

CONTENTS

Preface xix

Part I Understanding Research

- 1 Psychology, Science, and Life** 1
- Learning Objectives 1
 - Key Terms 1
 - Chapter Preview 1
 - Why are Research Methods Important Tools for Life? 3
 - Why Learning About Research is Important 5
 - Answering Important Questions 6
 - Why We Do Research 7
 - Description 8
 - Prediction 9
 - Explanation 10
 - Control 12
 - Research Applied to Life: Suicide 12
 - What Should You Believe? 13
 - Characteristics of Science 14
 - Science is Objective 15
 - Science is Data-driven 18
 - Scientific Methods are Replicable and Results are Verifiable 19
 - Science is Public 20
 - Culture and Research 21
 - The Interaction of Science and Society 22
 - The Government's Role in Science 23
 - Societal Values and Science 24
 - Scientific Literacy 25
 - What Would it Take to Change Your Mind? 26
 - Science and Pseudoscience 27
 - Warning Signs of Bogus Science 28
 - Junk Science 30
 - Controversy: The Myth of Vaccination and Autism Continues 30
 - What Can You Do About This? 31
 - Chapter Summary 32
 - Chapter Review Questions 33
 - Multiple Choice Questions 33
 - Essay Questions 36
 - Answers to Chapter Review Questions 36
 - Answers to Multiple Choice Questions 36
 - Answers to Essay Questions 36



Contents

2	Ethics in Research	38
	Learning Objectives	38
	Key Terms	39
	Chapter Preview	39
	Unethical Research Practices: Past and Present	41
	Ethical Problems in the Early Years of the Twentieth Century	41
	Ethics and Plagiarism	43
	Current Examples of Ethical Lapses	43
	The Impact of Ethical Lapses	46
	Ethical Guidelines Created by the American Psychological Association	46
	Aspirational Goals and Enforceable Rules	47
	Ethical Standards as They Affect You	48
	Legal Requirements and Ethics in Research	50
	Institutional Review Boards	50
	The Importance of Social Context in Deciding on Ethics in Research	51
	Stanley Milgram's Research Project on Obedience	52
	The Ethical Issues	52
	What You Need to do if Your Research Involves Deception	53
	Some Research May Require Deception	54
	The Effects of Debriefing on Research	55
	The Controversy About Deception	56
	Ethical Issues in Special Circumstances	57
	Ethics in Cross-cultural Research	57
	Ethics in Internet Research	59
	Ethics in Research with Nonhuman Animals	60
	Chapter Summary	61
	Chapter Review Questions	62
	Multiple Choice Questions	62
	Essay Questions	65
	Answers to Chapter Review Questions	66
	Answers to Multiple Choice Questions	66
	Answers to Essay Questions	66
3	Planning Research: Generating a Research Question	67
	Learning Outcomes	67
	Key Terms	67
	Chapter Preview	67
	Where Research Ideas Begin: Everyday Observations and Systematic Research	69
	Informal and Formal Sources of Ideas	70
	The Effect of Theory	71
	How Can You Develop Research Ideas?	74
	Culture and Research	77
	The Virtual Laboratory: Research on the Internet	78
	Internet Research	80
	Factors that can Make a Difference	82
	Advantages to Internet Research	85



Potential Problems with Internet Research	86
Checking on Research: The Role of Replication	87
Don't Reinvent the Wheel: Reviewing the Literature	89
What is a Literature Review?	90
The Effect of Peer Review on the Research Literature	90
How to Conduct a Literature Review	91
Electronic Databases	91
Starting Your Search	91
Different Sources of Information	93
How to Read a Journal Article	94
Understanding the Format of a Research Paper	94
Summary	98
Chapter Review Questions	99
Multiple Choice Questions	99
Essay Questions	101
Answers to Chapter Review Questions	101
Answers to Multiple Choice Questions	101
Answers to Essay Questions	102
4 Practical Issues in Planning Your Research	103
Key Terms	103
Chapter Preview	103
How Can You Develop a Research Idea?	104
Practical Questions in Planning Research	106
Understanding Your Research	106
Carrying Out a Literature Search	107
Conducting Your Study	107
Descriptive Research	108
Survey Research	108
Experimental Research	108
Determining the Research Setting	110
Choosing Your Methodology	111
Approaches to Psychological Research	111
Selecting Research Materials and Procedures	113
Why Methodology is Important	115
Choosing Your Participants or Subjects	116
The Nature of Your Participants	117
Deciding How Many Participants to Include	118
Research Applied to Life: Can Animal Research Help Us Understand Human Stress?	119
Differing Approaches in Different Areas of Psychology	120
Different Approaches in Different Journals	120
Different Types of Participants in Different Journals	121
Making Choices in Your Research Design	121
Summary	123
Chapter Review Questions	124



