HEALTH AND HUMAN BEHAVIOR

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Health and Human Behavior

Robert M. Kaplan is professor and chief of health care sciences in the department of family and preventive medicine at the University of California, San Diego. His research has focused on health outcome measurement and on behavioral interventions in chronic illnesses, including diabetes mellitus, chronic obstructive pulmonary disease, and arthritis. Over the years, his research has been supported by a variety of agencies including the National Institute of Health, the National Science Foundation, NATO, the National Center for Health Services Research, the American Diabetes Association, and the Arthritis Foundation. He serves on many NIH, WHO, and other agency committees, including study sections for both the Agency for Health Care Policy and Research (AHCPR) and the Veterans Administration. Having spent most of his career in San Diego, Dr. Kaplan has been active in the development of many new training programs. He helped found a new graduate school of public health at San Diego State, and he was active in the development of a new Ph.D. program that combined the resources of an academic psychology department and a school of medicine. In addition, he helped develop a general preventive medicine residency. Dr. Kaplan is the former recipient of an NIH Research Career Development Award and the Award for Outstanding Scientific Contribution to Health Psychology from the American Psychological Association. He is currently an associate editor for *The Annals of Behavioral Medicine,* and he serves on several other editorial boards. In 1988–1989 he served as the program chair for the Society of Behavioral Medicine, and he has held elected offices in several organizations including the Society of Behavioral Medicine, the American Association for the Advancement of Science, and the American Psychological Association. In 1992–1993 he was president of the division of health psychology of the American Psychological Association. Dr. Kaplan is the author or editor of 13 books and over 200 publications. He enjoys outdoor sports such as surfing, running, and tennis.

James F. Sallis, Jr., received his doctorate in clinical psychology in 1981 from Memphis State University, with an internship at Brown University. He was a postdoctoral Fellow in cardiovascular disease prevention and epidemiology at the Stanford Center for Research in Disease Prevention. He is currently professor of psychology at San Diego State University and assistant adjunct professor of pediatrics at the University of California, San Diego. Dr. Sallis is the author of over 100 scientific publications. He is on the editorial boards of *Health Psychology* and *Medicine, Exercise, Nutrition, and Health,* and has consulted with numerous government agencies, corporations, and research projects concerning health promotion. His research explores methods of keeping people healthy through regular physical activity, prudent dietary habits, and abstention from tobacco. Dr. Sallis has studied varied populations, such as adults, children, adolescents, families, and Latinos. He has conducted research in schools, work sites, churches, clinics, and homes. Dr. Sallis teaches undergraduate health psychology as well as the behavioral medicine seminar for the SDSU-UCSD Joint Doctoral Program in Clinical Psychology. To improve his own quality of life, he jogs and plays drums in a rock-and-roll band.

Thomas L. Patterson received his master's degree from the University of Georgia and his Ph.D. from the University of California, Riverside. He is currently associate professor in the

department of psychiatry at the University of California, San Diego. His broad field of interest lies in behavioral medicine and the biological basis of behavior. He has authored numerous papers investigating stressful life events, coping, and social support and their relationship to physical and psychological health. He has also published a number of papers investigating aggregation of various health habits. His current studies include how the stress of caring for Alzheimer's patients impacts the caregiver's health. Other work focuses on how stress, coping, and social support may impact HIV disease progression. Dr. Patterson serves as reviewer for a number of journals and granting agencies, and is a member of various community boards including the Board of Directors of the San Diego Alzheimer's Association. However, he feels most at home on the beach, where he is a competitive body surfer. He placed fifth in his age class in last year's world championships.

For health in three generations, to Cameron and Seth for adult questions only a child could raise, to Cathie for love and support, and to Oscar and Rose for believing this line of work is respectable.

RMK

To Asante sana Shemi Amarsi-Sallis and my parents, for nourishing me body and soul. To new and old friends and collaborators from many places and walks of life, who make it enjoyable. To those who conducted and participated in the research on which we rely so heavily.

