

Understanding Human Development

Fourth Edition

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Preface

Understanding Human Development, Fourth Edition, represents our belief that the story of each human life is a rich and compelling drama—one that deserves to be appreciated and understood. Our overarching goal for this course is to provide all readers with a balanced view for understanding human development as it unfolds across the lifespan—a view that emphasizes the dynamic interactions among biological, psychological, and sociocultural forces. Indeed, we believe that a modern understanding of developmental processes must consider the biological and psychological changes that occur at various points in the lifespan and must do so within relevant social and cultural contexts. Clearly, to ignore the important influences of family, society, and culture would leave us with explanations that are not only incomplete, but also flat and empty.

Reflecting the fact that development proceeds from the multiple interactions of many relevant variables across time, it is perhaps not surprising that our knowledge about human developmental processes and events has accumulated from a variety of perspectives. This course draws from many fields (psychology, biology, neuroscience, sociology, anthropology, history, nursing, medicine, and public health, to name a few) to provide an up-to-date presentation of key topics, issues, and controversies in the field of lifespan development. It has been our goal to prepare a text that reflects this comprehensive view of development across the lifespan.

We, of course, recognize that college and university students today are a diverse group—varying widely in age, ethnicity, identity, personal experiences, and outlook, and in academic background and personal and career interests as well. Some are already parents, and many will become parents in the near future; all have been children. Thus, although each student has followed and will follow a unique developmental trajectory, all students have considerable first-hand experience with human development; each has been “doing” it for a number of years. Indeed, because the study of human development is such a diverse enterprise, each of us “knows” the subject matter of human development from our own experience-based point of view. Thus, students come to their studies enriched by, but also embedded in, their attitudes, beliefs, biases, hopes, talents, language patterns, traumas, and more. We hope that as students study this course content, they begin to not only see themselves more clearly, but also see others in a wider context. We think that understanding development from a broader, more objective point of view is an important goal for students of human development. Because

many students of human development will pursue a future in career fields in which they will work closely with individuals of various ages—including social work, education, nursing, public health, counseling, various areas of psychology, and program administration—one of our goals in writing this text is to prepare these students not only with facts relevant to their future career success, but also with an understanding of the intricacies and the interactive nature of the forces that propel developmental processes across the lifespan.

We believe that the study of human development is fascinating—that most students have an irresistible curiosity about how humans “develop” and about how infancy, childhood, adolescence, and adulthood unfold, one into the other. This text encourages that curiosity through its emphasis on human diversity. *Understanding Human Development* presents people as they are in the context of culture and subculture, both within the United States and beyond. The contemporary case studies and research efforts incorporated in the body of the text, as well as those highlighted in its special features, reflect this variety of experiences. It is our hope that all students will find themselves mirrored in this course, and that all will see the defining principles and ideas of human development as self-descriptive as well as pertaining to human nature in general.

Finally, our approach incorporates applications and examples drawn from everyday life to illuminate the basic principles we describe. We encourage students to draw on their own experiences, and we hope students will weigh the evidence and ideas we present against these and, in the process, develop an informed, critical perspective on how we come to be who and what we are as human beings, on how our culture—broadly and narrowly defined—contributes to our development, and on what each of us can expect in our years to come.

—Wendy L. Dunn and Grace J. Craig

Features

Although it follows the basic outline of the third edition, the fourth edition of *Understanding Human Development* incorporates a substantive revision with a notable expansion and improvement in the quality of the learning and study tools that support the text. In particular, the fourth edition embeds the newest research findings in developmental science within its coverage, with more than 80 new

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reference citations added in each of the text's 18 chapters—in total, more than 1,500 new sources of information have been included since the third edition was published, with many of these focused on the rapidly expanding literature on brain development across the lifespan. In addition, the text's coverage has been updated to reflect current thinking on many important issues, especially those pertaining to family structure and personal identity, as social views on these topics continue to evolve. More attention is devoted, too, to cross-cultural perspectives and to understanding development as a process reflective of not only biological and psychology factors but also culture and self-understanding.

