence and the personality trait of conscientiousness (MacCann & others, 2020)
- Discussion of a recent survey of 102 experts on intelligence around the world that found most experts supported the concept of general intelligence (*G*) (Rindermann, Becker, & Coyle, 2020)
- Inclusion of a recent Danish study in which IQ test scores were positively associated with educational attainment in early and middle adulthood (Hegelund & others, 2020). Also in this study, individuals with low intelligence in childhood benefitted the most from education.
- New coverage of content on how IQ gains continue to occur in the United States and developing countries (Flynn, 2020)
- New discussion of Sternberg's (1998, 2019) balance theory of wisdom
- New description of the views of Igor Grossman and his colleagues (2020) and Judith Gluck (2020) stating that wisdom involves balancing your perspectives with those of others and being motivated to attain some common good within a larger group, such as one's family, an institution, or even a country. These experts believe that metacognitive thinking with a moral grounding is a critical factor in attaining wisdom.
- Updated estimate of the percentage of children who are classified as gifted in the United States (National Association for Gifted Children, 2020)
- Inclusion of Sternberg's (2018) recent view of giftedness, which he believes should include not only assessment of successful intelligence but also wisdom
- New quotation that supports the role of intellectual risk-taking in creativity

Chapter 9: Language Development

- Inclusion of changes and updates based on feedback from leading expert Virginia Marchman
- Discussion of a recent study in which infants at high risk for autism spectrum disorder used fewer gestures than their counterparts who were at low risk for autism (Choi & others, 2021). Also in this study, parents who gestured more with their 12-month-old infants had children with a better vocabulary at 36 months.
- Expanded content on Richard Aslin's (2020) conclusions that in addition to word segmentation, statistical learning has been documented as important in other domains such as musical tones, phonetic categories, sequences of visual

shapes, sequences of motor responses, and combination of object parts in complex visual scenes

- New content on the variability of the ages when infants and toddlers learn new words as well as the timing of vocabulary spurts. Also, new commentary on how some children experience a vocabulary spurt while others make slow and steady progress in learning new words.
- Description of a recent study in which learning new words at 21 months was associated with receptive vocabulary at 7 to 10 years of age (Rajan & others, 2019)
- Coverage of a recent study in which conversational turn counts at 18 to 24 months were linked to receptive and expressive vocabulary development 10 years later (Gilkerson & others, 2018)
- New discussion of a study involving English-speaking preschool children that revealed those from lower-income families had less advanced language-processing skills, as well as a smaller vocabulary and syntax deficiencies (Levine & others, 2020)
- Inclusion of recent research with low-income families in which 15-month-old infants whose mothers had a college education had much better language skills than their low-income counterparts whose mothers did not have a college education, and these differences were still present at 3 years of age (Justice & others, 2020)
- Coverage of a recent meta-analysis in which sensitive responsiveness by parents in low-SES families was more strongly linked to improvement in young children's language development than was the case in middle- and high-SES families (Madigan & others, 2019)
- Description of a recent study that found children living in extreme poverty had much smaller vocabularies and lower reading comprehension (Lervag & others, 2019)
- New *Connecting with Research* interlude on the effects of communication difficulties between hearing parents and deaf children
- Discussion of recent research in which teacher-perceived conflict predicted lower interest and pre-academic literacy skills in young children (Pakarinen & others, 2021)
- New coverage of the important concept of "learning to read" versus "reading to learn," with information regarding the typical timing of the switch between these two modes of reading
- Inclusion of a recent analysis across a number of countries that found bilingual children consistently had better executive function than monolingual children (Schirmbeck, Rao, & Maehler, 2020)
- Description of a recent study indicating a bilingual advantage for the alerting subcomponent of attention (Dash & others, 2019)
- New commentary that some recent research studies have not found a cognitive advantage for bilingual children (Dick & others, 2019; Donnelly & others, 2019)
- Discussion of recent research by Virginia Marchman and her colleagues (2020) in which early Spanish language development at 2 years of age was linked to stronger English

- skills and maintenance of good Spanish language skills at 4½ years of age
- Coverage of recent research with young children that found shared book reading at home and school in a second language not only improved their second-language learning but also that the perspective taking emphasized in the shared reading program increased the children's ability to shift perspectives and understand others' emotional states (Grover & others, 2020)
 - New discussion of a recent study of Chinese children indicating that English as a foreign language bilingual children outperformed monolingual Chinese children on an attention task and also had higher activation of their prefrontal cortex (Li & others, 2019)
 - Inclusion of a recent study that confirmed older adults have more difficulties in narrative discourse than younger age groups (Babaei & others, 2019)
 - Coverage of a recent study of individuals with mild cognitive impairment in which those who were bilingual had better verbal memory than their monolingual counterparts (Rosselli & others, 2019)
 - Description of research with 59- to 79-year-olds in which a 4-month-long second language program produced improvements in global cognitive functioning and connectivity among different regions of the brain's frontal and parietal lobes (Bubbico & others, 2019)
 - Discussion of a recent study that found parental coaching at 6, 10, and 14 months of age involving child-directed speech, back-and-forth interactions, and parentese speech increased infants' conversational turn-taking and language skills (production of words, for example) at 18 months of age (Ferjan Ramirez & others, 2020)
 - Inclusion of a recent study of 9- to 18-month-old infants in which book sharing resulted in more parent talk, child talk, and interactions than other language activities (toy play, personal care, and mealtime interactions, for example) (Clemens & Kegel, 2021)
 - Description of a recent meta-analysis that concluded shared picture book reading was linked to children having better expressive and receptive language skills (Dowdall & others, 2020)
 - Coverage of a recent study that revealed parent-child book reading interactions with 1- to 2.5-year-olds were linked to better language development in terms of receptive vocabulary, reading comprehension, and motivation to read in elementary school (Demir-Lira & others, 2019)
 - Inclusion of a recent research review that concluded young children's emotion regulation at 3 to 5 years of age plays an important role in preparing children for school readiness for kindergarten and elementary school in both socioemotional and academic domains (Harrington & others, 2020)
 - Coverage of a recent study that found emotion-dismissing mothers' parenting was linked to toddlers' lower emotional competence while mothers' emotion-coaching parenting was associated with their toddlers' higher emotional competence (Ornaghi & others, 2019)
 - Description of a recent study involving 3- to 4-year-olds in which paternal emotion coaching predicted children's positive emotional expression one year later (Gerhardt & others, 2020)
 - Coverage of a recent Chinese study in which the "Tuning in to Kids" program that emphasizes emotion coaching was effective in improving the emotion coaching and decreasing the emotion dismissing of mothers of preschool children (Qiu & Shum, 2021)
 - New summary of key supportive and unsupportive caregiver emotion socialization with children based on research in the last two decades (Spinrad, Morris, & Luthar, 2020)
 - Inclusion of a recent study that found letting infants cry it out in the first six months was not linked to adverse behavioral development and attachment at 18 months of age (Bilgin & Wolke, 2020)
 - Description of a recent study that revealed when parents let their infant cry it out, it was associated with highly problematic behavior at 3 months of age but with reduced problematic behavior at 12 months of age (Giesbrecht & others, 2020)
 - Discussion of a longitudinal study that revealed happiness at 1.5 years of age predicted intelligence in childhood (6 to 8 years of age) and educational attainment in adulthood (29 years of age) (Coffey, 2020)
 - Coverage of a recent study that indicated when fear was assessed at 6, 8, 10, and 12 months, fear peaked at 10 months (Gartstein, Hancock, & Iverson, 2018)
 - Inclusion of a recent study of young children in which a lower level of maternal depression and a higher level of children's executive control predicted a higher level of children's emotion knowledge (Thompson & others, 2020)
 - Description of a recent study in which children's emotion regulation, expressed in being able to manage feelings of sadness and worry, served as a buffer against the internalized symptoms associated with peer victimization (Cooley & others, 2021)
 - Coverage of a recent study in which young children with better emotion regulation were more popular with their peers (Nakamichi, 2020)
 - Discussion of a recent study of preschool children in which frequent expression of anger predicted lower social competence one year later (Lindsey, 2019)
 - Inclusion of recent research in which girls had higher emotion regulation skills at 9 to 12 years of age than at 13 to 16 years of age, while the reverse occurred for boys (Sanchis-Sanchis & others, 2020)

Chapter 10: Emotional Development and Attachment

- Revisions based on feedback from leading experts Martha Ann Bell and Laura Carstensen
- Discussion of recent research on healthy, full-term newborn crying duration using a digital recording device that indicated the average crying time is greater than previously indicated in parent reports of infant crying duration (Cabana & others, 2021)

