

Contents

1 Changing Paradigms In Health and Health Care 1

PARADIGMS: THE MENTAL
FRAMEWORKS OF SCIENCE 2

THE BIOMEDICAL MODEL VERSUS THE
BIOPSYCHOSOCIAL MODEL 3

- The Biomedical Model* 3
- Psychosomatic Medicine* 3
- A Paradigm Shift* 4
- The Biopsychosocial Model* 4

DEFINING HEALTH AND
RELATED TERMS 5

Box 1.1 The Meaning of the Root Word
of Health 5

- Changing Concepts of Health* 6
- The Impact of Health Definitions* 8
- The Wellness Continuum* 8

THE CRISIS IN HEALTH CARE 8

- The Health Care System* 9
- Economic Factors* 9

- The Technological Imperative* 10
- Box 1.2** The Changing Face of
American Physicians 11
- Medical Imperialism* 12
- Limitations of Technological Medicine* 12
- Life Expectancy* 13
- Questioning Technology's Effectiveness* 13
- Heroic Medicine* 14
- The Diseases of Civilization* 15

ALTERNATIVE HEALTH CARE DELIVERY
SYSTEMS 16

- The Impact of Cost Containment* 16
- Alternative Health Care Settings* 17

CONCLUSIONS 19

SUMMARY 20

2 Introduction to Health Psychology 22

HEALTH PSYCHOLOGY: AN EMERGING
DISCIPLINE 24

- Defining Health Psychology* 25

The Scope of Health Psychology 25
Health Psychology and Mind-Over-Body 26

MAJOR APPROACHES TO HEALTH PSYCHOLOGY 26

The Behavioral Approach 26
The Cognitive-Behavioral Approach 28
The Psychophysiological Approach 29
The Clinical Psychology Approach 30
The General Systems Theory Approach 30
The Community Psychology Approach 31
The Family Systems Approach 32
The Existential-Phenomenological Approach 32
The Holistic Approach 33

HEALTH PSYCHOLOGY AND RELATED DISCIPLINES 33

The Relationship to Medicine 33
Behavioral Medicine and Behavioral Health 34
Medical Psychotherapy 34

THE PRACTICE OF HEALTH PSYCHOLOGY 34

Therapy 34
Crisis Therapy 35
Lifestyle Training 36
Community and Organizational Programs 36
Public Education 36
Political Action 36
Research 36
Career Opportunities 37

TRAINING OF HEALTH PSYCHOLOGISTS 38

Course Work 38
Public Health Psychology 38
The Bottom Line 39

CONCLUSIONS 39
 SUMMARY 40

3 *Thinking Critically about Health-related Research* 43

THE COSTS OF FAULTY RESEARCH 44

Economic Costs of Faulty Research 44
The "Cry Wolf" Effect 45

THE DIFFICULTY OF EVALUATING RESEARCH 46

THE SCIENTIFIC METHOD 46

In the Beginning 46
The Marriage of Reason and Observation 47

DISCOVERY VERSUS VERIFICATION 47

Differences Between Discovery and Verification 48
Sources of Discovery 48
Confusing Discovery with Verification 49

THE EXPERIMENTAL METHOD 50

The Null Hypothesis 51
Treating Speculations as Verified Principles 51

COMMON PITFALLS IN HEALTH RESEARCH 52

Conclusions Based on Testimonials, Opinion or Authority 52

Box 3.1 *Darwin's Case of Faulty Testimony* 53

Studies Concluding That Variables Have No Effect 53
Studies That Confuse Correlation with Causation 55
Studies with Defective Measures of Variables 56
Studies with Small or Unrepresentative Samples 58

CONCLUSIONS 60
 SUMMARY 61

Box 3.2 *Guidelines for Evaluating Research* 62

4 *Psychobiological Mechanisms of Health and Disease* 64

THE MIND/BODY PROBLEM 65

THE AUTONOMIC NERVOUS SYSTEM 67

Functions of the Sympathetic Nervous System 67
Functions of the Parasympathetic Nervous System 69

THE LINK BETWEEN THE AUTONOMIC AND CENTRAL NERVOUS SYSTEMS 69

- The Hypothalamus* 70
- The Limbic System* 71
- The Interconnections* 72

THE HYPOTHALAMIC-PITUITARY-ADRENAL CORTICAL SYSTEM 72

- The Hormones of the Adrenal Cortex* 72
- The General Adaptation Syndrome (GAS)* 73
- The Central Nervous System and the GAS* 73
- Central Nervous System Control of Other Hormones* 74

THE IMMUNE SYSTEM 74

- The Innate System of Immunity* 74
- The Acquired System of Immunity* 75
- Cancer and Immune Surveillance* 78
- Psychoneuroimmunology: Does Mind Matter?* 79