In terms of its pedagogical focus, care has been taken with the organization of the text, so that it works equally well in digital as well as traditional text formatting. As was the third edition, the fourth edition is exceptionally well supported by the carefully integrated use of learning objectives, which are tied to not only chapter content, but also chapter summary statements, self-test opportunities, and questions provided to instructors in the test bank. Throughout, students have access to figures and tables that help to organize the text content, as well as to challenge students to develop their critical thinking and problem-solving abilities. The fourth edition also is supported by a rich array of video resources to illuminate various developmental concepts and processes.

Learning Objectives presented at the beginning of each chapter pose overarching themes, stimulating interest in the main topics and serving as a preview of the upcoming chapter. Learning objectives also are linked to the content of the chapter summaries and to all questions in the test bank.

Changing Perspectives explores controversies about human development, often within a specific cultural context, that encourage thought and discussion.

Current Issues emphasizes the “doing” of developmental research and provides an opportunity for students to conceptualize how research projects help us better understand the processes involved in human development.

Videos provide students using the text's digital resources with greater detail on compelling topics, such as adolescent cliques, body image and eating disorders, making a career choice, genetic counseling, and much more.

Interactive Figures allow students using the digital text to delve into the statistics and compare different sets of data to fully understand how researchers have studied human development.

Journal Questions encourage students to reflect on text content and relate it to their own experiences.

Fill-in Application Questions provide additional opportunities at the end of each chapter for students

using the digital text to think about how their experiences fit into the development across the lifespan.

Shared Writing prompts allow students to write their own essays and then to read and comment on fellow students' essays, giving them a broader understanding of different experiences and perspectives.

New to This Edition

Because the fourth edition of *Understanding Human Development* has involved a comprehensive review and revision, we have added significant new content to every chapter. Of particular note are the additions outlined in the following chapter-by-chapter list.

Chapter 1: Fundamentals of Human Development

- Expanded and updated coverage of “children in war,” reflecting recent world events
- Updated coverage of developmental neuroscience and the role of neurological forces in shaping development
- New section on relational systems models, emphasizing the role of epigenetic forces
- Updated information on the Fragile Families and Child Wellbeing Study

Chapter 2: Heredity and Environment

- Expanded and updated coverage of the human genome
- Updated information on single-gene traits, such as eye color
- A more detailed explanation of epigenetic processes, with new information on the epigenome and gene-environment interactions
- Updated information on mitochondrial disorders
- A more nuanced explanation of heritability, focusing on the role of epigenetic processes
- A specific focus on how millennials differ from baby boomers, to illustrate age cohort differences

Chapter 3: Prenatal Development and Childbirth

- Expanded and updated information on preterm and low-birth-weight interventions and outcomes
- Updated information on HIV/AIDS worldwide
- New information on the Zika virus and its teratogenic effects

- Updated statistics on drug use during pregnancy
- More recent information about the use of episiotomy during delivery
- Update of the Nurse-Family Partnership program
- New section on first trimester screening techniques
- Updated and expanded section on fertility treatments
- Expanded coverage of how adults make the transition to parenthood—for mothers, fathers, and nontraditional parents, both within U.S. culture and in other cultures around the world

Chapter 4: Physical, Cognitive, and Language Development in Infancy and Toddlerhood

- Updated information on early brain development, including myelination
- Expanded coverage of how habituation experiments are used to study infant cognition
- Updated information on sudden infant death syndrome and other traumatic events of infancy
- New information on the interrelated nature of infant behavior and brain activity
- New and expanded coverage of nutritional deficiencies in infancy, especially anemia
- Updated information on child malnutrition worldwide, with an emphasis on breastfeeding
- Updated coverage of infant perceptual development and early language development

Chapter 5: Personality and Sociocultural Development in Infancy and Toddlerhood

- Expanded coverage of emotional development in childhood
- Updated coverage of temperament and its role in development
- New information on the significance of early mother-infant communication
- Broadened coverage of the family as a system, emphasizing changing definitions of what constitutes a “family”
- Expanded coverage of the role fathers play in early childhood development
- Updated statistics on labor force participation and child-care arrangements in the United States
- Greater attention to the topic of young children with disabilities
- Expanded coverage of intervention programs aimed at reducing child maltreatment

