Health PSYCHOLOGY

Shelley E. Taylor

Ninth Edition

HEALTH PSYCHOLOGY

This page intentionally left blank

HEALTH PSYCHOLOGY

NINTH EDITION

SHELLEY E. TAYLOR
University of California, Los Angeles

Mc Graw Hill Education

HEALTH PSYCHOLOGY, NINTH EDITION

This book is printed on acid-free paper.

1 2 3 4 5 6 7 8 9 0 DOW/DOW 1 0 9 8 7 6 5 4

ISBN 978-0-07-786181-0
MHID 0-07-786181-7

Senior Vice President, Products & Markets: *Kurt L. Strand*
Vice President, General Manager, Products & Markets: *Michael Ryan*
Vice President, Content Production & Technology Services: *Kimberly Meriwether David*
Senior Brand Manager: *Allison McNamara*
Managing Editor: *Penina Braffman*
Marketing Specialist: *Alexandra Schultz*
Director, Content Production: *Terri Schiesl*
Content Project Manager: *Heather Ervolino*
Buyer: *Laura Fuller*
Cover Designer: *Studio Montage, St. Louis, MO.*
Cover Image: *Design Pics/Darren Greenwood*
Media Project Manager: *Jennifer Bartell*
Compositor: *Aptara®, Inc.*
Typeface: *10.5/12 Adobe Garamond Regular*
Printer: *R. R. Donnelley*

Library of Congress Cataloging-in-Publication Data

Taylor, Shelley E.
Health psychology / Shelley E. Taylor.—9th ed.
p. cm.
Includes bibliographical references and index.
ISBN-13: 978-0-07-803519-7 (hardback)
ISBN-10: 0-07-803519-8
1. Clinical health psychology. 2. Medicine, Psychosomatic. I. Title.
R726.7.T39 2011
616.001'9—dc22 2011007098

www.mhhe.com

For Sebastian

ABOUT THE AUTHOR

SHELLEY E. TAYLOR is Distinguished Professor of Psychology at the University of California, Los Angeles. She received her Ph.D. in social psychology from Yale University. After a visiting professorship at Yale and assistant and associate professorships at Harvard University, she joined the faculty of UCLA. Her research interests concern the psychological and social factors that promote or compromise mental and physical health across the life span. Professor Taylor is the recipient of a number of awards—most notably, the American Psychological Association's Distinguished Scientific Contribution to Psychology Award, a 10-year Research Scientist Development Award from the National Institute of Mental Health, an Outstanding Scientific Contribution Award in Health Psychology, and election to the Institute of Medicine and the National Academy of Sciences. She is the author of more than 350 publications in journals and books and is the author of *Social Cognition*, *Social Psychology*, *Positive Illusions,* and *The Tending Instinct*.

CONTENTS

PREFACE

When I wrote the first edition of *Health Psychology* over 30 years ago, the task was much simpler than it is now. Health psychology was a new field and was relatively small. In recent decades, the field has grown steadily, and great research advances have been made. Chief among these developments has been the use and refinement of the biopsychosocial model: the study of health issues from the standpoint of biological, psychological, and social factors acting together. Increasingly, research has attempted to identify the biological pathways by which psychosocial factors such as stress may adversely affect health and potentially protective factors such as social support may buffer the impact of stress. My goal in the ninth edition of this text is to convey this increasing sophistication of the field in a manner that makes it accessible, comprehensible, and exciting to undergraduates.

Like any science, health psychology is cumulative, building on past research advances to develop new ones. Accordingly, I have tried to present not only the fundamental contributions to the field but also the current research on these issues. Because health psychology is developing and changing so rapidly, it is essential that a text be up to date. Therefore, I have not only reviewed the recent research in health psychology but also obtained information about research projects that will not be available in the research literature for several years. In so doing, I am presenting a text that is both current and pointed toward the future.

A second goal is to portray health psychology appropriately as being intimately involved with the problems of our times. The aging of the population and the shift in numbers toward the later years has created unprecedented health needs to which health psychology must respond. Such efforts include the need for health promotion with this aging cohort and an understanding of the psychosocial issues that arise in response to aging and its associated chronic disorders. Because AIDS is a leading cause of death worldwide, the need for health measures such as condom use is readily apparent if we are to halt the spread of this disease. Obesity is now one of the world's leading health problems, nowhere more so than in the United States. Reversing this dire trend that threatens to shorten life expectancy worldwide is an important current goal of health psychology. Increasingly, health psychology is an international undertaking, with researchers from around the world providing insights into the problems that affect both developing and developed countries. The ninth edition includes current research that reflects the international focus of both health problems and the health research community.