 Contents

Multiple Choice Questions	124
Essay Questions	125
Answers to Chapter Review Questions	126
Answers to Multiple Choice Questions	126
Answers to Essay Questions	126
5 Measurement and Sampling	127
Key Terms	127
Chapter Preview	127
Psychological Concepts	129
Measuring Complex Concepts	129
Operational Definitions	129
Defining and Measuring Variables	131
The Importance of Culture and Context in Defining Variables	135
Multiple Possible Operational Definitions	136
Probability Sampling	136
Simple Random Sampling	137
Systematic Sampling	138
Stratified Random Sampling	138
Cluster Sampling	138
Nonprobability Sampling	140
Convenience Sampling	141
Quota Sampling	142
Purposive (Judgmental) Sampling	142
Chain-referral Sampling	143
Making Useful Measurements	143
Reliability	144
Validity	145
Considering Validity in Research	145
Construct Validity	145
Internal and External Validity	147
Statistical Conclusion Validity	151
Convergent and Divergent Validity	152
Research Applied to Life: The Head Start Program	152
Scales of Measurement	153
Nominal Scales	153
Ordinal Scales	154
Ratio and Interval Scales	154
Summary	155
Chapter Review Questions	156
Multiple Choice Questions	156
Essay Questions	158
Answers to Chapter Review Questions	158
Answers to Multiple Choice Questions	158
Answers to Essay Questions	158

Part II Experimental Approaches

- 6 Conducting An Experiment: General Principles** 160
- Key Terms 160
 - Chapter Preview 160
 - Choosing a Methodology: The Practicalities of Research 162
 - Determining the Causes of Behavior 162
 - Trying to Determine Causation in Research 163
 - Requirements for Cause–Effect Relationships 163
 - The Logic of Experimental Manipulation 164
 - Research Applied to Life: Withholding Treatment in Research 166
 - Experimental Control – Or What Can Go Wrong 167
 - Lack of Control in Experimental Research: Extraneous Variables and Confounds 167
 - Do Women Show Fear of Success? 169
 - Experimenter and Participant Effects 171
 - Minimizing the Likelihood of Experimenter and Participant Effects 172
 - The Hawthorne Effect 173
 - Research Applied to Life: Drug-sniffing Dogs 175
 - Realism in Research 176
 - Summary 177
 - Chapter Review Questions 177
 - Multiple Choice Questions 177
 - Essay Questions 180
 - Answers to Chapter Review Questions 180
 - Answers to Multiple Choice Questions 180
 - Answers to Essay Questions 180
- 7 Experiments with One Independent Variable** 181
- Key Terms 181
 - Chapter Preview 181
 - Determining Variables of Interest 183
 - Investigating Psychology and Criminal Justice 183
 - Variety of Research Variables 184
 - Independent and Dependent Variables 186
 - Using Experiments to Determine Causation 189
 - Is it Ethical to Induce Depression in Research? 190
 - Types of Independent and Dependent Variables 191
 - Qualitative and Quantitative Independent Variables 192
 - Research Applied to Life: What We Believe 194
 - Independent Variables Created by Different Types of Manipulations 195
 - Types of Dependent Variables 197
 - Research Applied to Life: Race and Pain 197
 - Understanding Your Results 198
 - Comparing Two Groups 198
 - Generalizing Research Results 200