Chapter 6: Physical, Cognitive, and Language Development in Early Childhood

- Updated and expanded information on brain development in early childhood
- New information on learning to write, emphasizing the concept of automaticity
- Expanded coverage of theory-of-mind research, especially regarding its link to the development of social relationships
- Updated coverage of memory development in early childhood
- Expanded discussion of private speech and how it prepares the child for subsequent developmental tasks
- New information on how children learn to use gestures as part of their communication repertoire
- Updated information on bilingualism and its impact on cognitive development
- New information on how play can be used to encourage positive development among children who have developmental difficulties

Chapter 7: Personality and Sociocultural Development in Early Childhood

- Updated information on the biological forces that underlie early personality development
- Updated coverage of emotion regulation in early childhood
- Expanded information on cross-cultural aspects of parental use of punishment
- New information on children’s use of media, especially digital media, and its impact on development
- Expanded and updated information on how children’s use of media is linked to aggression and violence, as well as to other aspects of development, and especially to sleep
- New coverage of how play is linked to the development of social competencies
- Updated coverage of the development of self-concept in early childhood
- Updated information about the effects of birth order and sibling dynamics
- Updated statistics and information on child maltreatment in the United States, including a discussion of race and ethnicity and of economic forces that are implicated

Chapter 8: Physical and Cognitive Development in Middle Childhood

- Expanded treatment of cerebellar development and its role in complex behavioral and cognitive functions
- Additional focus on the need for longitudinal methods when looking at brain changes
- Updates on the leveling off of childhood obesity trends in recent years
- Updates on common causes of illness and death in childhood
- Additional coverage of media use involving tablets and other new technology
- New information on single-sex schools and their impact on development in childhood
- Updated coverage of gender gaps in educational outcomes
- Updated content on autism spectrum disorder, to correspond to the *DSM-5*

Chapter 9: Personality and Sociocultural Development in Middle Childhood

- New information on the development of moral reasoning
- Updated treatment of bullying, including cyberbullying, and a new section on the negative impact of bullying on bullies themselves
- New research on the two dimensions of popularity: likeability and social status
- Reconceptualized and updated treatment of labor force participation by single and married mothers
- New section on increasingly diverse conceptualizations of the family
- Updates on recent changes in the U.S. economy and how these affect family stress and children's development

Chapter 10: Physical and Cognitive Development in Adolescence and Emerging Adulthood

- Discussion of social media as a way in which adolescents spend time
- Expanded discussion of factors affecting the secular trend of earlier menarche, including both cultural and historical perspectives
- Inclusion of *DSM-5's* of binge eating disorder as one of the eating disorders affecting adolescents

- Updated statistics on obesity
- Discussion of pubertal timing and pace as factors affecting developmental trajectories
- Updated coverage of changing attitudes about sexuality, especially pertaining to homosexuality and sexual diversity
- New statistics on the sexual behavior of adolescents
- Updated discussion of HIV/AIDS
- Updated statistics on births to adolescent girls, focused on the dramatic decline in teenage birth rates in all U.S. ethnic groups
- Expanded coverage of brain development in adolescence
- Updated coverage of risk taking and moral development in adolescence

Chapter 11: Personality and Sociocultural Development in Adolescence and Emerging Adulthood

- Updated coverage of identity development throughout adolescence, emphasizing gender identity and its development
- Updated coverage of ethnic identity development and its significance
- New content pertaining to generational changes for millennials
- Enhanced attention to cross-cultural aspects of parenting influences on adolescent development
- Updated coverage of media use by adolescents, including trends in social media use
- New content on how youth use social media in dating and how this is changing dating patterns and behaviors
- Updated coverage of drug use and usage trends by teenagers in the United States, including the changing laws regarding marijuana use
- Updated coverage of sexual abuse in adolescence, including new coverage of online sexual abuse
- Increased coverage of how epigenetic processes are involved in a risk-resilience model for mental health

Chapter 12: Physical and Cognitive Development in Young Adulthood

- Updates to statistics on physical health and changes in health status in early adulthood
- Updated coverage of HIV/AIDS in the United States and globally, including antiretroviral therapies and the impact these are having on AIDS

- Updated statistics on sexually transmitted infections
- New information on how sexual attitudes and behavior are changing, including an expanded discussion of homophobia
- Expanded and updated coverage of gender identity and sexual orientation, including a discussion of LGBTQ issues, and emphasizing current thinking about nonconforming sexual identity
- New section on the origins of gender orientation and sexual identity
- Updated information on postformal thought