- New section, “Social-Emotional Education Programs” (DiPerma, Frey, & Hart, 2021), including two increasingly implemented school programs: Second Step and CASEL
- New coverage of a recent study that found better self-regulation at 10 years of age was linked to maternal support at 5 years of age and also predicted better adolescent adjustment at 15 years of age (Perry & others, 2020)
- New commentary on the stress that the coronavirus pandemic has caused for children and some strategies parents can use to help children cope with the uncertainties of the virus
- Inclusion of a recent meta-analysis that found anxiety, depression, irritability, boredom, inattention, and fear were the main new-onset psychological problems that occurred in children during the COVID-19 pandemic (Kumar Panda & others, 2021)
- Extensive revision of the discussion of adolescent depression in the section on adolescent emotional development
- Coverage of a recent study in which low self-esteem and negative emotion management were linked to adolescent depression (Fiorilli & others, 2019)
- Description of recent research in which interpersonal stress was linked to increased depression in adolescent girls (Slavich & others, 2020)
- Coverage of a recent study in which higher levels of maternal and peer emotion support were linked to lower levels of adolescent girls’ daily negative affect and also predicted increases in the girls’ emotion regulation over time (Cui & others, 2020)
- Inclusion of a recent research review that concluded adolescents are very poor at recognizing depression, more likely to seek help from informal rather than professional sources, and tend to attach stigma to depression (Singh, Zaki, & Farid, 2019)
- Discussion of a longitudinal study that found a majority of adolescents who had a major depressive episode were likely to experience a recurrence of depression 15 years later (Alaie & others, 2019). In addition, depression during adolescence was associated with other mental health problems, low educational attainment, and problems in intimate relationships 15 years later.
- Description of a number of changes in the coverage of emotional development and aging based on feedback and editing by leading expert Laura Carstensen, including a revised description of her social selectivity theory
- Coverage of a recent study of 18- to 76-year-olds revealing that even during the prolonged stress of the COVID-19 pandemic, older adults reported more positive and less negative emotion than younger participants (Carstensen, Shavit, & Barnes, 2020)
- Expanded recommendations on parenting strategies for improving infants’ and children’s temperament
- Discussion of a recent study of low-income families in which having a difficult temperament at 0 to 12 months of age predicted behavior problems at 36 months (Maltby & others, 2019)
- Coverage of a recent study in which Latinx infants were at increased risk for obesity when their mothers had an anxious or avoidant insecure attachment style than a secure attachment style (Hepworth & others, 2021)
- Inclusion of a recent longitudinal study in which insecurely attached infants had worse emotion-regulation strategies than their securely attached counterparts in relationship-challenging contexts 20 to 35 years later (Girme & others, 2021)
- Description of a recent research review concluding that DNA methylation associated with infant attachment may influence stress regulation and socioemotional function (Craig & others, 2021)
- Updated data on the percentage of fathers who are staying at home and caring for their children (Livingston, 2018)
- New commentary about the increasing number of fathers who are working at home and likely to be around their children more than in the past because of the COVID-19 pandemic
- Coverage of a recent NICHD study that found sensitive, nurturing care of 6- to 54-month-olds predicted a higher incidence of prosocial behavior in first-grade children (Brownell & Drummond, 2020)
- New discussion of research indicating that adolescents who are insecurely attached are more likely to have emotional difficulties and engage in problem behavior such as drug abuse (Theoret & others, 2020)
- Description of a recent study of Lebanese adolescents that found those who were securely attached had lower rates of addiction to alcohol and cigarettes than their insecurely attached counterparts (Nakhoul & others, 2020)
- Coverage of a recent Israeli study in which avoidant and anxiously attached adolescents were less effective in coping with stress (Agbaria, 2021)
- Inclusion of a recent study that indicated maltreated and delinquent adolescents had high levels of insecure attachment (Protic & others, 2020)
- Discussion of a research review that revealed insecure attachment styles increased the risk of engaging in suicidal thoughts (Zortea, Gray, & O’Connor, 2021)
- Description of a recent study that indicated college students with an anxious attachment style were more likely to be addicted to social networking sites (Liu & Ma, 2019)
- Coverage of a recent meta-analysis that revealed adults with insecure attachment styles were more likely to engage in risky sexual behaviors (Kim & Miller, 2020)
- Updating and rewriting of section on attachment in late adulthood for greater clarification
- Discussion of a recent study in which older adult females with an avoidant attachment style were more likely to be socially isolated (Spence, Jacobs, & Bifulco, 2020)
- Description of a recent study of older adults that revealed those with secure attachment were competent in daily life, which in turn was related to psychological adjustment (Martin, Horn, & Allemand, 2021)
- Inclusion of a recent study that revealed a higher level of anxiety and depression symptoms in mothers in the last trimester of pregnancy was associated with infants’ externalizing problems at 2 years of age and a higher level of these

symptoms in fathers in the last trimester of pregnancy was related to a higher level of infants' internalized and externalized problems at 14 months of age (Hughes & others 2020)

- Description of a recent study involving the Bringing Home Baby project that found fathers who participated in the program felt more appreciated by their wives and that the mothers of the infants were more satisfied with the division of labor when fathers were more involved in parenting (Shapiro, Gottman, & Fink, 2020)
- Coverage of a recent study in which greater self-disclosure was associated with higher relationship intimacy offline but with lower relationship intimacy with romantic partners but not friends online (Lee, Gillath, & Miller, 2019)
- Discussion of a recent study that found being in a romantic relationship, interacting with a partner, and investing more time and effort in the relationship all predicted greater well-being (Hudson, Lucas, & Donnellan, 2020). However, these effects were moderated by relationship quality.
- Inclusion of information from a recent national poll of singles in the United States regarding how the COVID-19 pandemic had changed their dating habits (Match.com, 2020)
- Coverage of a recent cross-cultural study of more than 7,000 individuals in 25 countries that found support for the universality of Sternberg's triarchic theory of love (Sorokowski & others, 2021)
- New *Connecting with Research* interlude exploring the challenges of dealing with unrequited love (Clark & others, 2020)

Chapter 11: The Self, Identity, and Personality

- Discussion of recent research that revealed perspective taking underlies children's prosocial behavior and that the capacity to take others' perspectives develops during the early elementary school years (Sobel & Blankenship, 2021)
- Inclusion of recent research indicating that children who engage in less perspective taking are less likely to give to others (van de Groep, Zanolie, & Crone, 2020)
- Coverage of a recent research review in which reminiscence therapy with older adults was linked to reduced depressive and anxiety symptoms, improved life satisfaction, and increased social engagement (Shropshire, 2020)
- Inclusion of a recent study that revealed reminiscence therapy reduced the cognitive impairment, anxiety, and depression of post-stroke patients (Cheng & others, 2021)
- Description of recent research indicating that reminiscence therapy improved the cognition and quality of life of Alzheimer disease patients (Perez-Saez & others, 2021)
- New section on narcissism (Weiss & others, 2021)
- New content on the important distinction between vulnerable narcissism and grandiose narcissism and their links to different outcomes (Donnellan, Ackerman, & Wright, 2021)
- Coverage of a recent study that found grandiose narcissists actually were characterized by greater life satisfaction than vulnerable narcissists but also were characterized as inauthentic (Kaufman & others, 2020)

- Discussion of a recent study of Chinese adolescents in which mental health outcomes of narcissists depended on their self-esteem—narcissism and high self-esteem were associated with positive mental health outcomes, while narcissism and low self-esteem were linked to problematic mental health outcomes (Xu, Huebner, & Tian, 2020)
- Description of a recent study in three countries—Brazil, Portugal, and Spain—that found parental warmth was a key factor in adolescent self-esteem in all three countries (Isabel Martinez & others, 2020)
- Inclusion of a recent study in which parental warmth, monitoring, low maternal depression, economic well-being, and father presence (versus father absence) were linked to higher self-esteem in children and adolescents (Krauss, Orth, & Robins, 2020)
- Discussion of a 10-year longitudinal study in which high self-esteem in adolescence predicted more long-term personal goals, better self-rated physical health, and fewer depressive symptoms in emerging adulthood (Arsandaux, Galera, & Salamon, 2021)
- Updated and expanded coverage of outcomes of self-esteem levels in a number of areas, including sexual health (Sakaluk & others, 2020)
- Inclusion of a longitudinal study with Mexican-origin adolescents in which a reciprocal relation between self-esteem and academic achievement was found (Zheng & others, 2020)
- Description of a meta-analysis that concluded the findings did not support the notion that self-evaluations reach a critical low point in many domains in early adolescence (Orth & others, 2021)
- Coverage of a recent study that revealed maternal and paternal positive parenting (positive mood, good communication skills, and assertiveness) were associated with higher effortful control in young children (Neppl & others, 2020)
- Inclusion of recent research indicating that a majority of 4- to 5-year-old children were developmentally on track with self-regulation (Claussen & others, 2021). However, compared with children described as not on track, those who were on track lived in financially and socially advantaged environments and were less likely to undergo family adversity.
- Expanded and updated coverage of the importance of self-regulation in adolescence (Casey & others, 2019)
- Description of a recent meta-analytic review in which low self-regulation at 8 years of age was linked to externalizing problems, depressive symptoms, obesity, cigarette smoking, and illicit drug use at 13 years of age (Robson, Allen, & Howard, 2020)
- Coverage of a longitudinal study from birth to 45 years of age that revealed individuals with better self-control in childhood aged more slowly physically as adults and had fewer signs of aging in their brains (Richmond-Rakerd & others, 2021). Also in this study, in midlife these individuals were better equipped to manage later-life health, financial, and social demands.
- Discussion of a recent study of 13- to 16-year-olds in which females reported having a higher level of self-control and self-monitoring than their male counterparts (Tetering & others, 2020)