JFS

I am grateful for the patience and support of my family, Suzi, Carly, Jessie, and Leroy, who have reduced my stress level while I increased theirs. Many thanks to all the friends and colleagues who have provided ideas, critiques, and laughs.

TLP

The first wealth is health.
Ralph Waldo Emerson, *The Conduct of Life*, 1860.

Health is important. That is why we direct our lives toward achieving it. Wellness enables the pursuit of life's accomplishments and its pleasures. The days that marked the completion of this book were not unlike many others in which health items dominated the national news. Two of the most popular athletes in professional sports ended their careers because of health problems. Magic Johnson, a long-standing basketball star with the Los Angeles Lakers, announced that he had developed AIDS after an unprotected sexual encounter. In early 1992, Bo Jackson, perhaps the most gifted athlete in professional sports, announced that a damaged hip would forever limit his athletic performance. Jackson retired and sought surgery for an artificial hip.

Health and human behavior are inseparably intertwined. This book reviews numerous studies demonstrating that human behaviors are related to health status. Health and illness can be influenced by diet, exercise, stress, social relationships, and coping behaviors. A healthful lifestyle promotes health. Magic Johnson's health problems may have resulted from a lifestyle that included multiple sexual partners. Most of the major chronic illnesses have been connected, at least to some extent, with lifestyle. The most common cause of lung cancer, for example, is smoking behavior. Much of our message in this book is that we can, at least partially, control our health by controlling our behavior.

In addition to behavior affecting health, health can affect behavior. For Bo Jackson, a health condition dramatically affected behavior. Behavioral science, in its quest to identify the causes of behavior, often neglects one of the most important influences. Health status may determine whether you will play tennis, stay in bed, perform up to your potential on the midterm exam, or choose a particular vacation destination. Illness disrupts daily life. When illness strikes, the desire to get better is usually accompanied by motivation to get back to regular activities.

This book is about health and about behavior. More specifically, it is about the science that connects behavior to health and health to behavior.

WHY WE WROTE THIS BOOK

There are other excellent books about health psychology. However, they are different. Most of them place the greatest emphasis on psychological processes, such as coping with stress, and upon personality factors, such as the Type A personality. These are important topics. However, the study of health and behavior has become even broader and extends far beyond the individual. Sometimes several different perspectives are needed in order to understand complicated problems. For example, heart disease might be preventable through changes in diet and exercise behaviors. In order to accomplish this, we can work with individuals by providing in-depth counseling and behavior modification. Another approach is to work with small groups of individuals, while a third approach is to use the mass media in an attempt to affect entire communities. The media approach may have only a small effect upon any one individual, but collectively a community may lower its risk. This latter approach reflects the public

health perspective. We attempt to cover the field of health and human behavior broadly by including a wide variety of topics and perspectives.

Although the study of health and human behavior has interested scholars for centuries, it has only recently become legitimized. The Institute of Medicine of the National Academy of Sciences is probably the most prestigious collection of recognized biomedical scholars in the world. In 1982 it released a report suggesting that individual behaviors—such as cigarette smoking, diet, and exercise—may be associated with at least 50 percent of all chronic illness (Hamberg, Elliott, & Parron, 1982). Within a decade similar reports were offered by other distinguished organizations, including the World Health Organization and the National Institutes of Health. These reports and related developments stimulated a whole new scientific field. It is this new and exciting young discipline that we attempt to summarize in this book. Throughout the book, we make reference to an important document known as *Healthy People 2000*. This book, released in 1991 by the U.S. Department of Health and Human Services, lays out the objectives for improving the health of the U.S. population by the year 2000. Most of the objectives emphasize changing human behavior.

WHY THE THREE OF US?

None of us remembers exactly how this project got started. However, we agree that each of us thought it was a good idea and that each author needed the other two. San Diego is a good place for professors interested in health and human behavior. The three of us have been friends and colleagues for years (for one pair the friendship goes back to junior high school). In some ways we are an unlikely threesome—by avocation two surfers and a rock-and-roll drummer. Yet we have similar academic interests, and we represent complementary perspectives. At times we have worked collaboratively on research projects, and at other times we have criticized each other's work. For many years we have run together, partied together, and worked together in the supervision of students. Our personal work has become focused in slightly different areas, which represent the diversity of topics in this book. Jointly our expertise is in chronic illness, stress and coping, and health promotion/disease prevention. We work in different settings—a medical school department focusing on public health, a psychology department with a strong emphasis on applied and clinical issues, and a university psychiatry department based in a hospital. This diversity has helped us identify what we know, and what we collectively need to learn.