Chapter 13: Personality and Sociocultural Development in Young Adulthood

- Updated coverage of the topic of romantic love
- New and updated coverage of changing patterns of marriage and divorce in the United States today
- New information on same-sex marriage and same-sex parenting
- Updated statistics on cohabitation trends and living arrangements in families
- Updated coverage of government assistance for families (Personal Responsibility and Work Opportunity Reconciliation Act)
- Additional attention on mentoring in work relationships
- New information on racial or ethnic differences in work and pay
- Updated statistics on work trends among gender groups
- Updated information on work–family balance in dual-career families

Chapter 14: Physical and Cognitive Development in Middle Adulthood

- Updated treatment of physical changes in middle adulthood
- New and expanded treatment of menopause in a cross-cultural context
- New information on the side effects of hormone replacement therapy
- Updated statistics on life expectancy and causes of death in the United States today
- Updated treatment of obesity and overweight as a problem for middle-aged adults
- Expanded attention on how stress affects health

- New discussion of the stress associated with being a member of a disadvantaged group
- Expanded coverage of protective factors associated with maintaining cognitive functions into older adulthood

Chapter 15: Personality and Sociocultural Development in Middle Adulthood

- New treatment of the importance of middle adulthood as the crossroads from adolescence to older adulthood, with some abilities in decline but others characterized by growth
- Expanded and updated coverage of shifts in family composition and family dynamics
- Updated coverage of “boomerang” children who return home to live with parents
- Updated statistics on life expectancy, living arrangements, marital arrangements, and grandparenting
- Revised statistics about marriage and divorce rates
- New coverage of factors that increase and decrease the probability of divorce
- Enhanced coverage of job loss and job burnout

Chapter 16: Physical and Cognitive Development in Older Adulthood

- Expanded discussion of cultural differences in age-related stereotypes
- Revised population statistics projections in the United States and the world
- Expanded discussion of aging in various cultures throughout the world
- Updated and expanded coverage of medical approaches to looking younger
- New coverage of links between heart disease, cognitive impairment, and physical exercise
- Updated and expanded coverage of cognitive training for brain health, including Web and computer exercises
- Expanded analysis of the “obesity epidemic” in older adulthood and its effect on diabetes
- Updated statistics on usage and costs of the prescription drugs used by older adults, including information about Medicare Part D
- Inclusion of information about melatonin as a dietary aid to prolong the lifespan
- Updated information on Alzheimer’s disease, including protective factors, new recommendations about diagnosis, and advances in biomarker development

Chapter 17: Personality and Sociocultural Development in Older Adulthood

- New content on cross-cultural perspectives on ill health and aging
- Expanded treatment of coping strategies used to adjust to aging
- Updated statistics on health status, work status, and retirement
- New information on the changing shape of the U.S. population according to age
- Updates on changes in healthcare financing to accommodate an aging population in the United States
- More recent statistics about demographic profiles of older adults with respect to marital status, living arrangement, and racial and ethnic background
- Expanded and updated coverage on Medicare and Social Security

Chapter 18: Death and Dying

- Expanded treatment of cross-cultural issues in death and dying
- Updated discussion of terror management theory and its protective impact on self-esteem
- Updated and expanded discussion of caring for older adults with dementia and Alzheimer's disease
- Recent trends in rates of suicide in the United States
- Updated discussion of hospice usage and services
- Updated and expanded treatment of euthanasia and assisted suicide, including changes in legal issues and public opinion
- New section on acute, prolonged, and complicated grief as these are considered in *DSM-5*
- Updated coverage of end-of-life care recommendations from the Institute of Medicine and the American Cancer Society

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MyTest—an electronic version of the Test Bank to customize in-class tests or quizzes.

Acknowledgments

Understanding Human Development reflects the contributions of many individuals, although ultimately the responsibility for the content of the book rests with the authors. Foremost among the people we wish to acknowledge are the teachers, mentors, and colleagues who have encouraged and inspired us in our own study. We also wish to recognize the significance of the contributions of people of all ages we have learned from, including especially our students and research assistants, but also people with whom we have interacted across a wide variety of circumstances. We are grateful for the support of family and friends as well, and we wish to note that our closest personal relationships have perhaps taught us the most about the nuances and complexity of human development. Combined, the experiences, ideas, and insights of many people are reflected in this text.