- Inclusion of a recent study of Mexican-origin adolescents identifying the factors in their lives that were linked to different levels of effortful control (Atherton, Lawson, & Robins, 2020)
- Coverage of a recent study in which selective optimization with compensation (SOC) strategies improved the job performance of adults when they were faced with intense job demands (Mauno & others, 2020)
- Inclusion of a recent study in which SOC strategies were linked to successful aging in Korean women (Han & Ko, 2021)
- Description of a recent study that revealed emerging adults who were identity confused were more likely to present an ideal self and a false self on Facebook, indicating they were less realistic and more socially desirable in their online self-presentation (Michikyan, 2020)
- New discussion of a longitudinal study from early adolescence to emerging adulthood that confirmed the existence of a dual-cycle identity formation process (Becht & others, 2021)
- Discussion of a recent study of Flemish 17- to 26-year-olds in northern Belgium in which commitment and responsibility characterized older and employed participants more than younger and unemployed participants (Mattys & others, 2020)
- New coverage of a study of identity development from 25 to 33 years of age (Eriksson & others, 2020). In this study, fewer individuals were characterized by a moratorium status and more by an identity achievement status as they became older during this time frame.
- Much expanded and updated coverage of ethnic and racial identity based on feedback from leading expert Kevin Cokley
- New coverage of racial identity
- Inclusion of recent research on 13- to 17-year-old African American girls' racial socialization revealing that pride was linked to positive feelings about being Black while depression was associated with oppressive messages about Black women (Stokes & others, 2020)
- Description of a recent study of 11- to 12-year-olds that found more frequent discrimination from peers was linked to lower ethnic-racial commitment (Del Toro, Hughes, & Way, 2021)
- Coverage of a recent study of adolescents that revealed on days when adolescents reported more negative peer ethnic/racial interaction, they had lower school engagement (Wang, 2021). Also in this study, on days when they reported more positive peer ethnic/racial interaction, they engaged in more prosocial behavior.
- Inclusion of a recent research review of Latinxs that concluded perceived discrimination was linked to poorer mental health but that having a greater sense of ethnic pride attenuated this link (Andrade, Ford, & Alvarez, 2021)
- New discussion of the singular concept of ethnic-racial identity (ERI) (Atkin & others, 2021)
- Description of a recent study of Cherokee young adolescents' ERI in which both girls and boys reported strong positive attitudes about being a Cherokee (Hoffman, Kurtz-Coates, & Shaheed, 2021). However, youths' perceptions that others hold Cherokees in high regard decreased across the years.
- Coverage of a recent study that revealed enhanced resilience against discrimination in Latinx youth when they had more experiences with ethnic family socialization and had engaged in ethnic identity exploration and resolution (Martinez-Fuentes, Jager, & Umaña-Taylor, 2021)
- Expanded and updated discussion of the Big Five Factors of personality, including links to mental health (Widiger & McCabe, 2021) and achievement (Szalma, 2021)
- Discussion of a recent study of the Big Five factors in which conscientiousness was the strongest predictor of living longer (Chapman & others, 2020). In this study, the activity dimension of extraversion was a better predictor of longevity than other dimensions.
- Description of a recent study that indicated adolescents high in conscientiousness are less likely to spend excessive time on social networking sites (Yanez & others, 2020)
- Coverage of a recent study that revealed adolescents high in conscientiousness have greater satisfaction with life (Heilmann & others, 2020)
- Inclusion of recent research indicating that adults high in conscientiousness are more satisfied with their marriage, while those high in neuroticism are less satisfied with their marriage (Sayehmiri & others, 2020)
- Description of a recent study that found adults high in extraversion had a higher perceived level of well-being (Ortet & others, 2020)
- Coverage of recent research indicating that individuals high in agreeableness were less likely to engage in physical activity (Hearon & Harrison, 2020)
- Discussion of recent research that revealed individuals characterized by high neuroticism avoided engaging in selfie-posting and selfie-editing, while those with high extraversion and agreeableness engaged in more selfie-posting and selfie-editing (Chaudhari & others, 2019)
- Inclusion of a recent study of adolescents in which high neuroticism was linked to having more symptoms of anxiety, depression, and obsessive-compulsive disorder (Tonarely & others, 2020)
- Inclusion of a recent study in which older adults with higher neuroticism and lower conscientiousness had more difficulty in their cognitive control of processes needed to engage in goal-directed behavior (Bell, Hill, & Stavrinis, 2020)
- Coverage of recent research with adolescents indicating that higher levels of optimism were linked to lower levels of suicide risk (Yi & others, 2021)
- Discussion of a recent study of Latinx young adolescents that found higher resilience and school attachment predicted higher optimism (Taylor & others, 2020)
- Description of a recent study that revealed regardless of growing up in disadvantaged circumstances as a child, being optimistic as an adult was linked to being a non-smoker, consuming a healthy diet, and having a healthy body mass index (Non & others, 2020)

- Inclusion of recent research that revealed greater optimism at 85 and 90 years of age was associated with five-year survival from 85 to 90 and from 90 to 95 (Jacobs, Maaravi, & Stessman, 2021)
- New *Connecting with Research* interlude exploring how an individual's personality profile might be connected to their diversity orientation and attitudes about diversity
- Coverage of a recent study of college students in which daily hassles predicted subsequent health complaints (Tran & others, 2021)
- Discussion of recent research in which a 6-week generativity program with middle-aged and older adults produced positive outcomes including increases in perceived social support and decreases in loneliness (Moieni & others, 2021)

Chapter 12: Gender and Sexuality

- Extensive editing, revision, and updating based on leading expert Sabra Katz-Wise's feedback and comments
- Description of a recent study with 18-month-olds in which fathers with higher testosterone levels were more likely to engage in child maltreatment and negative parenting (Rodriguez, Granger, & Leerkes, 2021)
- Inclusion of recent research with 15- to 39-month-olds that revealed mothers tended to protect young children from distress, while fathers were more likely to assist their children in coping with frustration (Deichmann & Ahnert, 2021)
- Discussion of a recent study of 4- to 9-year-olds in which gender-nonconforming children were perceived more negatively than gender-conforming children (Kwan & others, 2020). Also in this study, gender-nonconforming boys were perceived more negatively than gender-nonconforming girls.
- Inclusion of recent research that found young adolescent boys were more likely to feel pressure from parents to engage in gender-conforming behavior and to feel pressure from peers to avoid engaging in gender-nonconforming behavior (Jackson, Bussey, & Myers, 2021)
- New *Connecting with Research* interlude exploring preschool children's perceptions of gender and careers
- Coverage of a recent study of 3- to 7-year-olds that revealed boys were more likely than girls to engage in gender stereotyping, especially with masculine stimuli such as toys, and to be sanctioned for not conforming to gender stereotypes (Skocajic & others, 2020)
- Inclusion of recent research with 14- to 18-year-olds that found believing in innate math ability was associated with lower self-perceived ability and intrinsic motivation in girls but not in boys (Heyder, Weidinger, & Steinmayr, 2021)
- New commentary noting that categories such as gender and ethnicity intersect and create systems of power and privilege as well as oppression and discrimination
- Updating of national scores in eighth-grade math (National Assessment of Educational Progress, 2019a) and fourth-grade reading (National Assessment of Educational Progress, 2019b), with gender scores virtually even in math but girls still scoring higher than boys in reading
- Inclusion of a recent study of preschool children that found differences favoring girls on a wide range of pre-academic and cognitive skills, including attention, language, and literacy (Brandlistuen & others, 2020)
- New coverage of recent research that revealed girls show more emotional concern for others than boys do (Trentini & others, 2021)
- New description of a recent study that found girls had much better self-regulation than boys at 13 to 16 years of age (van Tetering & others, 2020)
- Extensively edited, expanded, and updated coverage of transgender individuals
- New discussion of the term *two-spirit* that is used by some indigenous North Americans to refer to individuals who are perceived as having both male and female spirits within them
- New content indicating that 40 percent or more of transgender individuals attempt suicide at least once (Dickey & Budge, 2020)
- Coverage of a recent study of transgender individuals in which gender affirmation was associated with a lower rate of suicidal ideation and psychological distress, while discrimination was linked to a higher rate of suicidal ideation and psychological distress (Lelutiu-Weinberger, English, & Sandanpitchai, 2020)
- Description of recent research that confirmed victimization and discrimination predicated increased suicidal ideation, while community connection reduced suicidal ideation (Rabasco & Andover, 2021)
- Inclusion of a recent study that found a majority of transgender individuals had experienced discrimination in the last year and those who encountered greater discrimination were more likely to experience depression and anxiety (Puckett & others, 2020)
- New commentary that because trans individuals experience considerable discrimination, it is important that society provide a more welcoming and accepting attitude toward them (Vargas, Huey, & Miranda, 2020)
- Coverage of a recent study that found psychotherapy targeting internalized stigma and non-affirmation experiences can be effective in reducing gender-related stress and increasing resilience in transgender persons (Budge, Sinnard, & Hoyt, 2020)
- New *Connecting with Careers* feature on Dr. Stephanie Budge, psychotherapist and researcher focusing on transgender issues
- Inclusion of recent research indicating increased rates of sexual inactivity among young adults from 2008 to 2018 and possible reasons for this increase (Ueda & others, 2020)
- Discussion of a recent study of young adolescents at 14 sites across 4 continents that found consistent evidence for a sexual script of boys' social gains for having girlfriends and girls' risk for having boyfriends (Moreau & others, 2018)
- Inclusion of recent research indicating that sexual minorities' reports of general discrimination, victimization, and health care discrimination peaked in early adulthood and again in middle adulthood (Rice & others, 2021)