 Contents

Comparing Multiple Groups	201
Data Analysis	202
Experiments with Two Groups	202
Experiments with Multiple Groups	203
Summary	204
Chapter Review Questions	204
Multiple Choice Questions	204
Essay Questions	207
Answers to Chapter Review Questions	207
Answers to Multiple Choice Questions	207
Answers to Essay Questions	207
8 Experiments with Multiple Independent Variables	208
Key Terms	208
Chapter Preview	208
Research with Multiple Independent Variables	209
Main Effects	209
Interactions between Variables	211
Not Much Power in the Pose: Illustration of a 2×3 Design with an Interaction	212
A 2×2 Factorial Design with Repeated Measures	214
Research with More Than Two IVs	216
Practical Complexities in Research	217
Research Applied to Life: Racial Prejudice	219
Data Analysis	224
Summary	225
Chapter Review Questions	226
Multiple Choice Questions	226
Essay Questions	228
Answers to Chapter Review Questions	228
Multiple Choice Questions	228
Answers to Essay Questions	228
9 Expanding on Experimental Designs: Repeated Measures and Quasi-experiments	229
Key Terms	229
Chapter Preview	229
Repeated-Measures Designs	231
Advantages of Repeated-Measures Designs	231
Increasing Efficiency in Data Collection	231
Increasing Validity of Data	232
Finding Enough Participants	232
Reducing Error in Measurement	235
Limitations to Repeated-Measures Designs	235
Possible, but Unlikely, Repeated-Measures Designs	235
Subject (Participant) Variables	236
Research Applied to Life: Cell Phones, Alcohol, and Driving	236

Illustration of a One-variable Design with Repeated Measures	236
Order and Sequence Effects	237
Data Analysis with Repeated-Measures Designs	238
Quasi-experimental Designs	239
Causation and Quasi-experimental Designs	240
Combining Experimental and Quasi-experimental Designs	240
Threats to Internal Validity	242
Threats Associated with Participants	242
Threat Associated with Measurement	243
Types of Quasi-experimental Designs	245
One-group Pretest–Posttest Design	246
Static-group Comparison Designs	247
Nonequivalent Control Group Designs	247
Interrupted Time-series Designs	249
Replicated Interrupted Time-series Designs	250
Research Applied to Life: Laws and Behavior	252
Summary	254
Chapter Review Questions	255
Multiple Choice Questions	255
Essay Questions	256
Answers to Chapter Review Questions	257
Multiple Choice Questions	257
Answers to Essay Questions	257

Part III Correlational and Nonexperimental Designs

10 Principles of Survey Research	258
Key Terms	258
Chapter Preview	258
Surveys: Answering Diverse Questions	260
Census versus Sample	260
Accuracy of Survey Results	261
Ethics in Survey Research	262
Selecting Your Methodology	262
Online Data Collection	264
Question Types	265
Question Content	267
Research Applied to Life: How Many Adolescents Smoke?	272
Response Bias	272
Social Desirability	273
Acquiescence	275
Satisficing versus Optimizing	275
Culture and Response Styles	276
Acquiescent Response Style	277
Extreme and Moderate Response Style	277



Contents

Studying Sensitive Issues	278
Are Telephone Surveys Appropriate for Sensitive Issues?	279
Crowdsourcing in Research	279
Sampling Issues	280
Finding Hidden Populations	280
Summary	282
Chapter Review Questions	283
Multiple Choice Questions	283
Essay Questions	285
Answers to Chapter Review Questions	285
Answers to Multiple Choice Questions	285
Answers to Essay Questions	285
11 Correlational Research	287
Key Terms	287
Chapter Preview	287
Correlational Studies	289
Finding Relationships	289
Making Predictions	292
Research in Life: The Media and Violence	293
Using the Correlational Approach	294
Correlational Studies	295
Correlational Analysis	295
Positive and Negative Correlations	295
Strength of Association	296
Factors Affecting the Size of a Correlation Coefficient	298
Traditional Correlational Tests	303
The Pearson Product–Moment Correlation	303
Alternate Bivariate Correlations	303
Linear Regression	304
Correlations with Multiple Variables	305
Multiple Regression	306
Research Applied to Life: The Mental Health of College Students	306
Summary	308
Chapter Review Questions	308
Multiple Choice Questions	308
Essay Questions	310
Answers to Chapter Review Questions	310
Multiple Choice Questions	310
Answers to Essay Questions	310
12 Studying Patterns in The Natural World: Observational Approaches	311
Key Terms	311
Chapter Preview	311
Observational Approaches	313
Scientific versus Casual Observation	313