Specifically, we would like to thank the professionals who contributed directly to the preparation and production of the fourth edition of this text. We owe considerable

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At Pearson, many, many people worked to bring the fourth edition of *Understanding Human Development* to life. These people are identified on the copyright page of the text; however, several are deserving of special mention. Our sincere thanks and deep appreciation go to Ashley Dodge, Sutapa Mukherjee, and Tanimaa Mehra, who all played a role in planning the fourth edition and helped us bring it to fruition. Our editorial project manager, Michelle

Hacker, and our developmental editor, Robyn Alvarez, have been superb in providing us with the advice and assistance we needed to prepare this fourth edition. Although we have not collaborated directly with the design artists who developed the art plan for the book or with the production editors who made everything work, we are grateful to them for creating and producing an engaging, clear, and attractive layout and design for the fourth edition. And finally, thanks again to Rochelle Diogenes for suggesting our partnership on this book, which we believe has leveraged our specific skills, interests, and passions.

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About the Authors

Wendy L. Dunn is the James Y. Canfield Professor of Psychology at Coe College in Cedar Rapids, Iowa. A first-generation college student who grew up on a farm in Iowa, Wendy earned her undergraduate and master's degrees from Iowa State University; she holds two PhDs, both from the University of Iowa. Although she has assumed a variety of administrative appointments during her academic career, including serving for a time as Vice President of Academic Affairs and Dean of Faculty and currently as Executive Director of Planning, Wendy takes the greatest pleasure in teaching and mentoring undergraduate students. She is the recipient of the C. J. Lynch Outstanding Teacher award at Coe College.

Wendy's research centers on human learning and decision making. She has long been interested in how students learn and has written a wide variety of instructor's manuals and student study guides to accompany many well-known psychology books. She is a co-author of two Introductory Psychology texts: *Psychology: A Concise Introduction*, with Lyle Bourne and Bruce Ekstand, and *Psychology: Concepts and Applications*, with Charles Morris and Al Maisto. Her partnership with Grace Craig through four editions of *Understanding Human Development* has been an especially rich collaboration.

Outside of her academic career, Wendy has been an active community volunteer, serving in leadership roles on boards for the Metropolitan YMCA, the United Way, Orchestra Iowa, the Cedar Rapids Museum of Art, and Brucemore, Inc., a property of the National Trust for Historic Preservation. Wendy has been happily married to Greg Dunn for more than 40 years; together they have a son, Bobby; a daughter, Whitney; a son-in-law, Eliot; and a 2-year old grandson, Jake. Wendy believes that the study of human development comes alive when contextualized through the events of one's own life and that her experiences as daughter, wife, mother, and grandmother have contributed a rich and valuable perspective to how she views the unfolding of life's story.

Grace J. Craig is Professor Emerita at the University of Massachusetts Amherst, where she taught for more than 40 years after teaching for 4 years at Smith College. She taught a variety of courses throughout her career, including child psychology, early childhood education, special education, lifespan development, and child development. She has been an associate dean, acting dean, and, intermittently, the head of the Departments of Human Development, Student and Personnel Development, and Teacher Education and Curriculum Studies before her retirement in 2012. Grace's focus throughout her career was always on helping students, through teaching, advising, and guiding them in their research. She has done research on child and family studies, lifespan development, and early childhood education, but she prefers working with students.

Grace earned her undergraduate degree in sociology and anthropology, and her master's degree and PhD in psychology, from the University of Massachusetts. She was a school psychologist for a few years while her daughter was young. She also supervised facilities such as a day-care center, a center for children with special needs, and preschools. Throughout her career, she has authored and co-authored several textbooks, including *Human Development*, now in its ninth edition; *Children Today*; and *Human Development: A Social Work Perspective*.

Now retired, Grace enjoys birding. Her husband, Ralph, taught in Massachusetts public schools before his death in 2015. Her daughter, Talli McCormick, is a nurse practitioner who currently teaches Nursing at Massachusetts General Hospital, Institute for Allied Health Professionals. Her grandson, Edward McCormick, is earning his bachelor's degree at the University of Massachusetts.