Health habits lie at the origin of our most prevalent disorders, and this fact underscores more than ever the importance of modifying problematic health behaviors such as smoking and alcohol consumption. Increasingly, research documents the importance of a healthy diet, regular exercise, and weight control among other positive health habits for maintaining good health. The at-risk role has taken on more importance in prevention, as breakthroughs in genetic research have made it possible to identify genetic risks for diseases long before disease is evident. How people cope with being at risk and what interventions are appropriate for them represent important tasks for health psychology research to address.

Health psychology is both an applied field and a basic research field. Accordingly, in highlighting the accomplishments of the field, I present both the scientific progress and its important applications. Chief among these are efforts by clinical psychologists to intervene with people to treat biopsychosocial disorders, such as post-traumatic stress disorder; to help people manage health habits that have become life threatening, such as eating disorders; and to develop clinical interventions that help people better manage their chronic illnesses.

Finding the right methods and venues for modifying health continues to be a critical issue. The chapters on health promotion put particular emphasis on the most promising methods for changing health behaviors. The chapters on chronic diseases highlight how knowledge of the psychosocial causes and consequences of these disorders may be used to intervene with people at risk—first, to reduce the likelihood that such disorders will develop, and second, to deal effectively with the psychosocial issues that arise following diagnosis.

The success of any text depends ultimately on its ability to communicate the content clearly to student readers and spark interest in the field. In this ninth edition, I strive to make the material interesting and relevant to the lives of student readers. Most chapters open with a case history reflecting the experiences of college students. Others highlight news stories related to health. In addition, the presentation of material has been tied to the needs and interests of young adults. For example, the topic of stress management is tied directly to how students might manage the stresses associated with college life. The topic of problem drinking includes sections on college students' alcohol consumption and its modification. Health habits relevant to this age group—tanning, exercise, and condom use, among others—are highlighted for their relevance to the student population. By providing students with anecdotes, case histories, and specific research examples that are relevant to their own lives, they learn how important this body of knowledge is to their lives as young adults.

Health psychology is a science, and consequently, it is important to communicate not only the research itself but also some understanding of how studies were designed and why they were designed that way. The explanations of particular research methods and the theories that have guided research appear throughout the book. Important studies are described in depth so that students have a sense of the methods researchers use to make decisions about how to gather the best data on a problem or how to intervene most effectively.

Throughout the book, I have made an effort to balance general coverage of psychological concepts with coverage of specific health issues. One method of doing so is by presenting groups of chapters, with the initial chapter offering general concepts and subsequent chapters applying those concepts to specific health issues. Thus, Chapter 3 discusses general strategies of health promotion, and Chapters 4 and 5 discuss those issues with specific reference to particular health habits such as exercise, smoking, accident prevention, and weight control. Chapters 11 and 12 discuss broad issues that arise in the context of managing chronic and terminal illness. In Chapters 13 and 14, these issues are addressed concretely, with reference to specific disorders such as heart disease, cancer, and AIDS.

Rather than adopt a particular theoretical emphasis throughout the book, I have attempted to maintain a flexible orientation. Because health psychology is taught within all areas of psychology (for example, clinical, social, cognitive, physiological, learning, and developmental), material from each of these areas is included in the text so that it can be accommodated to the orientation of each instructor. Consequently, not all material in the book is relevant for all courses. Successive chapters

of the book build on each other but do not depend on each other. Chapter 2, for example, can be used as assigned reading, or it can act as a resource for students wishing to clarify their understanding of biological concepts or learn more about a particular biological system or illness. Thus, each instructor can accommodate the use of the text to his or her needs, giving some chapters more attention than others and omitting some chapters altogether, without undermining the integrity of the presentation.

NEW TO THIS EDITION

Chapter 1 Chapter 1 introduces the concept of evidence-based medicine by way of explaining the importance of formal evaluation of evidence, through randomized clinical trials in particular. The revision of Chapter 1 also adds a new section called "Methodological Tools," which includes a gentle introduction to neuroscience, the important research technique of meta-analysis, and a section on the use of mobile and wireless technology in health psychology.

Chapter 2 Chapter 2 begins a discussion of the costs of war, in particular the health risks faced by veterans returning from Iraq and Afghanistan. A box called "Costs of War to the Brain" details the important serious consequences of concussion and head injuries for long-term functioning.

Chapter 3 Historically, health behaviors have been approached as activities that people learn and consciously choose to do. But there is a substantial unconscious component to health habits. Chapter 3 now includes several sections addressing unconscious influences on health behaviors, including the role that implementation intentions can play and circumstances when the brain may be "persuaded" by health messages without the person realizing that social influence has taken place.

Chapter 4 This chapter on health behaviors including exercise, sun safety, and diet has been fully updated. In particular, the risks of dieting and the adverse role of stress in weight loss efforts are discussed.

Chapter 5 The coverage of obesity and eating disorders has been moved to this chapter, along with alcoholism and smoking, because science increasingly suggests that aspects of the obesity epidemic and eating disorders may be explained by addiction. In addition, in the sections on treatments, Chapter 5 features online interventions to modify health behaviors.