Studying Natural Behaviors	314
Studying Complex Human Behavior	315
Ethology	316
Describing the Behavior of Nonhuman Animals	317
Approaches to Observational Research	318
Five Practical Steps in Observational Research	318
Structured and Unstructured Observations	319
Sampling Issues in Observational Research	321
Number of Sampling Blocks	321
Methods of Sampling Events During Observation	322
Estimating the Frequency and Duration of Behaviors	324
Ethological Observations in Clinical Research	325
The Human Side of Observational Research	325
Ethics	325
Participant–Observer Interactions	326
Subject Reactivity	326
Observer Effects	328
Data Analysis in Observational Research	329
Summary	329
Chapter Review Questions	330
Multiple Choice Questions	330
Essay Questions	331
Answers to Chapter Review Questions	332
Multiple Choice Questions	332
Answers to Essay Questions	332
13 Research in Depth: Longitudinal and Single-case Studies	333
Key Terms	333
Chapter Preview	333
Longitudinal Research	335
Common Themes in Longitudinal Research	335
Cross-sectional versus Longitudinal Research	336
Varieties of Longitudinal Research	337
Trend Studies	338
Cohort Studies	340
Cohort-sequential Studies	340
Panel Studies	342
Research Applied to Life: Student Achievement	344
Issues in Longitudinal Designs	345
Retrospective and Prospective Studies	345
Attrition	346
Single-subject Experimentation	350
Experimental Analysis of Behavior	350
Methods of Single-case Designs	351
Withdrawal Designs	351
Single-subject Randomized Clinical Trials	352


 Contents

Strengths of Single-participant Designs	352
Weaknesses of Single-participant Designs	353
Misunderstandings about Single-case Research	353
Case Studies	354
A Case Study with Experimental Manipulations: Tasting Pointed Chickens and Seeing Colored Numbers	356
Summary	357
Chapter Review Questions	357
Multiple Choice Questions	357
Essay Questions	359
Answers to Chapter Review Questions	359
Multiple Choice Questions	359
Answers to Essay Questions	359

Part IV Culture and Research

14 People are Different: Considering Cultural and Individual Differences in Research	361
Key Terms	361
Chapter Preview	361
Different Cultural Perspectives	363
What is Culture?	364
Defining an Individual's Culture, Ethnicity, and Race	366
Criteria for Inclusion in a Group	368
Social Issues and Cultural Research	369
Cross-cultural Concepts in Psychology	370
Are Psychological Constructs Universal?	370
Issues in Cross-cultural Research	372
Is There a Biological Basis for Race?	373
The Criteria for Race	373
Biological Insights Regarding Race	374
Are There Really Different Races?	375
Practical Issues in Cultural Research	376
Lack of Appropriate Training among Researchers	376
Why the Concepts of Culture and Ethnicity are Essential in Research	377
Studying Differences Due to Language and Thought Processes	377
Studying Differences in Simple and Complex Behaviors	378
Is Culture-free Theory Really Free of Culture?	379
Similarities and Differences within the Same Culture	380
Cultural Factors in Mental Health Research	381
Content Validity	381
Translation Problems	382
Cross-cultural Norms	382
Cross-cultural Diagnoses	384
Sex and Gender: Do Men and Women Come From Different Cultures?	386
Stereotypes and Gender-related Performance	386

Research Applied to Life: Are Men better than Women at Mathematics?	387
Summary	388
Chapter Review Questions	389
Multiple Choice Questions	389
Essay Questions	391
Answers to Chapter Review Questions	391
Multiple Choice Questions	391
Answers to Essay Questions	391
<i>Appendix A – Writing a Research Report</i>	395
<i>Appendix B – Statistics Review</i>	415
<i>Appendix C – Statistical Tables</i>	441
References	451
Index	495