


# HEALTH AND HUMAN BEHAVIOR

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# Health and Human Behavior

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## 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 abstinence 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

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TLP



*The first wealth is health.*

Ralph Waldo Emerson, *The Conduct of Life*, 1860.

**H**ealth 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 per-

spectives. 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.

Robert M. Kaplan  
James F. Sallis, Jr.  
Thomas L. Patterson

*Preface*

*xvii*

**SECTION 1**

**Methods and Issues**

**1 Introduction**

**3**

HEALTH AND HUMAN BEHAVIOR

5

THE AGE OF CHRONIC ILLNESS

6

MODELS OF MEDICAL CARE

7

THE CHANGING FACE OF  
HEALTH CARE

8

BEYOND MEDICAL CARE

9

SOME BASIC DEFINITIONS

9

What Is Health?

9

What Is Psychology?

10

What Is Health Psychology and  
Behavioral Medicine?

10

Health Psychology and Its  
Relationship to Other Fields of  
Study

12

A BRIEF HISTORY

13

THE CONTEMPORARY SCENE:  
HEALTHY PEOPLE 2000

14

PLANNING FOR THE NEXT  
CENTURY

15

HEALTH, BEHAVIOR, AND YOU  
KEY TERMS

17

**2 Behavioral Epidemiology**

**20**

WHAT IS EPIDEMIOLOGY?

21

BEHAVIORAL EPIDEMIOLOGY

25

EPIDEMIOLOGIC METHODOLOGY

26

EPIDEMIOLOGIC MEASURES

26

Cohort Study

27

Panel Study

27

Case-Control Study

28

Experimental Studies

28

**MAJOR EPIDEMIOLOGIC STUDIES**

29

Framingham Heart Study

29

Alameda County Study

30

The Stanford Three-Community  
Studies

31

**PERSON, PLACE, AND TIME IN  
EPIDEMIOLOGICAL STUDIES**

32

Person

32

Place

32

Time

33

**SUMMARY**

38

**KEY TERM**

38

**3 Understanding and Changing  
Health Behaviors**

**39**

**THE CHALLENGE OF HEALTH  
BEHAVIOR CHANGE**

39

**RESPONDENT AND OPERANT  
LEARNING**

42

Principles of Respondent Learning

42

Operant Learning

44

**SOCIAL COGNITIVE THEORY**

50

**THE HEALTH BELIEF MODEL**

52

**THE THEORY OF REASONED  
ACTION**

53

**THE COMMUNICATION-**

**BEHAVIOR CHANGE MODEL**

55

**THE PRECEDE-PROCEED MODEL**

56

**THE TRANSTHEORETICAL MODEL**

58

**CONCLUDING THOUGHTS ON  
MODELS**

59

**CHANGING HEALTH BEHAVIORS**

59

Self-Directed Behavior Change

60

Are Behavioral Methods Effective?

69

**SUMMARY**

69

KEY TERMS (AND THE NAMES ASSOCIATED WITH THEM)	70	SUMMARY	98
		KEY TERMS	99
<b>4 The Health Care System</b>	<b>71</b>		
WHY PEOPLE USE HEALTH SERVICES	72		
MODELS OF HEALTH SERVICE USE	74		
THE HEALTH CARE CRISIS	75		
THE COST PROBLEM	76		
SMALL AREA VARIATION STUDIES	76		
IS MORE BETTER?	77		
COST CONTAINMENT	79		
IS HEALTH PROMOTION A PROFITABLE HEALTH SERVICE?	81		
INDUSTRY AND HEALTH OUTCOMES	82		
COMPARATIVE HEALTH CARE SYSTEMS	83		
SUMMARY	86		
KEY TERMS	86		
<b>5 Compliance with Medical Regimens</b>	<b>87</b>		
PHYSICIAN AWARENESS OF THE PROBLEM	88		
THEORIES ABOUT COMPLIANCE	89		
HOW DO WE MEASURE COMPLIANCE?	89		
SOCIODEMOGRAPHIC CHARACTERISTICS	92		
PERSONALITY FACTORS	92		
THE RATIONAL PATIENT	93		
DIRECT EFFECTS OF COMPLIANCE	94		
IMPROVING SELF-REPORTING OF COMPLIANCE	96		
		<b>SECTION 2</b>	
		<b>Life Stress</b>	
		<b>6 Stress and Coping</b>	<b>102</b>
		DEFINITION OF STRESS	104
		FOCUS ON THE STRESS RESPONSE	106
		FOCUS ON STRESSORS	108
		FOCUS ON LIFE EVENTS	109
		MODELS OF STRESS	114
		LIFE EVENTS AND THE PREDICTION OF ILLNESS	115
		Multiple Sclerosis	115
		Myocardial Infarction	116
		Cancer	116
		Infections	117
		Depression	117
		THE STRESS RESPONSE	118
		SOCIAL SUPPORT, DISEASE, AND IMMUNE STATUS	120
		DEPRESSION, DISEASE, AND IMMUNE FUNCTION	121
		OTHER PHYSIOLOGIC INDICATORS OF STRESS	121
		STRESS AND APPRAISAL	122
		STRESS AND COPING	123
		LOGICAL PROBLEMS IN ASSESSING STRESS RESEARCH	124
		STRESS AS A PERFORMANCE ENHANCER	126
		STRESS AND POSITIVE HEALTH OUTCOMES	127
		WHO STAYS HEALTHY UNDER STRESS?	127