Chapter 6 Chapter 6 updates the rapidly expanding field of stress. The box on posttraumatic stress disorder continues the focus on the health risks incurred by veterans returning from Iraq, Afghanistan, and other places with active combat.

Chapter 7 In the new edition, Chapter 7 adopts a focus on resilience and explores many of its sources and consequences. In addition, the coping intervention section has been expanded to include mindfulness meditation and acceptance/commitment theory. A new box titled, "Can Bad Relationships Affect Your Health?" shows how conflict-ridden and ambivalent relationships can lead to health risks.

Chapter 8 Research on the use of health services has been updated throughout the chapter.

Chapter 9 Chapter 9 includes a new section on complementary and alternative medicine (CAM) that covers the philosophical origins of CAM, Chinese medicine,

ayurvedic medicine, homeopathy and naturopathy, and the many CAM treatments that people now use instead of or in addition to traditional medical treatment. These include dietary supplements, prayer, acupuncture, yoga, hypnosis, meditation, guided imagery, chiropractic medicine, osteopathy, and massage.

Chapter 10 Chapter 10 is fully updated and includes new findings from neuroscience and the significance of the neural overlap between physical and social pain.

Chapter 11 Chapter 11 has been streamlined and updated with new perspectives on the management of chronic illness. The importance of co-management is underscored, and new Internet-based interventions are described.

Chapter 12 Chapter 12 includes continuing coverage of the issues of euthanasia and assisted suicide, as issues facing dying people and their families that are receiving increasing legal attention.

Chapter 13 Chapter 13 contains updated research on psychological risks for cardiovascular disease. The sections on hypertension and stroke have been fully updated. The sections on diabetes underscore its increasing incidence, due in large part to the obesity epidemic, and the difficulty of effectively modifying lifestyle factors that contribute to and aggravate this disease.

Chapter 14 Chapter 14 includes updated coverage of immune-related disorders including AIDS, cancer, arthritis, and type I diabetes.

Chapter 15 Chapter 15 has been reoriented away from summarizing the preceding chapters to pointing toward the future. The Affordable Care Act is described, as are its implications for health care in the United States. In addition, we consider the potential role of technology including smartphones and the management of health habits and acute and chronic illness.

■ SUPPLEMENTS

For Instructors

Online Learning Center On the book's website, instructors will find an Instructor's Manual, PowerPoints, a Test Bank, and a Computerized Test Bank. These materials are available on the password-protected side of the Online Learning Center (www.mhhe.com/taylorhealth9e). Contact your McGraw-Hill sales representative for access to the instructor's side of the site.

For Students

Online Learning Center Students will find a number of study tools on the book's website: www.mhhe.com/taylorhealth9e. These include learning objectives, lab exercises, quizzes, and the book's glossary.

■ ACKNOWLEDGMENTS

My extensive gratitude goes to Ian Boggero, Whitney Brammer, and Joelle Broffman for the many hours they put in on the manuscript. I thank my editors at McGraw-Hill, Penina Braffman, Erin Guendelsberger, and Heather Ervolino, who devoted much

time and help to the preparation of the book. I also wish to thank the following reviewers who commented on all or part of the book:

Brian V. Bolter, *University of Central Arkansas*
Nathan Deichert, *Mount Olive College*
Amanda Dillard, *Grand Valley State University*
Gabrielle D'Lima, *Old Dominion University*
Jacqueline Evans, *Texas State University-San Marcos*
Michael Johnson, *University of Tennessee at Chattanooga*
Susan J. LaBine, *Edinboro University of Pennsylvania*
Angie MacKewn, *University of Tennessee at Martin*
Joyce Schulte, *Moberly Area Community College*
Gregory P. Shelley, *Kutztown University of Pennsylvania*
Kamila S. White, *University of Missouri, St. Louis*

Shelley E. Taylor

CourseSmart eTextbooks

This text is available as an eTextbook from CourseSmart, a new way for faculty to find and review eTextbooks. It's also a great option for students who are interested in accessing their course materials digitally and saving money. CourseSmart offers thousands of the most commonly adopted textbooks across hundreds of courses from a wide variety of higher education publishers. It is the only place for faculty to review and compare the full text of a textbook online, providing immediate access without the environmental impact of requesting a print exam copy. At CourseSmart, students can save up to 50 percent off the cost of a print book, reduce their impact on the environment, and gain access to powerful Web tools for learning including full text search, notes and highlighting, and e-mail tools for sharing notes between classmates. For further details contact your sales representative or go to www.coursesmart.com.