CONCLUSIONS 85

SUMMARY 85

5 *Psychological and Behavioral Therapies in Health Psychology 91*

IMPACT OF BIOMEDICAL VERSUS BIOPSYCHOSOCIAL MODELS 92

PERSPECTIVES ON PSYCHOSOCIAL PROCESSES IN HEALTH 93

THE BEHAVIORAL MODEL OF THERAPY 93

- The Cognitive-Behavioral Model of Therapy* 93

CHARACTERISTICS OF BEHAVIOR THERAPY 94

- Classical Conditioning* 94
- Operant Conditioning* 94
- Health-Related Behavior as Conditioned Responses* 95
- Precision and Measurement* 95

- Behavioral Management* 97
- Cognitive Behavioral Therapy* 99

A CENTRAL TECHNIQUE: RELAXATION TRAINING 104

- Progressive Relaxation* 104
- Systematic Desensitization* 106

EXPRESSIVE THERAPY AND HEALTH PSYCHOLOGY 107

- Expressive Versus Behavioral Therapy* 107
- The Psychodynamic Model of Therapy* 108
- Uncovering Versus Covering Therapies* 108
- Methods of Expressive Therapies* 108

CONCLUSIONS 113

SUMMARY 114

6 *A Cognitive-Social Look at Physicians and Patients 119*

HUMAN INFORMATION PROCESSING AND MEDICAL REASONING 121

- Our Limited Channel Capacity* 121
- Probabilities, Heuristics, and Cognitive Errors* 122
- Medical Diagnosis and Information Processing* 124

COPING WITH ILLNESS 127

- Stages in the Formulation of Disease* 127
- Dispositional Versus Process Analyses of Coping* 127
- The Psychology of Physical Symptoms* 128
- Coping with the Sick Role* 130

THE ROLE OF THE HEALTH CARE PROFESSIONAL 132

- Dealing with Defense Mechanisms* 132
- Keeping Patients Informed* 133
- Health Care Provider Stress* 134

ADHERENCE TO MEDICAL PROCEDURES 135

- Importance of Correct Implementation* 135
- Prevalence of Failures to Implement Biomedical Treatment* 136
- Awareness of Noncompliance* 137

Transmittal, Reception, and Retention of
Information 137
Improving Compliance 139

7 Stress and Health 147

THE NATURE OF STRESS 148
 A STRESS MODEL 148
 Stressors 149
 Cognitive Appraisals 150
 Stress Resistance Resources 151
Box 7.1 The Conservation of
 Resources Model 151
 Short-term Reaction 153
 Eustress, Distress, and Neutral Effects 154
 SOCIAL SUPPORT 156
 Main Effect versus Buffering Models 156
Box 7.2 A Research Investigation of
 Instrumental Support In Childbirth 157
 Negative Effects of Social Support 158
 The Link Between Social Support and
 Health 159
 COPING 159
 Cognitive Components 159
 Problem- and Emotion-Focused Coping 160
 Individual Coping Styles 161
 STRESS MANAGEMENT 163
 Managing Stressors 163
Box 7.3 A Summary of Common
 Defense Mechanisms 164
 Modifying Appraisals 165
 Developing Stress Resistance Resources 166
 Controlling Stress Reactions 166
 Stress Management Programs 166
 CONCLUSIONS 167
 SUMMARY 167

**8 Lifestyle Factors I: Health,
Food, and Exercise 170**

PREVENTING LIFESTYLE DISEASES 172
 NUTRITION 173
 The American Diet 173

Diet and Health 174
Box 8.1 Buyer Beware: Watch the
 Hidden Fat! 174

WEIGHT CONTROL 177
 The Glucostatic Theory 177
 The Set-point Theory 177
 Restrained Eating Theory 178
 Dieting and Metabolic Rates 178
 Low Calorie Food: Friend or Foe? 178

OBESITY 178
 Measuring Obesity 179
Box 8.2 Finding Ideal Weight Through The
 Body Mass Index 179
 Causes of Obesity 180
 Effects of Obesity 180
 Treatment of Obesity 181

Box 8.3 Very-low-calorie Diets 182

EATING DISORDERS 184
 Anorexia Nervosa 184
 Bulimia Nervosa 185

EXERCISE 186
 Aerobic Exercise 186
 Stretching and Weight Training 186
 Physiological Benefits of Exercise 187
 Psychological Benefits of Exercise 187
 How Much Exercise Is Enough? 188
 Getting Motivated to Exercise 189

DEVELOPING HEALTHY
 LIFESTYLE BEHAVIORS 189
 Theories of Lifestyle Change? 189
 Goal Setting and Contracts 190
Box 8.4 Behavioral Change Contract 191

CONCLUSIONS 191
 SUMMARY 192
 HEALTHSTYLE: A SELF-TEST 194

**9 Lifestyles II: The Invisible
Drugs 197**

DRUG ADDICTION 198
 Physical Dependency and Tolerance 198
 Set and Settings 199
 Effects of Psychoactive Drugs 199

NICOTINE	199
<i>The Effects of Smoking Tobacco</i>	200
<i>Passive Smoking</i>	201
<i>Why Smoking Is Hard to Quit</i>	202
<i>How Smokers Become Ex-Smokers</i>	202
<i>Preventing Cigarette Smoking</i>	205