- Updated data on the number of people in the U.S. living with an HIV infection (1.2 million), with 1 in 7 of these individuals unaware that they have the infection (HIV.gov, 2020)
- Updated statistics noting that approximately 36,400 new HIV infections were diagnosed in 2018, with 69 percent of those diagnoses given to men who were having sex with other men (HIV.gov, 2020)
- New content on the increasing interest in PrEP (pre-exposure prophylaxis) awareness, which involves taking a daily pill that can reduce the probability of getting HIV by as much as 90 percent (Restar & others, 2020)
- Inclusion of a recent study in which more than 87 percent of alcohol-involved sexual assaults on college campuses was committed by serial perpetrators (Foubert & others, 2020). Also in this study, fraternity members and student athletes were more likely to commit alcohol-involved assault than other men on campus.
- Coverage of a recent study that indicated women who had experienced sexual assault were more likely to subsequently have more academic problems and engage in fewer serious romantic relationships while in college and nine years later to have more symptoms of depression, anxiety, and post-traumatic stress disorder (Rothman & others, 2020)
- Inclusion of recent research on acquaintance rape of college women that revealed 84 percent of the women knew their perpetrator and 65.5 of them encountered the perpetrator after the attack (Bell, Wolff, & Skolnick, 2021). Women who encountered their perpetrator after the attack reported more lifestyle changes and more severe symptoms of post-traumatic stress disorder.
- New content on the recent movement toward *affirmative consent* for sexual activity that is being encouraged on many college campuses (Goodcase, Spencer, & Toews, 2020)
- Discussion of a recent study of young adults in which women (37.4 percent) were more likely than men (22.4 percent) to report having experienced sexual assault (Mumford & others, 2020)
- Inclusion of a recent national study that focused on sexting among U.S. middle and high school students (Patchin & Hinduja, 2019)
- Updated national data (2019) from the Youth Risk Behavior Surveillance study on the timing of sexual intercourse in U.S. adolescents, including ethnic variations and the percentage of adolescents who start having sexual intercourse prior to 13 years of age (Underwood & others, 2020)
- New projections from the National Survey of Family Growth for the probability of having sexual intercourse in the United States by the age of 20, which is 77 percent for males and 79 percent for females (Martinez & Abma, 2020)
- Description of a recent study of adolescents that indicated higher quality of experiences with parents were linked to reduced likelihood of accessing pornography or engaging in vaginal sex, anal sex, oral sex, and masturbation (Astle, Leonhardt, & Willoughby, 2020)
- New coverage of a recent study in which associating with antisocial peers predicted early engagement in sexual intercourse (Clark & others, 2021)
- New discussion of a recent study of adolescents that linked low self-control to risky sexual behavior (Magnusson, Crandall, & Evans, 2020)
- Coverage of a recent national study that indicated adolescent use of long-acting reversible contraception (LARC) increased from 1.8 percent in 2013 to 5.3 percent in 2017 (Aligne & others, 2020)
- Updated data on the incidence of adolescent pregnancy in the United States, which continues its dramatic decline, reaching its lowest point ever in 2019—16.7 births per 1,000 15-to 19-year-olds, less than half the percentage (41.5 births) in 2008 (Martin & others, 2021)
- Updated data on ethnic variations in the incidence of adolescent pregnancy, with significant declines in Latinx, African American, non-Latinx White, and Asian American adolescent pregnancies
- Coverage of recent research on the percentage of adolescents who use condoms when they have sex, including ethnic variations (Szucs & others, 2020)
- Description of a study in which use of LARC increased from 2010 to 2017, although urban, educated, and higher-income women were more likely to use LARC (Beshar & others, 2021)
- Update on AIDS incidence worldwide, with 88 percent of all children and adolescents with AIDS living in sub-Saharan Africa (UNAIDS, 2020)
- Inclusion of a recent Canadian study that found adolescent mothers were much more likely than young adult mothers to live in low-SES neighborhoods, be depressed, and have higher rates of tobacco, marijuana, and alcohol use (Wong & others, 2020)
- Update on pregnancy prevention programs provided by Girls Inc (2021), including recent research indicating that their adolescent pregnancy prevention program was effective in preventing pregnancy
- Update on the continuing government funding of pregnancy prevention programs through the Office of Adolescent Health (2021) and a description of the focus of several of the programs
- Description of a recent research review and analysis that concluded research over the last three decades strongly supports the value of comprehensive sex education across a range of topics and grade levels (Goldfarb & Lieberman, 2021)
- Coverage of recent research in which across the college years, rates of kissing, touching, performing and receiving oral sex, and penetrative sex increased (Lefkowitz & others, 2019). Also in this study, across the college years, contraceptive use decreased, especially for males and for students in a serious romantic relationship.
- Discussion of a recent study of first-year college students in six focus groups that found the following was a common theme in their discussion: “Sex is easier to get and love is harder to find” (Anders & others, 2020)
- Description of a recent study of emerging adults in which a higher percentage of women than men reported having sex, hooking up with an acquaintance, using partner characteristics as a reason to hook up, and having negative reactions to

their most recent hookup (Olmstead, Norona, & Anders, 2019). Also in this study, a higher percentage of men reported hooking up with a stranger, meeting at a bar/club, and hooking up at a party.

- Coverage of a recent study of more than 300,000 women that found late menopause was associated with increased risk of breast cancer (Gottschalk & others, 2020)
- Inclusion of a recent research review that concluded TRT is effective in improving sexual function but that evidence of its influence on other outcomes, such as cardiovascular disease, is inconclusive (Corona, Torres, & Maggi, 2020)
- New content on a number of factors that are linked to erectile dysfunction, such as smoking, cardiovascular issues, obesity, depression, and lack of exercise (Crafa & others, 2020)
- New description of high-intensity shockwave therapy for the treatment of erectile dysfunction (Adeladheim & others, 2021)
- Coverage of a recent research review of low-intensity shockwave therapy that showed benefits in treating erectile dysfunction after 6 months and continued but reduced effects at 1 year (Brunckhorst & others, 2019)
- Description of a recent study in which a combined treatment of low-intensity shockwave therapy and Cialis was more effective in reducing ED than Cialis alone (Verze & others, 2020)
- New discussion of a recent study of individuals 50 years and older that revealed a past-year decline in sexual desire or frequency of sexual activities was associated with an increase in depressive symptoms and a lower quality of life (Jackson & others, 2019)
- Coverage of a recent study that found middle-aged and older adult women reported greater sexual satisfaction when they had fewer physical illnesses, better self-rated health, and absence of depression, and when they placed higher importance on sexuality and intimacy (Buczak, Konig, & Hajek, 2021). Also in this study, greater sexual satisfaction was linked to having a partner, living with a partner, and being less lonely.
- Inclusion of a recent Swiss study that found post-menopausal women were consuming high amounts of vegetables but insufficient amounts of calcium-rich foods (Lanyan & others, 2020)
- New coverage of a recent national study on the sexual activity and sexual health of 65- to 80-year-olds (University of Michigan, 2018)

Chapter 13: Moral Development, Values, and Religion

- Important changes made based on the recommendations of leading experts Daniel Lapsley and Gustavo Carlo
- Significantly revised discussion of Kohlberg's three levels of moral reasoning for greater clarification and accuracy
- Expanded and updated discussion of moral disengagement (Lapsley, LaPorte, & Kelley, 2022)
- Inclusion of recent research documenting the role of moral disengagement in bullying and increases in the bully's aggression (Bijared & others, 2021; Mascia & others, 2021)

- Coverage of a recent study that revealed mothers' mind-mindedness when engaged with their infants was linked to the children's higher level of conscience at 6 years of age (Goffin, Kochanska, & Yoon, 2020)
- Description of a recent study that found a lower level of maternal sensitivity in early childhood was associated with a decrease in children's conscience in early childhood and an increase in conduct problems during the elementary school years (Ettekal & others, 2020)
- Discussion of a recent study in which children and adolescents said that changes in moral beliefs are more disruptive to one's identity than changes in social conventional beliefs (Lefebvre & Krettenaur, 2020). Also in this study, the children and adolescents reported that changes in negative moral beliefs are more disruptive to one's identity than changes in positive moral beliefs.
- New *Connecting with Research* interlude describing how parent and peer relationships influence Latinx adolescents' prosocial behavior
- New main section, "Culture"
- Description of differences in behavior between WEIRD (Western, Educated, Industrialized, Rich, and Democratic) cultures that emphasize individual rights and independent behavior and non-WEIRD cultures that are characterized by duty-based communal obligations and collective, interdependent behavior
- Discussion of differences in morality within a culture, such as behavioral differences between people in lower-SES and higher-SES subgroups
- Inclusion of a recent study of Chinese and Dutch 17- to 26-month-olds in which the toddlers displayed more happiness (smiling more, for example) after sharing treats than after receiving treats (Song, Broekhuizen, & Dubas, 2020)
- Coverage of a recent study in 12 countries that found sharing increased from 4 to 12 years of age in each of the countries (Samek & others, 2020)
- New content on the association of prosocial behavior with other positive aspects of development in adolescence (Donahue, Tillman, & Luby, 2020)
- Inclusion of a recent meta-analysis of 55 studies involving participants from childhood through emerging adulthood that revealed higher levels of prosocial behavior were associated with lower levels of internalizing and externalizing problems (Memmott-Elison & others, 2020)
- Description of a recent study of Chinese adolescents in which empathy played an important role in increasing forgiveness of an offender's transgression (Ma & Jiang, 2020)
- Discussion of a recent study of adolescents that revealed both gratitude and forgiveness were linked to a lower level of reactive and proactive aggression through their connection to self-control (Garcia-Vazquez & others, 2020)
- Inclusion of recent research indicating that other-praising gratitude expressions improve social relationships (Weiss, Burgmer & Lange, 2020)
- Description of recent research that found adolescents with the character strength of gratitude were more likely to

engage in prosocial behavior and to show peer acceptance (Lavy & Benish-Weisman, 2021)