McGraw-Hill Create
www.mcgrawhillcreate.com

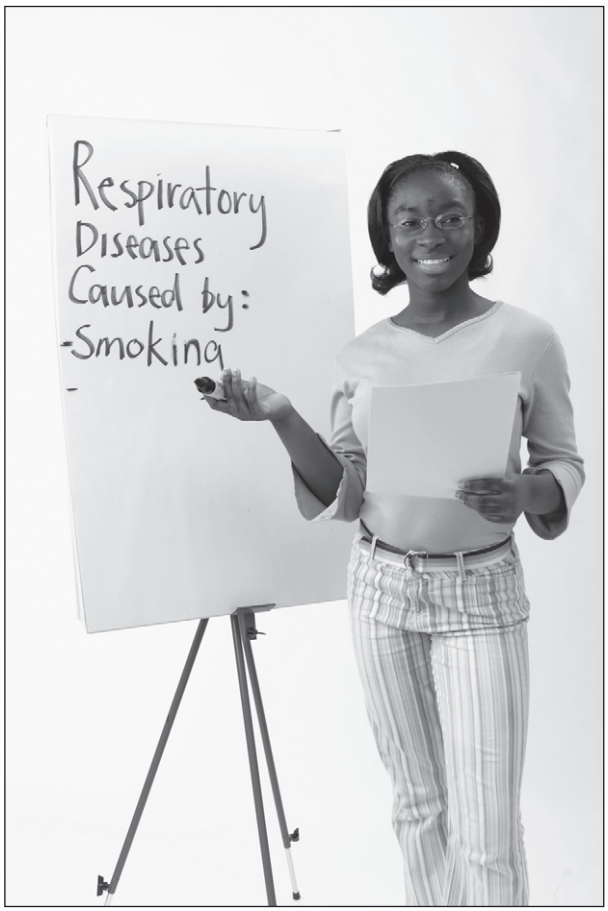
Craft your teaching resources to match the way you teach! With McGraw-Hill Create you can easily rearrange chapters, combine material from other content sources, and quickly upload content you have written like your course syllabus or teaching notes. Find the content you need in Create by searching through thousands of leading McGraw-Hill textbooks. Arrange your book to fit your teaching style. Create even allows you to personalize your book's appearance by selecting the cover and adding your name, school, and course information. Order a Create book and you'll receive a complimentary print review copy in 3–5 business days or a complimentary electronic review copy (eComp) via e-mail in about one hour. Go to www.mcgrawhillcreate.com today and register. Experience how McGraw-Hill Create empowers you to teach your students your way.

PART 1

Introduction to Health Psychology

CHAPTER 1

What Is Health Psychology?



CHAPTER OUTLINE

"Life span may be as wide as your smile: The bigger the smile, the longer the life" (March 29, 2010)

"City vs. Country: Who is Healthier? Surprisingly, people living in major cities live longer, healthier lives, a reversal from the past" (July 12, 2011)

"Women losing years: Life expectancy slips for women (why these losses are largely due to the toll of smoking and record levels of obesity)" (June 15, 2011)

"Movie theater junk food: Is it a menace to society?" (June 13, 2012)

"Men juggle too: Competing work and family demands stress out more guys nowadays" (July 5, 2011)

Every day, we see headlines about health. We are told that smoking is bad for us, that we need to exercise more, and that we've grown obese. We learn about new treatments for diseases about which we are only dimly aware, or we hear that a particular herbal remedy may make us feel better about ourselves. We are told that meditation or optimistic beliefs can keep us healthy or help us to get well more quickly. How do we make sense of all these claims, and which ones are personally important? Health psychology addresses important questions like these.

DEFINITION OF HEALTH PSYCHOLOGY

Health psychology is an exciting and relatively new field devoted to understanding psychological influences on how people stay healthy, why they become ill, and how they respond when they do get ill. Health psychologists both study such issues and develop interventions to help people stay well or recover from illness. For example, a health psychology researcher might be interested in why people continue to smoke even though they know that smoking increases their risk of cancer and heart disease. Understanding this poor health habit leads to interventions to help people stop smoking.

Fundamental to research and practice in health psychology is the definition of health. Decades ago, a forward-looking World Health Organization (1948) defined **health** as "a complete state of physical, mental, and social well-being and not merely the absence of disease or infirmity." This definition is at the core of health psychologists' conception of health. Rather than defining health as the absence of illness, health is recognized to be an achievement involving balance among physical, mental, and social well-being. Many use the term **wellness** to refer to this optimum state of health.

Health psychologists focus on *health promotion and maintenance,* which includes issues such as how to get children to develop good health habits, how to promote regular exercise, and how to design a media campaign to get people to improve their diets.

Health psychologists study the psychological aspects of the *prevention and treatment of illness.* A health psychologist might teach people in a high-stress occupation how to manage stress effectively so that it will not adversely affect their health. A health psychologist might work with people who are already ill to help them follow their treatment regimen.