MANAGEMENT OF STRESS	128	EPIDEMIOLOGY	164
SUMMARY	130	ARTHRITIS AND	
KEY TERMS	130	MUSCULOSKELETAL	
		DISORDERS	165
<b>7 Social Support</b>	<b>132</b>	OSTEOARTHRITIS	166
THE EPIDEMIOLOGY OF SOCIAL		RHEUMATOID ARTHRITIS	167
NETWORKS AND HEALTH		SYSTEMIC LUPUS	168
OUTCOMES	133	FIBROSITIS	169
HOW IS SOCIAL SUPPORT		OTHER RHEUMATIC DISEASES	170
MEASURED?	134	THE IMPACT OF ARTHRITIS ON	
HOW CAN SOCIAL		BEHAVIOR	170
RELATIONSHIPS IMPACT UPON		THE MEASUREMENT OF	
HEALTH OUTCOMES?	138	CLINICAL OUTCOMES IN	
Causal Modeling	139	ARTHRITIS	171
Illness Causes Disruption		HISTORICAL APPROACHES	172
in Social Support	139	ARTHRITIS-SPECIFIC MEASURES	172
Third Variable Explanations	139	ARTHRITIS IMPACT	
Low Social Support Causes Mortality	140	MEASUREMENT SCALE (AIMS)	173
THEORIES OF HOW SOCIAL		HEALTH ASSESSMENT	
SUPPORT AFFECTS HEALTH	141	QUESTIONNAIRE (HAQ)	173
The Main-Effects Model	141	PSYCHOLOGICAL ISSUES IN PAIN	
The Stress-Buffering Model	143	AND ARTHRITIS	174
IS SOCIAL SUPPORT IMPORTANT		CHRONIC PAIN AND DEPRESSION	174
RELATIVE TO OTHER RISK		SOCIAL SUPPORT IN ARTHRITIS	176
FACTORS?	145	TREATMENT OF CHRONIC PAIN	177
SOCIAL SUPPORT IN CHRONIC		UNPROVEN REMEDIES	180
ILLNESS	148	SUMMARY	181
Asthma	149	KEY TERMS	182
Coronary Heart Disease	150		
Back Pain	152		
SUMMARY	154		
KEY TERMS	155		
		<b>9 Diabetes</b>	<b>183</b>
		PATHOPHYSIOLOGY	185
		Regulation of Blood Sugar	186
		The Complications of Diabetes	188
		EPIDEMIOLOGY	190
		Controversies about Treatment	191
		The UGDP Controversy	192
		The Patient's Role	194
		Patient Factors in Diabetes	194

### **SECTION 3**

## **Chronic Illnesses**

### **8 Pain and Arthritis**

PAIN VERSUS NOCICEPTION

CURRENT MODELS OF PAIN

159

161

163

TREATMENT	195	SELECTED FACTORS BELIEVED TO INCREASE RISK FOR CANCER	249
Behavioral Interventions in Type I Diabetes	195	Diet and Cancer	249
Behavioral Interventions in Type II Diabetes	199	Cigarette Smoking	252
Developing Behavioral Programs	200	CANCER SCREENING: ON THE CASE OF MAMMOGRAPHY	253
SUMMARY	205	CANCER TREATMENT PSYCHOLOGICAL ISSUES	255
KEY TERMS	205	COPING WITH CANCER	260
<b>10 Cardiovascular Diseases</b>	<b>206</b>	DEALING WITH CANCER TREATMENT—THE CASE OF ADJUVANT CHEMOTHERAPY FOR BREAST CANCER	262
WHAT IS CARDIOVASCULAR DISEASE?	207	SUMMARY	263
Epidemiology of Cardiovascular Diseases	209	KEY TERMS	264
Pathophysiology of Cardiovascular Diseases	210		
Etiology of Cardiovascular Diseases	212		
BLOOD CHOLESTEROL AND LIPOPROTEINS	215	<b>12 The Acquired Immune Deficiency Syndrome (AIDS)</b>	<b>265</b>
What Are Lipoproteins?	217	THE HISTORY OF AIDS	267
Etiology of Hypercholesterolemia	218	THE EPIDEMIOLOGY OF AIDS	268
Treatment and Prevention of Hypercholesterolemia	219	AIDS in the United States	268
Serum Cholesterol in Children	219	The Worldwide AIDS Epidemic	272
Can Blood Cholesterol Be Too Low?	221	HOW DOES ONE CONTRACT AIDS?	273
Summary	222	WHAT IS THE CLINICAL COURSE OF HIV DISEASE?	274
BLOOD PRESSURE	222	The Immune System	274
Epidemiology	226	Development and Progression of AIDS	275
Etiology	227	DETECTION OF HIV	277
Prevention and Treatment of Hypertension	232	STAGES OF AIDS DISEASE	277
Summary	239	NERVOUS SYSTEM INFECTIONS	278
BEHAVIORAL TREATMENT OF CARDIOVASCULAR DISEASES	239	AIDS THERAPIES	279
SUMMARY	241	PHARMACEUTICAL PRODUCTS, BUREAUCRACY, AND THE TREATMENT OF AIDS	280
KEY TERMS	241	AIDS VACCINES	280
<b>11 Cancer</b>	<b>243</b>	SOCIAL IMPLICATIONS	281
WHAT IS CANCER?	245		
EPIDEMIOLOGY	245		