- Discussion of a recent study of U.S. and Japanese middle-aged adults in which higher gratitude was linked to positive psychological functioning and lower gratitude was related to lower psychological functioning (Srirangarajan & others, 2020)
- Coverage of a recent study of older adults that found reflecting more on the important lessons life had taught them increased their forgiveness, which in turn boosted their positive attitudes toward aging, life satisfaction, hope, and self-esteem (Bryant, Osowski, & Smith, 2021)
- Description of a recent study of lesbian and gay older adults that revealed volunteers had better health, more positive mental health, and less psychological distress (Lyons & others, 2021)
- Coverage of recent research indicating that older adults who engage in volunteering have better mental health than their counterparts who don't (Jorgenelis & Pettigrew, 2020)
- Inclusion of a recent national study that revealed adults aged 65 and older were more likely to engage in volunteering than their younger counterparts and also were more likely to report that they volunteer because they want to use their skills and experiences meaningfully (AARP, 2019)
- Inclusion of a recent survey that found 86 percent of college students said they had cheated (Kessler International, 2017)
- Updated data on the percentage of children and youth who have conduct disorder (up to 10 percent) and new data indicating that approximately 25 percent of these individuals subsequently develop antisocial personality disorder (Rubin, 2020)
- Coverage of a British longitudinal study of males from 8 to 61 years of age in which the childhood factors that best predicted which individuals would have criminal careers lasting at least 20 years were harsh discipline, poor parental supervision, parental conflict, and a convicted father (Farrington, 2020)
- Description of the longitudinal Pittsburgh Youth Study that revealed the adolescent factors that best predicted which boys were most likely to be in the worst category of criminal offenders through their thirties were frequency of sexual activity, school problems, and having friends who were a bad influence (Ahonen & others, 2020)
- Discussion of a recent study that found neighborhood poverty was linked to delinquency in adolescence, especially through maternal stress and adverse childhood experiences (Wang, Choi, & Shin, 2020)
- Description of a recent study that revealed parental monitoring was a protective factor against delinquency for both boys and girls, but had a stronger effect for girls than boys (Liu & Miller, 2020)
- Discussion of a recent study that indicated associating with prosocial peers at 12 years of age was linked to decreased drug use and a lower incidence of property-offending delinquency a year later (Walters, 2019)
- Inclusion of a recent research review in which a lack of academic success and having a learning disability were linked to juvenile delinquency (Grigorenko & others, 2019)

- Description of a recent study of 11- to 17-year-olds in which greater school engagement was linked to committing fewer minor offenses as well as fewer crimes against persons and property (Lamari-Fisher & Bond, 2021)
- Coverage of a recent study in rural China that found low self-control was linked to delinquent behavior in adolescents (Jiang, Chen, & Zhuo, 2020)
- Updated content on American college freshmen's views on the importance of being very well-off financially versus developing a meaningful philosophy of life (Stolzenberg & others, 2019)
- New content indicating that a number of studies have found that adolescents who are more religious are more likely to engage in service learning activities (Hart, 2020)
- Updated data on the percentage of adolescents who adopt the same religion as their parents (48 percent) (Diamant & Sciupac, 2020)
- Updated content from a national study on the continuing decline of attendance at religious services by high school seniors (Stolzenberg & others, 2019)
- Coverage of a recent study in which religiosity was linked to a delayed initiation of alcohol use, more so for girls than boys (Barry, Valdez, & Russell, 2020)
- Discussion of a recent Danish study in which participating in a religious organization and praying were associated with fewer risk factors for engaging in an unhealthy lifestyle (Herold & others, 2021)
- Inclusion of a recent study of older adults that revealed those with stronger religiosity were less depressed and had longer telomeres on their chromosomes (Wang & others, 2020)
- Description of a recent survey that found when individuals were asked what gives them a sense of meaning in life, 69 percent said family, 34 percent said career, and 20 percent said spirituality and faith (Pew Research Center, 2018)
- Coverage of recent research indicating that meaning in life can reduce psychological distress (Yu & others, 2020) and facilitate mental health recovery (Jun & Yun, 2020)

Chapter 14: Families, Relationships, and Parenting

- Coverage of a recent study in which destructive marital conflict was linked to less effective coparenting (Kopystynska, Barnett, & Curran, 2020)
- Inclusion of recent national data on the increasing percentage of people in the U.S. who have never married—35 percent of men and 30 percent of women in 2019 compared with 30 percent of men and 23 percent of women in 1990 (U.S. Census Bureau, 2019)
- New data indicating that African American adults (47 percent) are much more likely to be single than non-Latinx White adults (28 percent) and Latinx adults (27 percent) (Brown, 2020)
- Updated data on the increasing percentage of U.S. adults who live in a single person household—36 million in 2019 compared with 7 million in 1960

- Expanded content on the reasons that an increasing percentage of adults are remaining single and never marrying
- Coverage of a recent nationally representative survey of more than 35,000 U.S. single adults that found they are increasingly having uncommitted sexual encounters and taking far longer to make a formal commitment to a partner, a circumstance described as “fast sex and slow love” (Fisher & Garcia, 2019). Nonetheless, in this survey, today’s singles show a strong interest in finding romantic love and a partner they can live with forever.
- Updated data on the increasing percentage of emerging and young adults who are cohabiting (U.S. Census Bureau, 2019)
- New content indicating that at lower SES levels, couples are more likely to cohabit and give birth prior to marriage and less likely to marry at all (Karney, 2021)
- New description of the recent U.S. trend of adults engaging in serial cohabitation in the last decade (Eickmeyer & Manning, 2018)
- New content on cohabitation increasing in China and Taiwan but continuing to be rare in Japan and South Korea
- Inclusion of a recent national survey that found married couples reported higher relationship satisfaction than those living with an unmarried partner (Horowitz, Graf, & Livingston, 2019)
- Discussion of a recent study that indicated early transitioning into a stepfamily home, especially for females, was linked to earlier entry into cohabitation (Johnston, Cavanagh, & Crosnoe, 2020)
- New content on cohabitation more often being perceived as a stepping stone to marriage in the United States but more frequently perceived as an alternative to marriage in Europe, especially in Scandinavian countries (Sassler & Lichter, 2020)
- Updated data on the age of first marriage in the United States, which in 2019 was 30 for men and 28 for women, higher than at any previous point in history (U.S. Census Bureau, 2019)
- Coverage of a recent study that found men had a higher level of marital satisfaction than women across a number of countries (Sorokowski, Kowal, & Sorokowska, 2019). In this study, marital satisfaction was similar among Muslims, Christians, and atheists.
- New comparison of age at first marriage in a number of developed countries, with individuals in Sweden getting married latest and those in Israel and Turkey earliest
- Inclusion of a recent study that explored reasons why individuals get married, with love (88 percent of the respondents) at the top of the list (Geiger & Livingston, 2019)
- New discussion of factors such as forgiveness and commitment as indications of whether a marriage is successful (Lavner & Bradbury, 2019)
- Inclusion of a recent study in which couples high in neuroticism were less satisfied with their marriage than those high in conscientiousness (Sayehmiri & others, 2020)
- Coverage of a longitudinal study that revealed hostile marital interactions increased couples’ psychological distress, health risk behaviors, and BMI in early middle age, which in turn were linked to greater physical illness later in life (Lee & others, 2021)
- Description of a longitudinal study of middle-aged married adults that found negative behavior in their marriage decreased and positive behavior increased across 13 years in middle age (Verstaen & others, 2020)
- New data on the percentage of U.S. men 65 years of age and older (69 percent) and women in the same age group (47 percent) who were married in 2019 (Administration on Aging, 2020)
- New content and data on the percentages of individuals from different ethnic groups who are married (U.S. Census Bureau, 2019)
- New content and data on the percentages of newlyweds and all married people who are married to someone from a different ethnic group, percentages that have increased dramatically in recent years (Livingston & Brown, 2017)
- Coverage of recent research on Mexican married older adults in which spousal support was associated with less loneliness, while spousal strain was linked to more loneliness three years later (Saenz, 2021)
- Updated data on divorce rates in the United States (U.S. Census Bureau, 2019)
- New content on ethnic variations in divorce rates. Among Latinxs, 30 percent of women and 27 percent of men become divorced in their lifetime.
- Updated data on divorce rates in different countries, with Russia having the highest rate of divorce and Chile the lowest (OECD, 2019)
- Coverage of a recent research review that concluded divorced adults have a higher rate of adverse cardiovascular events, including death due to cardiovascular disease, than their married counterparts (Dhindsa & others, 2019)
- Updated data on the percentage of individuals 65 years of age and older who are divorced, which increased to 15 percent in 2017 (U.S. Census Bureau, 2018)
- Revision and updating of the coverage of marriage and divorce in middle age to account for the recently increasing percentage of middle-aged adults who are getting divorced
- Inclusion of a recent study that indicated today’s older adults are more accepting of divorce than their counterparts from two decades ago (Brown & Wright, 2019)
- Updated data on the significant decrease in remarriage that is occurring in the United States (Schweizer, 2019)
- Description of a recent study examining the extent to which men and women repartner following a gray divorce (that is, when they are 50 years of age and older) (Brown & others, 2019). In this study, 22 percent of women and 37 percent of men repartnered following a gray divorce.
- New content on the double retreat in family structure that is taking place in the United States—decline in marriage and decline in remarriage
- Discussion of a recent study in which adults in same-sex relationships experienced similar levels of commitment, satisfaction, and emotional intimacy as their counterparts in different-sex relationships (Joyner, Manning, & Prince, 2019)