Health psychologists also focus on *the etiology and correlates of health, illness, and dysfunction.* **Etiology** refers to the origins or causes of illness. Health psychologists especially address the behavioral and social factors that contribute to health, illness, and dysfunction, such as alcohol consumption, smoking, exercise, the wearing of seat belts, and ways of coping with stress.

Finally, health psychologists analyze and attempt to improve *the health care system and the formulation of health policy.* They study the impact of health institutions and health professionals on people's behavior to develop recommendations for improving health care.

In summary, health psychology examines the psychological and social factors that lead to the enhancement of health, the prevention and treatment of illness, and the evaluation and modification of health policies that influence health care.

Why Did Health Psychology Develop?

To many people, health is simply a matter of staying well or getting over illnesses quickly. Psychological and social factors might seem to have little to contribute. But consider some of the following puzzles that cannot be understood without the input of health psychology:

- When people are exposed to a cold virus, some get colds whereas others do not.
- Men who are married live longer than men who are not married.
- Throughout the world, life expectancy is increasing. But in countries going through dramatic social upheaval, life expectancy can plummet.
- Women live longer than men in all countries except those in which they are denied access to

health care. But women are more disabled, have more illnesses, and use health services more.

- Infectious diseases such as tuberculosis, pneumonia, and influenza used to be the major causes of illness and death in the United States. Now chronic diseases such as heart disease, cancer, and diabetes are the main causes of disability and death.
- Attending a church or synagogue, praying, or otherwise tending to spiritual needs is good for your health.

By the time you have finished this book, you will know why these findings are true.

THE MIND-BODY RELATIONSHIP: A BRIEF HISTORY

During prehistoric times, most cultures regarded the mind and body as intertwined. Disease was thought to arise when evil spirits entered the body, and treatment consisted primarily of attempts to exorcise these spirits. Some skulls from the Stone Age have small, symmetrical holes that are believed to have been made intentionally with sharp tools to allow the evil spirit to leave the body while the shaman performed the treatment ritual.

The ancient Greeks were among the earliest civilizations to identify the role of bodily factors in health and illness. Rather than ascribing illness to evil spirits, they developed a humoral theory of illness. According to this viewpoint, disease resulted when the four humors or circulating fluids of the body—blood, black bile, yellow bile, and phlegm—were out of balance. The goal of treatment was to restore balance among the humors. The Greeks also believed that the mind was important. They described personality types associated with each of the four humors, with blood being associated with a passionate temperament, black bile with sadness, yellow bile with an angry disposition, and phlegm with a laid-back approach to life.

By the Middle Ages, however, the pendulum had swung to supernatural explanations for illness. Disease was regarded as God's punishment for evildoing, and cure often consisted of driving out the evil forces by torturing the body. Later, this form of "therapy" was replaced by penance through prayer and good works. During this time, the Church was the guardian of medical knowledge, and as a result, medical practice assumed religious overtones. The functions of the physician were typically absorbed by priests, and so healing and the practice of religion became virtually indistinguishable.

Beginning in the Renaissance and continuing into the present day, great strides were made in understanding the technical bases of medicine. These advances include the invention of the microscope in the 1600s and the development of the science of autopsy, which allowed

Sophisticated, though not always successful, techniques for the treatment of illness were developed during the Renaissance. This woodcut from the 1570s depicts a surgeon drilling a hole in a patient's skull, with the patient's family and pets looking on.

TABLE 1.1 | The Biomedical Model: Why Is It Ill-suited to Understanding Illness?

- Reduces illness to low-level processes such as disordered cells and chemical imbalances
- Fails to recognize social and psychological processes as powerful influences over bodily estates—assumes a mind-body dualism
- Emphasizes illness over health rather than focusing on behaviors that promote health
- Model cannot address many puzzles that face practitioners: why, for example, if six people are exposed to a flu virus, do only three develop the flu?

medical practitioners to see the organs that were implicated in different diseases. As the science of cellular pathology progressed, the humoral theory of illness was put to rest. Medical practice drew increasingly on laboratory findings and looked to bodily factors rather than to the mind as bases for health and illness. In an effort to break with the superstitions of the past, practitioners resisted acknowledging any role for the mind in disease processes. Instead, they focused primarily on organic and cellular pathology as a basis for their diagnoses and treatment recommendations.

The resulting **biomedical model,** which has governed the thinking of most health practitioners for the past 300 years, maintains that all illness can be explained on the basis of aberrant somatic bodily processes, such as biochemical imbalances or neurophysiological abnormalities. The biomedical model assumes that psychological and social processes are largely irrelevant to the disease process. The problems with the biomedical model are summarized in Table 1.1.

THE RISE OF THE BIOPSYCHOSOCIAL MODEL

The biomedical viewpoint began to change with the rise of modern psychology, particularly with Sigmund Freud's (1856–1939) early work on **conversion hysteria.** According to Freud, specific unconscious conflicts can produce physical disturbances that symbolize repressed psychological conflicts. Although this viewpoint is no longer central to health psychology, it gave rise to the field of psychosomatic medicine.