PATHOPHYSIOLOGY	357	<b>17 Obesity</b>	<b>396</b>
HEALTH BENEFITS FOR CHILDREN	359	EPIDEMIOLOGY	400
ETIOLOGY	360	OTHER HEALTH RISKS OF OBESITY	401
TREATMENT	366	ETIOLOGY	403
PREVENTION	368	Genetic Factors	403
SUMMARY	369	Physiological Factors	403
KEY TERMS	369	Psychological Factors	405
<b>16 Smoking</b>	<b>370</b>	TREATMENT	408
INTRODUCTION	371	PREVENTION OF OBESITY	413
EPIDEMIOLOGY	373	SUMMARY	414
Patterns of Cigarette Use—Who Smokes?	373	KEY TERMS	415
The Epidemiology—Smoking or Health?	375	<b>18 Person Factors: Personality and Demographic Influences on Health</b>	<b>416</b>
The Smoking and Health “Controversy”	377	TYPE A BEHAVIOR AND ITS COMPONENTS	417
PATHOPHYSIOLOGY	377	Competitiveness and Achievement Striving	418
Nicotine	378	Time Urgency and Impatience	418
Tars	378	Hostility and Aggressiveness	418
Carbon Monoxide	378	ASSESSING TYPE A BEHAVIOR	418
ETIOLOGY	378	TYPE A BEHAVIOR AS A CVD RISK FACTOR	419
Initiation of Smoking	378	Components of Type A Behavior	422
Regular Smoking	379	Treatment of Type A Behavior	424
Smoking Cessation	381	HEALTH LOCUS OF CONTROL	427
Maintenance or Relapse	384	OPTIMISM	429
TREATMENT	384	PERSONALITY AND CANCER OUTCOME	430
Reducing Psychological Dependence	384	DEMOGRAPHIC FACTORS	432
Reducing Physiological Dependence	386	Social Class, Race, and Poverty	432
Maintenance and Relapse Prevention Comprehensive Programs for Cessation and Relapse Prevention	387	Older Adults	435
SMOKING PREVENTION	390	SUMMARY	435
New Approaches to Tobacco Control	392	KEY TERMS	436
SUMMARY	394		
KEY TERMS	394		

<b>19 Community Interventions</b>	<b>437</b>	<b>HEALTH PROMOTION ACTIVITIES IN COMMUNITIES</b>	<b>456</b>
THE COMMUNITY APPROACH TO DISEASE PREVENTION	438	SUMMARY	456
CONTRASTING INDIVIDUAL AND COMMUNITY APPROACHES TO HEALTH BEHAVIOR CHANGE	438	KEY TERMS	457
<b>THEORETICAL BASIS FOR COMMUNITY-BASED CVD PREVENTION</b>	<b>442</b>		
Social Cognitive Theory	442		
The Communication-Behavior Change Framework	442		
The Social Marketing Framework	442		
The Community Organization Framework	442		
The Social Ecology Framework	443		
<b>COMMUNITY-BASED HEALTH PROMOTION PROGRAMS</b>	<b>444</b>		
The North Karelia Project	444		
The Stanford Three-Community Study	445		
The Stanford Five-City Project	445		
The Minnesota Heart Health Program	447		
The Pawtucket Heart Health Program	447		
<b>STRATEGIES OF COMMUNITY- BASED HEALTH PROMOTION</b>	<b>449</b>		
Mass Media	449		
Risk Factor Screening	451		
Programs at Work Sites and Other Community Settings	451		
Health Promotion Competitions	452		
<b>ENVIRONMENTAL AND POLICY CHANGES</b>	<b>453</b>		
		<b>SECTION 5</b>	
		<b>Summary</b>	
		<b>20 For Those Interested in More Information about the Field of Health Psychology</b>	<b>461</b>
		<b>ORGANIZED HEALTH PSYCHOLOGY</b>	<b>461</b>
		<b>WHAT DO HEALTH PSYCHOLOGISTS DO?</b>	<b>462</b>
		Patient Care	462
		Community Work	462
		Teaching	462
		<b>RELATIONSHIPS WITH OTHER PROFESSIONALS</b>	<b>462</b>
		<b>TRAINING ISSUES</b>	<b>463</b>
		Medical School	463
		Public Health School	464
		Psychology Training in Programs	465
		<b>SUMMARY</b>	<b>466</b>
		<b>KEY TERMS</b>	<b>466</b>
		<i>Bibliography</i>	<i>481</i>
		<i>Name Index</i>	<i>533</i>
		<i>Subject Index</i>	<i>548</i>