- New data on the age of mothers when they have their first child in the United Kingdom, which increased to 30 years of age in 2018, compared with 27 years of age in the United States
- Inclusion of a recent study that revealed higher levels of anxiety and depression in mothers in the last trimester of pregnancy were associated with infants' externalizing problems at 2 years of age, and higher levels of anxiety and depression in fathers in the last trimester of pregnancy were related to higher levels of infants' internalized and externalized problems at 14 months of age (Hughes & others 2020)
- Coverage of a recent study involving the Bringing Home Baby project that found fathers who participated in the program felt more appreciated by their wives and that wives were more satisfied with the division of labor when fathers were more involved in parenting (Shapiro, Gottman, & Fink, 2020)
- Updated data on the age at which U.S. mothers have a first child, which is now at the oldest age ever—26.9 years (National Center for Health Statistics, 2019)
- Discussion of a recent study that revealed when parents had little awareness of their adolescents' whereabouts, adolescents were more likely to smoke cigarettes and initiate smoking at an earlier age (Sartor & others, 2020)
- Inclusion of a recent study in which parental active tracking measures during adolescence and college were associated with better health behavior in both developmental time frames (Abar & others, 2021)
- Discussion of a recent study that revealed authoritarian parenting was associated with being a bully perpetrator in adolescence (Krisnana & others, 2021)
- Coverage of a recent Chinese study that found authoritative parenting increased children's favorable trajectories of math achievement (Want, Chen, & Gong, 2021)
- Description of recent research indicating that authoritative parenting reduced adolescent screen time (Xu, 2021)
- Inclusion of a recent study in which authoritarian parenting was linked to all forms of child maltreatment, while authoritative parenting was associated with a lower risk for all types of child maltreatment (Lo & others, 2019)
- Coverage of recent research with 7- to 9-year-olds that revealed indulgent parenting was associated with increased body mass index (BMI) (Hughes & others, 2021)
- Discussion of a recent study conducted during the COVID-19 pandemic which found that nearly 20 percent of parents had hit or spanked their children in the previous two weeks and indicated that they had increased their use of spanking during those two weeks (Lee & others, 2021)
- Update on the number of countries that ban corporal punishment of children (an increase from 34 in 2012 to 59 in 2020) (Global Initiative to End All Corporal Punishment of Children, 2020)
- New research with college students indicating that daughters are less likely than sons to be punished by both parents (Melhausen-Hassoen & others, 2021)
- Updates on the controversy about whether research adequately documents that physical punishment has detrimental effects on children's development (Gershoff & others, 2019; Larzelere & others, 2019)
- Discussion of recent research in which effective coparenting when children were 3 to 5 years of age was linked to fewer externalizing problems 8 to 10 years later (Parkes, Green, & Mitchell, 2019)
- Coverage of a recent study of low-income, unmarried couples that revealed cooperative coparenting at earlier points in time resulted in fewer child behavior problems (Choi, Parra, & Jiang, 2019)
- Updated data on the extent of child maltreatment in the United States, including new data on specific types of abuse (Administration for Children & Families, 2020)
- Inclusion of recent research that found young children who were abused in the first five years of life were more likely to later receive special education services, to repeat a grade in school, to have been convicted of a crime in the past year, and to have poorer physical health than individuals who had not been abused in early childhood (Lansford & others, 2021)
- Description of a recent research review in which childhood sexual abuse was linked to increased incidence of mental health disorders (including anxiety and mood disorders), as well as substance use disorders (Noll, 2021)
- Discussion of a recent study that revealed parental emotional abuse, more than any other type of abuse, was associated with increased rates of post-traumatic stress disorder in adolescence (Hoeboer & others, 2021)
- Inclusion of a recent large-scale Canadian study in which a history of child maltreatment involving either physical abuse or sexual abuse was linked to having physical and mental health problems in adulthood (Cameranesi, Lix, & Piotrowski, 2019)
- Coverage of a recent study that found child maltreatment was associated with an increase in psychiatric problems and substance abuse in adulthood (Wang & others, 2020)
- Inclusion of a recent study of low-income families revealing that the rate of intergenerational abuse was high and reflected a pathway that increased children's maladaptive socioemotional development (as indicated in emotion dysregulation, for example) (Warmingham, Rogosch, & Cicchetti, 2020)
- Discussion of a recent study that revealed child maltreatment was linked to increased emotion-focused coping and decreased problem-solving coping (VanMeter, Handley, & Cicchetti, 2020)
- Coverage of recent research that found mothers who had experienced child maltreatment from their parents were more likely to engage in maltreatment of their offspring, which in turn was linked to an increased externalizing and internalizing symptoms in late childhood (Rusotti & others, 2021)
- Inclusion of a recent large-scale study in which social support and coping skills were linked to positive adult mental health outcomes for maltreated children (Su, D'Arcy, & Meng, 2020)
- Description of a recent study of Lebanese adolescents that found those who were securely attached to their parents had

lower rates of addiction to alcohol and cigarettes than their insecurely attached counterparts (Nakhoul & others, 2020)

- Coverage of a recent study that indicated maltreated and delinquent adolescents had high levels of insecure attachment (Protic & others, 2020)
- Inclusion of a recent Chinese study in which a lower level of parent-adolescent conflict was linked to less adolescent risk-taking (Liu, Wang, & Tian, 2019)
- Discussion of a recent meta-analysis of 54 studies that concluded children who experience parental divorce are at increased risk for depression, anxiety, suicide attempts, distress, alcohol abuse, drugs, and smoking (Auersperg & others, 2019)
- Coverage of a recent study that found adolescents' emotional and behavioral problems increased after their parents divorced, not before (Tullius & others, 2021)
- Discussion of a 15-year longitudinal study of divorced families that involved an 11-session parenting improvement program that had a cascading effect of improved child, adolescent, and adult outcomes (Wolchik & others, 2021)
- Inclusion of recent research indicating that lesbian mothers, heterosexual mothers, and gay fathers reported higher parenting competence than heterosexual fathers (Farr & Vasquez, 2020a)
- Coverage of a U.K. longitudinal study of gay father, lesbian mother, and heterosexual parent families when their children reached early adolescence that found little difference among the three family styles but indicated that better parenting quality and parental mental health were linked to fewer adolescent problems (McConnachie & others, 2021)
- New *Connecting with Research* interlude exploring the roles that school counselors might play in helping transracial adoptees deal with identity issues
- Description of a recent study that indicated birth fathers, who are often less likely to be included in open adoption, would like to be part of the open adoption triad (adoptee, birth family, and adoptive family) (Clutter, 2020)
- Update on the significant increase in the number of grandparents alive today in the United States (70 million) (AARP, 2019)
- Coverage of a recent study that found when children live with their grandparents, the arrangement especially benefits low-income and single parents, who are able to spend more money on their children's education and activities and less money on child care (Amorim, 2019)
- Inclusion of a recent Japanese study that revealed caring for at least one co-residing grandchild 6 years of age or younger was neither detrimental nor beneficial to grandparents' health (Oshio, 2021)
- New prediction that in 2030, more than 70 percent of U.S. 8-year-old children will have at least one great-grandparent who is living (AARP, 2019)
- Discussion of a recent study that revealed middle-aged adults were happiest when they had harmonious relationships with their parents and their adult children (Kim & others, 2020)

Chapter 15: Peers and the Sociocultural World

- Coverage of a recent study in the United States and China that found parents' increased peer restriction predicted a decrease in children's adjustment over time (Xiong & others, 2020)
- Inclusion of content indicating that adolescents often rely on peers for emotional support, which was made especially difficult because of the social isolation created by the COVID-19 pandemic (Magson, 2021)
- Description of a longitudinal study that found shyness in childhood predicted lower emotional stability and lower extraversion in adolescence, with these links mainly due to negative peer experiences (Baardstu & others, 2020)
- Discussion of recent research with third- and fourth-graders in which feeling related to peers at school was associated with the children's positive affectivity both at school and at home (Schmidt, Dirk, & Schmiedek, 2019)
- Inclusion of a recent study that found being a fun person to be around was a key component of peer popularity (Laursen & others, 2020)
- Discussion of a recent study in which perceived peer rejection was preceded by either aggression or depression in adolescence (Beeson, Brittain, & Vaillancourt, 2020)
- Coverage of a recent analysis of bullying from 1998 to 2017 in the United States that indicated a significant increase in cyberbullying and face-to-face bullying in females (Kennedy, 2021)
- Description of a recent study of more than 15,000 U.S. high school students that found 20 percent had experienced school bullying and 15 percent had undergone cyberbullying (Webb & others, 2021). In this study, sexual minority adolescents were much more likely to be bullied than were heterosexual adolescents. In addition, African American and Latinx adolescents were less likely to have experienced both types of bullying.
- Inclusion of a recent Chinese study that found adults 60 years of age and older who had experienced bullying victimization as children had more severe depression symptoms than their counterparts who had not been bullied as children (Hu, 2021)
- Discussion of a longitudinal study in which after being bullied, bullying victims' self-esteem decreased and this lower self-esteem was linked with further bullying victimization (Choi & Park, 2021)
- Inclusion of a recent study of more than 150,000 12- to 15-year-olds in low- and middle-income countries that found victims of bullies were characterized by these obesity-related factors: anxiety-induced sleep problems, lack of physical exercise, sedentary behavior, and fast food consumption (Smith & others, 2021)
- Description of a recent large-scale Norwegian study that concluded bullies, victims, and bully-victims are at risk for developing sleep problems, including shorter duration of sleep and higher prevalence of insomnia, as well as lower grade point averages (Hysing & others, 2021)