Psychosomatic Medicine

The idea that specific illnesses are produced by people's internal conflicts was perpetuated in the work of Flanders Dunbar in the 1930s (Dunbar, 1943) and Franz Alexander in the 1940s (Alexander, 1950). Unlike Freud, these researchers linked patterns of personality, rather than a specific conflict, to specific illnesses. For example, Alexander developed a profile of the ulcer-prone personality as someone with excessive needs for dependency and love.

A more important development concerned an emphasis on physiological mechanisms. Dunbar and Alexander maintained that conflicts produce anxiety, which becomes unconscious and takes a physiological toll on the body via the autonomic nervous system. The continuous physiological changes eventually produce an actual organic disturbance. In the case of the ulcer patient, for example, repressed emotions resulting from frustrated dependency and love-seeking needs were thought to increase the secretion of acid in the stomach, eventually eroding the stomach lining and producing ulcers (Alexander, 1950).

Dunbar's and Alexander's work helped shape the emerging field of **psychosomatic medicine** by offering profiles of particular disorders believed to be psychosomatic in origin, that is, caused by emotional conflicts. These disorders include ulcers, hyperthyroidism, rheumatoid arthritis, essential hypertension, neurodermatitis (a skin disorder), colitis, and bronchial asthma.

We now know that all illnesses raise psychological issues. Moreover, researchers now believe that a particular conflict or personality type is not sufficient to produce illness. Rather, the onset of disease is usually due to several factors working together, which may include a biological pathogen (such as a viral or bacterial infection) coupled with social and psychological factors, such as high stress, low social support, and low socioeconomic status.

The idea that the mind and the body together determine health and illness logically implies a model for studying these issues. This model is called the **biopsychosocial model.** Its fundamental assumption is that health and illness are consequences of the interplay of biological, psychological, and social factors (Keefe, 2011).

Advantages of the Biopsychosocial Model

How does the biopsychosocial model of health and illness overcome the disadvantages of the biomedical model? The biopsychosocial model maintains that biological, psychological, and social factors are all important determinants of health and illness. Both macrolevel processes (such as the existence of social support or the

presence of depression) and microlevel processes (such as cellular disorders or chemical imbalances) continually interact to influence health and illness and their course (Suls & Martin, 2011).

The biopsychosocial model emphasizes both health and illness. From this viewpoint, health becomes something that one achieves through attention to biological, psychological, and social needs, rather than something that is taken for granted.

Clinical Implications of the Biopsychosocial Model

The biopsychosocial model is useful for clinical practice with patients as well. First, the process of diagnosis can benefit from understanding the interacting role of biological, psychological, and social factors in assessing a person's health or illness. Recommendations for treatment can focus on all three sets of factors.

The biopsychosocial model makes explicit the significance of the relationship between patient and practitioner. An effective patient-practitioner relationship can improve a patient's use of services, the efficacy of treatment, and the rapidity with which illness is resolved.

The Biopsychosocial Model: The Case History of Nightmare Deaths

To see how completely the mind and body are intertwined in health, consider a case study that intrigued medical researchers for nearly 15 years. It involved the bewildering "nightmare deaths" among Southeast Asians.

Following the Vietnam War, in the 1970s, refugees from Southeast Asia, especially Laos, Vietnam, and Cambodia, immigrated to the United States. Around 1977, the Centers for Disease Control (CDC) in Atlanta became aware of a strange phenomenon: sudden, unexpected nocturnal deaths among male refugees from these groups. Death often occurred in the first few hours of sleep. Relatives reported that the victim began to gurgle and move about in bed restlessly. Efforts to awaken him were unsuccessful, and shortly thereafter he died. Even more mysteriously, autopsies revealed no specific cause of death.

However, most of the victims appeared to have a rare, genetically based malfunction in the heart's pacemaker. The fact that only men of particular ethnic backgrounds were affected was consistent with the potential role of a genetic factor. Also, the fact that the deaths seemed to cluster within particular families was consistent with the genetic theory. But how and why would such a defect be triggered during sleep?

As the number of cases increased, it became evident that psychological and cultural, as well as biological, factors were involved. Some family members reported that the victim had experienced a dream foretelling the death. Among the Hmong of Laos, a refugee group that was especially plagued by these nightmare deaths, dreams are taken seriously as portends of the future. Anxiety due to these dreams, then, may have played a role in the deaths (Adler, 1991).

Another vital set of clues came from a few men who were resuscitated by family members. Several of them said that they had been having a severe night terror. One man, for example, said that his room had suddenly grown darker, and a figure like a large black dog had come to his bed and sat on his chest. He had been unable to push the dog off his chest and had become quickly and dangerously short of breath (Tobin & Friedman, 1983). This was also an important clue because night terrors are known to produce abrupt and dramatic physiologic changes.