Box 9.1 Tobacco Companies Fight Back	205
<i>Smokeless Tobacco</i>	207

ALCOHOL	208
<i>Who Uses Alcohol</i>	208
<i>Alcohol Dependence and Abuse</i>	209
<i>What Causes Alcohol Dependence and Abuse</i>	209

Box 9.2 The Gene for Alcoholism: Looking Beyond the Headlines	211
<i>The Biopsychosocial Effects of Alcoholism</i>	212
<i>Treatment of Alcohol Dependence and Abuse</i>	214
<i>Prevention of Alcohol Dependence and Abuse</i>	215

CONCLUSIONS	216
-------------	-----

SUMMARY	217
---------	-----

10 Pain and Health Psychology 221

A BIOMEDICAL MODEL OF PAIN	222
<i>The Search for Pain Receptors</i>	222
<i>Nerve Fibers and Pain Pathways</i>	223
<i>The Receiving Areas of the Brain</i>	224

ACTIVITY IN PAIN PATHWAYS AND PAIN	224
<i>Battle Wounds</i>	224
<i>Phantom Limb Pain</i>	225
<i>Acute Versus Chronic Pain</i>	226
<i>Cultural and Personal Differences in Pain Response</i>	226

BROADENING OUR CONCEPT OF PAIN	227
<i>The Gate Control Theory of Pain</i>	227
<i>Operant Control of Pain</i>	230
<i>Multifaceted and Multimodal Approaches to Pain Treatment</i>	231

A CASE STUDY OF PAIN TREATMENT	233
--------------------------------	-----

HEADACHE	234
<i>Migraine Headache</i>	234
<i>Tension Headache</i>	239
<i>Mixed Headache</i>	241

CONCLUSIONS	242
-------------	-----

SUMMARY	242
---------	-----

11 Modern Epidemics: Cardiovascular Disease 246

ARTERIOSCLEROSIS	249
PSYCHOLOGICAL APPROACHES TO ESSENTIAL HYPERTENSION	249
<i>Essential Hypertension</i>	249
<i>Effects of Hypertension</i>	249
<i>The Physiological Basis of Hypertension</i>	250
<i>Measurement of Blood Pressure</i>	252
<i>Medical Control of Hypertension</i>	252
<i>Role of Health Psychology in the Control of Hypertension</i>	254

Box 11.1 Relaxation Techniques Used for Hypertension Treatment	256
---	-----

PSYCHOLOGICAL APPROACHES TO CORONARY HEART DISEASE	259
<i>Ischemia and Angina</i>	260
<i>Myocardial Infarction</i>	260
<i>Biomedical Treatment of Coronary Heart Disease</i>	261
<i>Prevention of Coronary Heart Disease</i>	262
<i>Psychology's Role in Prevention</i>	263
<i>Type A Behavior</i>	263
<i>Stress and Coronary Heart Disease</i>	268

CONCLUSIONS	269
-------------	-----

SUMMARY	270
---------	-----

12 Cancer and AIDS: The Dreaded Diseases 273

CANCER	274
<i>What Is Cancer?</i>	274
<i>Types of Cancer</i>	274

The Biopsychosocial Precursors of Cancer 275
The Psychosocial Effects of Cancer and Its
Treatment 278
Psychosocial Interventions for Cancer
Patients 281

ACQUIRED IMMUNE

DEFICIENCY SYNDROME 284
The HIV Virus and Its Effects 285
The Transmission of AIDS 286
Populations at Risk 286
The Psychosocial Impact of AIDS 287
The Psychosocial Treatment of AIDS 288
Controversy and Contradiction 290

CONCLUSIONS 290

SUMMARY 291

Box 12.1 Fighting Cancer with the
Mind 292

13 *The Widening Scope of
Health Psychology* 296

HEALTH PSYCHOLOGY AND
TEMPOROMANDIBULAR
JOINT SYNDROME 299

History of Temporomandibular Joint
Syndrome 299

Response Specificity 299
Biofeedback Treatment 300

HEALTH PSYCHOLOGY AND
PLASTIC SURGERY 301

THE ROLE OF THE PSYCHOLOGIST IN
ORAL SURGERY 303

HEALTH PSYCHOLOGY AND
SKIN DISORDERS 305

Box 13.1 Stigmata Induced by
Hypnosis 306
Psychological Factors in Skin Disorders 308
Psychological Treatments of Skin Disorders 310

HEALTH PSYCHOLOGY AND
ASTHMA 311

Complexities of Asthma and Its Treatment 312
Psychological Interventions 313

PSYCHOLOGICAL APPROACHES
TO DIABETES 315

Psychosocial Factors in Diabetes 315
Psychological Interventions 315
Stress and Diabetes 316
Psychosomatic Families 317

CONCLUSIONS 319

SUMMARY 319

Glossary 323
References 336
Photo Credits 372
Index 373