- New *Connecting with Research* interlude exploring the long-term effects of bullying on children with autism
- Discussion of a recent study of university students in which being a cybervictim increased the risk of suicidal ideation as well as heightened anxiety, stress, and depression (Martinez-Monteagudo & others, 2020)
- Inclusion of a recent study of eighth-graders in which peer pressure was associated with substance use (Jelsma & Varner, 2020)
- Discussion of a recent study that found the Hip Hop crowd and the alternative crowd were at increased risk for a number of negative behaviors (Jordan & others, 2019)
- New content on adolescent social distancing as a consequence of the coronavirus pandemic and recommendations for parental discussions with adolescents regarding safety during the pandemic
- Discussion of research indicating that higher-intensity friendships are likely to amplify an adolescent's pre-existing tendencies toward depression or aggression (Costello & others, 2020)
- New description of a recent study of young adolescents revealing that for non-Latinx White and Asian American adolescents, higher academic achievement was associated with having same-ethnic friends, while for African American and Latinx adolescents, higher academic achievement was linked with having cross-ethnic friends (Chen, Saafir, & Graham, 2020)
- Coverage of a recent study of Saudi Arabian youth that found they had a higher rate of suicidal thoughts and behavior when their friends disclosed depression and self-harm (Copeland & others, 2021)
- Inclusion of a recent study that revealed peers' influence on adolescents' healthy eating behavior is often negative and characterized by increased consumption of energy-dense and low-nutritional-value foods (Rageliene & Granhoj, 2020)
- Description of a recent meta-analytic review that concluded friendship experiences may be more closely related to loneliness than to depressive symptoms (Schwartz-Mette & others, 2020)
- New commentary by Laura Carstensen noting that older adults are less lonely and more happy than young adults
- Coverage of a recent study of older adults in which having a larger friend confidant network or closer connections with friend confidants was linked to better marital quality for wives and husbands 5 years later (Zhaoyang & Martire, 2021)
- Discussion of a recent study of older adults that revealed interactions with friends were more pleasant and were associated with fewer stressful discussions of experiences than interactions with partners or family members (Ng & others, 2020)
- Inclusion of a recent Korean study of 40- to 69-year-olds in which engaging in leisure-time physical activity was linked to a lower risk of death, and those who engaged in vigorous, intense physical activity benefitted the most (Park & others, 2020)
- New description of a recent study that found middle-aged and older adult women who engaged in a higher level of leisure-time physical activity were more likely to report experiencing positive affect (Holahan & others, 2020)
- Inclusion of recent research on middle-aged Europeans indicating that those who engaged in more physical activity during their leisure time were less likely to be depressed (Marques & others, 2020)
- Coverage of recent research in which the more individuals engaged in leisure-time physical activity, the less work-related stress they had (du Prel, Siegrist, & Borchart, 2019)
- Inclusion of a number of changes based on feedback and editing by leading expert Laura Carstensen
- Revised description of social selectivity theory
- Discussion of a recent research review of older adults' health that concluded ageism led to worse health outcomes, especially in less-developed countries and among those with less education (Chang & others, 2020)
- Description of a recent analysis which concluded that the COVID-19 pandemic brought a parallel increase in ageism, with increased views of older adults as being helpless, frail, and unable to contribute to society (Ayalon & others, 2021)
- Inclusion of a recent meta-analysis of Chinese older adults in which having a low level of social support was linked to depression and increased social support was associated with reduced depression (Qui & others, 2020)
- Coverage of a recent study in which being lonelier and less socially integrated were linked to increased suicidal ideation in single older adult men (Lutzman, Sommerfeld, & Ben-David, 2021)
- Discussion of a recent study of older adults that revealed interacting with a greater variety of social ties was related to engaging in more physical activity and less sedentary behavior (Fingerman & others, 2020). Also in this study, greater involvement with diverse social ties was associated with being in a more positive mood.
- Expanded coverage of what the term *culture* means, including content on how everyone has a culture (with multiple examples provided)
- Inclusion of a recent study of Japanese elementary school children that revealed greater screen time duration was linked to increased obesity, decreased physical activity, and lower academic performance (Mineshita & others, 2021)
- Coverage of a recent Dutch study indicating that children's physical activity was lower and their screen time was much higher during and after school closures due to the COVID-19 pandemic lockdown (Ten Velde & others, 2021)
- Description of World Health Organization (WHO) recommendation that 3- to 4-year-old children should engage in no more than 1 hour of screen time daily (Willumsen & Bull, 2020)
- Inclusion of recent research on 13- to 18-year-olds in the United States and the United Kingdom that found significant gender differences in the types of digital media they used (Twenge & Martin, 2020)
- Coverage of a recent study of 11,000 9- and 10-year-olds that found screen time was linked to reduce sleep duration,

later sleep onset, and more sleep disturbances (Hisler & others, 2020)

- Description of a recent study that revealed screen media multitasking at 18 months of age was linked to having more behavioral problems and lower cognitive functioning at 4 to 6 years of age (Srisinghasongkram & others, 2021)
- Update on the percentage of adolescents who own a smartphone, which increased from 66 percent in 2009 to 95 percent in 2018 (Anderson & Jiang, 2018)
- Inclusion of a 2019 survey indicating the percentage of 18- to 24-year-olds who were using YouTube (90 percent), Facebook (76 percent), Instagram (75 percent), and Snapchat (73 percent) (Perrin & Anderson, 2019)
- Discussion of a recent large-scale study of more than 32,000 15-year-olds in 37 countries that found problematic social media use and low social support were the best predictors of low life-satisfaction (Walsh & others, 2020)
- Description of a recent national survey in 2019 of the percentage of U.S. older adults age 65 and over who use the Internet (73 percent) (Anderson, 2019)
- Inclusion of a recent study of older adults that revealed increased Internet use was linked to decreased loneliness (Yu, Wu, & Chi, 2021)
- Coverage of a recent study in which lower SES was linked to less cortical surface area in the brain of adolescents as well as less effective working memory (Judd & others, 2020). The SES factor most responsible for the lower level of brain functioning was less parental education.
- Inclusion of a recent Chinese study that found low family SES was linked to children's low academic achievement, being especially influenced by lower parental involvement in children's schooling (Zhang & others, 2020)
- Updated data on the percentage of U.S. adults below the poverty line with varying degrees of education (Duffin, 2019)
- Updated data on the percentage of single-mother families living in poverty (34 percent), which was nearly five times as high as their married counterparts (6 percent) (U.S. Census Bureau, 2019)
- Inclusion of a recent study of older adults that found poverty was a risk factor for earlier death (Guimaraes & Andrade, 2020)
- New opening commentary in the section on Ethnicity focused on the importance of not using a deficit model in studying ethnic minority adolescents and recognizing not just stressors in their lives but also the positive aspects of their lives (Weissmark & others, 2020)
- Updated data on the percentage of children 18 years old and younger from different ethnic groups in the United States (U.S. Census Bureau, 2018)
- New discussion of research by Yoonsun Choi and her colleagues (Choi & Hahn, 2017; Choi & others, 2020a, b, c) on generational differences in Filipino Americans and Korean Americans, as well as younger Asians' belief that older Asians place too much emphasis on education
- Coverage of a recent study in which immigrant children who were separated from their parents had a lower level of literacy

and a higher level of psychological problems than those who migrated with their parents (Lu, He, & Brooks-Gunn, 2020). Also in this study, a protracted period of separation and prior undocumented status of parents further increased the children's disadvantages.

- New content on multi-ethnic/racial individuals and the discrimination they often encounter (Tan & others, 2019; Woo & others, 2020)
- New description of the positive outcomes when adolescents have a positive ethnic identity (Umaña-Taylor & others, 2020)
- New discussion of a recent study in which Latinx adolescents showed enhanced resilience against discrimination encounters when they had more family ethnic socialization experiences and greater engagement in identity exploration and resolution (Martinez-Fuentes, Jager, & Umaña-Taylor, 2021)
- New main section, "Racism and Discrimination"
- New coverage of the Black Lives Matter movement and the killing of George Floyd in Minneapolis as well as discussion of past and current racism and discrimination in the United States
- New discussion of how to talk with children about racism based on the Intentional Parenting for Equity and Justice program proposed by Diane Hughes and her colleagues (Hughes, Fisher, and Cabrera, 2020)
- Inclusion of new content based on BIPOC (Black, Indigenous, and other People of Color) parents' emphasis on how their children and youth can stay safe during interactions with the police
- Recommendation of a recent book that helps BIPOC parents talk with their children and youth about race: *The ABCs of Survival* (National Black Child Family Institute, 2021)
- New content on the dramatic increase in ethnic diversity that is predicted to occur for older adults (U.S. Census Bureau, 2019)
- New data on poverty rates for African American older adults, which have declined since 1975 but are still far too high (Congressional Research Service, 2019)

Chapter 16: Schools, Achievement, and Work

- New commentary noting that the federal government suspended standardized testing in schools in 2020 because of the coronavirus pandemic
- Update on the number of Montessori schools in the United States and around the world in 2021 (National Center for Montessori in the Public Sector, 2021)
- New coverage of an experimental study with young children in a high-poverty area which found that over a 3-year period those who attended Montessori programs fared better in academic achievement, social understanding, and mastery orientation than those who attended other early childhood programs (Lillard & others, 2017)
- Inclusion of a recent study in which young children who attended Montessori schools displayed better creativity skills

than their counterparts in traditional schools (Denervaud & others, 2019)