Interviews with the survivors revealed that many of the men had been watching violent TV shows shortly before retiring, and the content of the shows appeared to have made its way into some of the frightening dreams. In other cases, the fatal event occurred immediately after a family argument. Many of the men were said by their families to have been exhausted from combining demanding full-time jobs with a second job or with night school classes to learn English. The pressures to support their families had been taking their toll.

All these clues suggest that the pressures of adjusting to life in the United States played a role in the deaths. The victims may have been overwhelmed by cultural differences, language barriers, and difficulties finding satisfactory jobs. The combination of this chronic strain, a genetic susceptibility, and an immediate trigger provided by a family argument, violent television, or a frightening dream culminated in nightmare death (Lemoine & Mougne, 1983). Clearly, the biopsychosocial model unraveled this puzzle.

THE NEED FOR HEALTH PSYCHOLOGY

What factors led to the development of health psychology? Since the inception of the field of psychology in the early 20th century, psychologists have made important

contributions to health, developing models that explore how and why some people get ill and others do not, how people adjust to their health conditions, and what factors lead people to practice health behaviors. In response to these trends, the American Psychological Association (APA) created a task force in 1973 to focus on psychology's potential role in health research. Participants included counseling, clinical, and rehabilitation psychologists, many of whom were already employed in health settings. Independently, social psychologists, developmental psychologists, and community/environmental psychologists were developing conceptual approaches for exploring health issues (Friedman & Silver, 2007). These two groups joined forces, and in 1978, the Division of Health Psychology was formed within the APA. It is safe to say that health psychology is one of the most important developments within the field of psychology in the past 50 years.

From the 1980s forward, the field gained momentum, so that in 2001, the American Psychological Association added "promoting health" to its mission statement. What other factors have fueled the growing field of health psychology?

Changing Patterns of Illness

An important factor influencing the rise of health psychology has been the change in illness patterns that has occurred in the United States and other technologically advanced societies in recent decades. As Table 1.2 shows, until the 20th century, the major causes of illness and death in the United States were **acute disorders**—especially tuberculosis, pneumonia, and other infectious diseases. The prevalence of acute infectious disorders, such as tuberculosis, influenza, measles, and poliomyelitis, has declined because of treatment innovations and changes in public health standards, such as improvements in waste control and sewage. Acute disorders are short-term illnesses, often the result of a viral or bacterial invader and usually amenable to cure.

Now, however, **chronic illnesses**—especially heart disease, cancer, and respiratory diseases—are the main contributors to disability and death, particularly in industrialized countries. Chronic illnesses are slowly developing diseases with which people live for many years and that typically cannot be cured but rather are managed by patient and health care providers. Table 1.3 lists the main diseases worldwide at the present time. Note how the causes are projected to change over the next decade or so.

Why have chronic illnesses helped spawn the field of health psychology? First, these are diseases in which psychological and social factors are implicated as causes. For example, personal health habits, such as diet and smoking, contribute to the development of heart disease and cancer, and sexual activity is critical to the likelihood of developing AIDS (acquired immune deficiency syndrome).

Second, because people may live with chronic diseases for many years, psychological issues arise in their management. Health psychologists help chronically ill people adjust psychologically and socially to their changing health state and treatment regimens, many of which involve self-care. Chronic illnesses affect family functioning, including relationships with a partner or children,

TABLE 1.2 | What Are the Leading Causes of Death in the United States? A Comparison of 1900 and 2009, per 100,000 Population

1900		2009	
Influenza and pneumonia	202.2	Diseases of the heart	195.2
Tuberculosis, all forms	194.4	Malignant neoplasms (cancer)	184.9
Gastroenteritis	142.7	Chronic lower respiratory diseases	44.7
Diseases of the heart	137.4	Cerebrovascular diseases (stroke)	42.0
Vascular lesions of the c.n.s.	106.9	Accidents	38.4
Chronic nephritis	81.0	Alzheimer's disease	25.7
All accidents	72.3	Diabetes mellitus	22.4
Malignant neoplasms (cancer)	64.0	Influenza and pneumonia	17.5
Certain diseases of early infancy	62.6	Nephritis, nephrotic syndrome, and nephrosis	15.9
Diphtheria	40.3	Intentional self-harm (suicide)	12.0

Source: Murphy, 2000; Centers for Disease Control and Prevention, January 2012.

TABLE 1.3 | What Are the Worldwide Causes of Death?

The causes of death and disability are expected to change dramatically by the year 2030.