WHAT DOES THE BOOK COVER?

This book presents 20 chapters divided into four general categories. The first section of the book reviews methods and issues. Within this section we will review behavioral epidemiology. *Epidemiology* is the study of the distribution and determinants of disease. Behavioral factors are important in the establishment of risk factors for various illnesses. The chapter considers not only the behavioral risk factors but also the methods that are used in establishing which behaviors are associated with risk. Next, Chapter 3 reviews models of health behavior. The chapter focuses on the principles of learning and on other social influences that may affect health behavior. Chapter 4 is an overview of the health care system; it discusses many contemporary issues relevant to today's "health care crisis." Chapter 5 also reviews interactions with the health care system and problems in compliance with medical recommendations.

The second section of the book reviews stress and coping. Chapter 6 provides an overview of stress, the relationship between stress and immunity, and techniques that are used to

manage stress. Chapter 7 goes into more depth on social support; it considers social support as a risk factor for illness and reviews evidence for and against the assumption that social relationships can influence health outcomes.

The third section of the book focuses on chronic illnesses. Chapter 8 reviews chronic pain and arthritis. Chapter 9 goes into more detail on diabetes; it considers various types of diabetes and relates each to behavioral determinants and behavioral interventions. Chapter 10 focuses on cardiovascular disease, Chapter 11 reviews cancer, while Chapter 12 goes into detail about one of our major current public health threats, AIDS. Chapter 13 discusses injury, violence, and alcohol, three major threats to public health.

The final section of the book is devoted to health behavior and health promotion. Chapter 14 reviews diet, Chapter 15 considers physical activity, and Chapter 16 focuses on smoking. Each of these chapters reviews current epidemiology and describes interventions. Chapter 17 reviews the relationship between obesity and disease, Chapter 18 considers the relationship between personality and disease, while Chapter 19 evaluates community interventions. The final chapter will be used to provide information for those students who want to continue their study of health and human behavior. The chapter summarizes organizations devoted to the field as well as training opportunities. Finally, the book has several special features, including special boxes that focus on areas such as ethnic diversity and women's issues. Most of the chapters are framed in relation to the U.S. health objectives for the year 2000.

WHO DO WE OWE?

We are pleased to take credit for completing this book, but must admit that many others helped us get this far. The following reviewers provided many important insights: Glen Albright, Baruch College; Robert Croyle, University of Utah–Salt Lake City; Charles Kaiser, College of Charleston; Edward Krupat, Massachusetts College of Pharmacy and Allied Health Sciences; Connie Schick, Bloomsburg University; and Mervyn K. Wagner, University of South Carolina. Graduate students Liz Eakin and several members of our first-year Ph.D. class read various parts of the manuscript and provided important critical appraisal. The manuscript was read by 45 undergraduate students enrolled in health psychology at San Diego State University in the Fall of 1991, and we are indebted to those who identified countless problems. We take responsibility for any that remain. Of course, the book contains some opinions and personal interpretations. We hope the reader will enjoy agreeing or disagreeing with these comments.

We are especially appreciative to Robin Nordmeyer for taking the role of oversight mother hen, and to Rachel Ingram and Bev Jones for helping put the manuscript together. Computer wizardry and sharp eyes were provided by Kecia Carrasco throughout the manuscript preparation phase. Finally, to our three editors at McGraw Hill—Jim Anker, Jane Vaicunas, and Chris Rogers—and the editorial staff Eleanor Castellano and Kathy Porzio for sticking with us through the process, we offer our most sincere appreciation. To all who have helped us by either encouraging or criticizing the manuscript, we express our sincere appreciation.

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