- Description of a recent study in which a social-emotional learning program and a coordinated interactive reading program were used to enrich Head Start classrooms, an intervention that resulted in the children having significantly fewer conduct problems and negative emotional symptoms, as well as better peer relations in adolescence (Bierman & others, 2021)
- Coverage of a recent study of 3- to 4-, 5- to 6-, and 8- to 9-year-olds that found children in foster care who participated in Head Start programs had better cognitive, socioemotional, and health outcomes than their foster care counterparts who did not attend Head Start programs (Lee, 2020)
- Discussion of a recent study that revealed increased teacher-student conflict during the transitions from elementary school to middle school and middle school to high school were linked to an increased externalizing symptoms in the students' first year at the new school (Longobardi & others, 2019)
- Inclusion of a recent study in which students in the first year of middle school had lower levels of adaptive coping and higher levels of maladaptive coping than elementary school students did (Skinner & others, 2020)
- Updated data on school dropout rates, which continue to decline considerably (National Center for Education Statistics, 2020)
- Updated data on the transition to college, with a much higher percentage of first-year college students today saying they feel overwhelmed with all they have to do (Stolzenberg & others, 2020)
- Updated data on the percentage of children with a disability receiving special education services in different disability categories (National Center for Education Statistics, 2020)
- Coverage of recent research that found African American children and adolescents are more likely to be diagnosed with ADHD than their non-Latinx White and Latinx counterparts (Zablotsky & Alford, 2020)
- Inclusion of recent research suggesting that African American and Latinx children and adolescents are more likely than their non-Latinx White counterparts to be diagnosed with disruptive behavior disorders (Fadus & others, 2020)
- Description of recent research in which preterm birth was linked to ADHD (Walczak-Kozłowska & others, 2020)
- Coverage of recent research indicating that low socioeconomic status is linked to the development of ADHD and also that low SES is associated with inferior brain functioning (Machlin, McLaughlin, & Sheridan, 2020)
- Inclusion of content indicating that the neurotransmitter GABA is linked to the development of ADHD (Puts & others, 2020)
- Description of a research review of meta-analyses and randomized experiments that concluded neurofeedback has medium to large effects on ADHD, with 32 to 47 percent remission rates lasting from 6 to 12 months (Arns & others, 2020)
- Inclusion of an extensive set of meta-analyses that concluded neurofeedback is effective in reducing inattentiveness in

children with ADHD but that stimulant medication is more effective than neurofeedback in doing so (Riesco-Matias & others, 2021)

- Coverage of a recent meta-analysis that found regular exercise was more effective than neurofeedback, cognitive training, and cognitive therapy in treating ADHD (Lambez & others, 2020)
- Description of a recent study that revealed children with ADHD were 21 percent less likely to engage in regular exercise than children who had not been diagnosed with ADHD (Mercurio & others, 2021)
- Substantial revision of the discussion of autism spectrum disorders (ASD)
- New content on the dramatic increase in the percentage of children who are autistic (Centers for Disease Control and Prevention, 2020) and the percentage of autistic children who are receiving special education services (National Center for Education Statistics, 2020)
- Discussion of a recent research summary that concluded key early warning signs for ASD are lack of social gestures at 12 months, using no meaningful words at 18 months, and having no interest in other children or no spontaneous two-word phrases at 24 months (Tsang & others, 2019)
- New main section, "Schools and the Coronavirus Pandemic," with separate subsections on K-12 education and college education
- Description of recent research indicating that too often schools were leaving learning to chance for students following the change to online instruction after the coronavirus abruptly shut down in-person classes in 2020 (Gross, 2020)
- Inclusion of a recent study documenting significantly low math achievement scores for students after instruction went online during the pandemic (Chetty & others, 2020)
- New *Connecting with Research* interlude exploring how parental expectations might influence Black boys' math scores
- New discussion exploring whether peer mindsets can influence a student's mindset (Sheffler & Chenug, 2020), including description of a recent study across most of a school year that found students who were around peers with a growth mindset for 7 months increased their growth mindset across that time frame (King, 2020)
- Inclusion of recent research indicating that engaging in a strategic mindset was critical in achieving goals (Chen & others, 2020). College students with a strategic mindset used more metacognitive strategies and in turn had higher grade point averages and made greater progress toward their professional, educational, and health goals.
- New content on David Yeager and his colleagues' (Yeager, Dahl, & Dweck, 2018) national experimental study—a brief, online, direct-to-student growth mindset intervention that increased the grade point averages of underachieving students and also improved the challenge-seeking mental activity of higher-achieving students. In other recent research, the positive outcomes of the U.S. online growth mindset intervention were replicated with students in Norway (Bettinger & others, 2018).

- Inclusion of recent research that revealed a higher level of grit predicted better outcomes in stronger postsecondary institutions that provided better student support, especially in achieving on-time graduation (Goyer, Walton, & Yeager, 2021)
- New list of questions to help students assess how much grit they have (Clark & Malecki, 2019)
- New coverage of the very positive job outlook for college graduates at the beginning of 2020 that turned steeply downward in March and April of 2020 with the onset of the coronavirus pandemic (NACE, 2020)
- Inclusion of the 2019 Trends in International Mathematics and Science Study (TIMSS) of math and science achievement in a number of countries, with East Asian countries taking 19 of the top five spots in fourth- and eighth-grade science and fourth- and eighth-grade math. Singapore was number one in three of the four comparisons.
- Update on the percentage of full-time and part-time students who are working while going to college (National Center for Education Statistics, 2018)
- New content on the major change in the context of work that was mandated by the onset of the coronavirus pandemic, when huge numbers of employees abruptly switched from working in an office, school, or other context to working at home
- Discussion of a Finnish study indicating that alcohol-related death was elevated 0 to 5 and 11 to 20 years after the onset of unemployment (Junna, Moustgaard, & Martikainen, 2021)
- Updated information about the fastest-growing jobs anticipated through 2028 in the 2020–2021 *Occupational Outlook Handbook*
- Coverage of a recent study in which work-related stress and night-shift work increased workers' obesity (da Silva & others, 2021)
- Description of a recent study in 15 European countries that found work stress increased from 1995 to 2015, especially in lower-skilled occupations (Rigo & others, 2021)
- New content on the extensive increase in unemployment that occurred in 2020 because of the coronavirus pandemic
- Inclusion of a recent study that found more mothers than fathers were dissatisfied with their work-family balance and partner's share of family responsibilities before the COVID-19 pandemic (Craig & Churchill, 2020). For some, the pandemic improved satisfaction levels, but for most they became worse.
- Updated data on the percentage of U.S. 45- to 54- and 55- to 64-year-olds in the workforce, including comparisons of 2019 to 2015 and 2000 (Mislinski, 2019)
- New coverage of the percentage of individuals 65 to 69 years of age who are still working in the United States and in other countries, with the highest percentage being in Asian countries and the lowest in European countries (McCarthy, 2019)
- Discussion of a recent analysis indicating that healthier, higher-income, and better-educated older adults can continue

working longer than lower-income older adults whose jobs are physically demanding (United Income, 2019)

- Inclusion of recent findings that indicate older workers are more satisfied at work, take fewer sick days, and demonstrate stronger problem-solving skills than younger workers (Milken Institute and Stanford Center of Longevity, 2019)
- New description of a recent analysis of U.S. workers in which more than 50 percent of those 50 years and older are pushed out of long-time jobs before they choose to retire (Gosselin, 2019)
- Inclusion of a recent report indicating that 37 percent of individuals in the United States retire earlier than they had planned (Munnell, Rutledge, & Sanzenbacher, 2018)
- Discussion of a recent study that found all retirement pathways were associated with cognitive decline for workers in low-complexity jobs but were not linked to accelerated cognitive decline for those in high-complexity jobs (Carr & others, 2020). Also, after retiring and subsequently returning to work, a modest improvement in cognitive function occurred.
- Inclusion of a recent study that revealed retirement satisfaction was linked to carrying out retirement plans, possessing resilience, achieving social integration, adopting new roles, and maintaining quality family relationships (Principi & others, 2020)
- Coverage of recent research in European countries indicating that memory decline accelerated after retirement (Macken, Riley, & Glymour, 2021)

Chapter 17: Death, Dying, and Grieving

- New commentary noting that the extensive number of deaths due to the coronavirus pandemic is making many Americans more aware of death than in recent decades
- Addition of the view of some critics that completion of a living will creates the potential for premature withdrawal of interventions (Kurin & Mirachi, 2021)
- Update on Physician Orders for Life-Sustaining Treatment (POLST), which in 2019 was available in 40 states
- Update on the number of states that allow assisted suicide, which recently increased to 9 states plus Washington, DC
- Update on countries that allow assisted suicide and those that allow both assisted suicide and euthanasia
- New content based on a national study of 10- to 19-year-olds indicating that suicide rates for males and females have increased since 2007, with a disproportionate, steeper increase among 10- to 14-year-old females (Ruch & others, 2019)
- New content indicating that suicide has replaced homicides as the second leading cause of death in adolescence (National Center for Health Statistics, 2020)
- Updated data on the percentage of U.S. adolescents who seriously consider suicide each year and attempt suicide each year, including gender and ethnicity figures (Underwood & others, 2020)
- Cross-cultural comparisons of adolescent suicide