1990		2030	
Rank	**Disease or Injury**	**Projected Rank**	**Disease or Injury**
1	Lower respiratory infections	1	Ischemic heart disease
2	Diarrheal diseases	2	Cerebrovascular disease
3	Conditions arising during the perinatal period	3	Chronic obstructive pulmonary disease
4	Unipolar major depression	4	Lower respiratory infections
5	Ischemic heart disease	5	Road traffic accidents
6	Cerebrovascular disease	6	Trachea, bronchus, lung cancers
7	Tuberculosis	7	Diabetes mellitus
8	Measles	8	Hypertensive heart disease
9	Road traffic accidents	9	Stomach cancer
10	Congenital anomalies	10	HIV/AIDS

and health psychologists help ease the problems in family functioning that may result.

Chronic illnesses may require medication use and self-monitoring of symptoms, as well as changes in behavior, such as altering diet and getting exercise. Health psychologists develop interventions to help people learn these regimens and promote adherence to them.

Advances in Technology and Research

New medical technologies and scientific advances create issues that can be addressed by health psychologists. Just in the past few years, genes have been uncovered that contribute to many diseases including breast cancer. How do we help a college student whose mother has just been diagnosed with breast cancer come to terms with her risk? If she tests positive for a breast cancer gene, how will this change her life? Health psychologists help answer such questions.

Certain treatments that prolong life may severely compromise quality of life. Increasingly, patients are asked their preferences regarding life-sustaining measures, and they may require counseling in these matters. These are just a few examples of how health psychologists respond to scientific developments.

Expanded Health Care Services

Other factors contributing to the rise of health psychology involve the expansion of health care services. Health care is the largest service industry in the United States, and it is still growing rapidly. Americans spend more than $2.3 trillion annually on health care (National Center for Health Statistics, 2011b). In recent years, the health care industry has come under increasing scrutiny, as substantial increases in health care costs have not brought improvement in basic indicators of health.

Moreover, huge disparities exist in the United States such that some individuals enjoy the very best health care available in the world while others receive little health care except in emergencies. As of 2010, 49.9 million Americans had no health insurance at all (U.S. Census Bureau, 2011), with basic preventive care and treatment for common illnesses out of financial reach. These developments have fueled recent efforts to reform the health care system to provide all Americans with a basic health care package, similar to what already exists in most European countries.

Health psychology represents an important perspective on these issues for several reasons:

- Because containing health care costs is so important, health psychology's main emphasis on prevention—namely, modifying people's risky health behaviors before they become ill—can reduce the dollars devoted to the management of illness.
- Health psychologists know what makes people satisfied or dissatisfied with their health care (see Chapters 8 and 9) and can help in the design of a user-friendly health care system.

In the 19th and 20th centuries, great strides were made in the technical basis of medicine. As a result, physicians looked more and more to the medical laboratory and less to the mind as a way of understanding the onset and progression of illness.

- The health care industry employs millions of people. Nearly every person in the country has direct contact with the health care system as a recipient of services. Consequently, its impact is enormous.

For all these reasons, then, health care delivery has a substantial social and psychological impact on people, an impact that is addressed by health psychologists.

Increased Medical Acceptance

Another reason for the development of health psychology is the increasing acceptance of health psychologists within the medical community. Health psychologists have developed a variety of short-term behavioral interventions to address health-related problems, including managing pain, modifying bad health habits such as smoking, and managing the side effects of treatments. Techniques that may take a few hours to teach can produce years of benefit. Such interventions, particularly those that target risk factors such as diet or smoking, have contributed to the actual decline in the incidence of some diseases, especially coronary heart disease.

To take another example, psychologists learned many years ago that informing patients fully about the procedures and sensations involved in unpleasant medical procedures such as surgery improves their adjustment to those procedures (Janis, 1958; Johnson, 1984). As a consequence of these studies, many hospitals and other treatment centers now routinely prepare patients for such procedures.

Ultimately, if a health-related discipline is to flourish, it must demonstrate a strong track record, not only as a research field but as a basis for interventions as well (Glasgow, 2008; King, Ahn, Atienza, & Kraemer, 2008). Health psychology is well on its way to fulfilling both tasks.

HEALTH PSYCHOLOGY RESEARCH

Health psychologists make important methodological contributions to the study of health and illness. The health psychologist can be a valuable team member by providing the theoretical, methodological, and statistical expertise that is the hallmark of good training in psychology.

The Role of Theory in Research

Although much research in health psychology is guided by practical problems, such as how to ease the transition from hospital to home care, about one-third of health psychology investigations are guided by theory (Painter, Borba, Hynes, Mays, & Glanz, 2008). A **theory** is a set of analytic statements that explain a set of phenomena, such as why people practice poor health behaviors. The best theories are simple and useful. Throughout this text, we will see references to many theories, such as the theory of planned behavior that predicts and explains when people change their health behaviors (Chapter 3).

The advantages of theory for guiding research are several. Theories provide guidelines for how to do research and interventions. For example, the general principles of cognitive behavior therapy can tell one