

---

# Research Methods in Criminal Justice and Criminology

---

Fourth Edition

**Frank E. Hagan**

*Mercyhurst College*

**Allyn and Bacon**

Boston • London • Toronto • Sydney • Tokyo • Singapore

---

# Brief Contents

Chapter 1	Introduction of Criminal Justice Research Methods: Theory and Method	1
Chapter 2	Ethics in Criminal Justice Research	30
Chapter 3	Research Design: The Experimental Model and Its Variations	62
Chapter 4	An Introduction to Alternative Data-Gathering Strategies and the Special Case of Uniform Crime Reports	107
Chapter 5	Sampling and Survey Research: Questionnaires	129
Chapter 6	Survey Research: Interviews and Telephone Surveys	164
Chapter 7	Participant Observation and Case Studies	198
Chapter 8	Unobtrusive Measures, Secondary Analysis, and the Uses of Official Statistics	224
Chapter 9	Validity, Reliability, and Triangulated Strategies	258
Chapter 10	Scaling and Index Construction	278
Chapter 11	Data Analysis: Coding, Tabulation, and Simple Data Presentation	302
Chapter 12	Data Analysis: A User's Guide to Statistics	339
Chapter 13	Policy Analysis, Evaluation Research, and Proposal Writing	381
Appendix A	How to Write the Research Report	414
Appendix B	Table of Random Numbers	420
Appendix C	An Overview of SPSS/PC+	422
Appendix D	Statistics: An Addendum to Chapter 12	437
Appendix E	Answers to Pop Quizzes in Chapter 12	445
Appendix F	Normal Curve Areas	450
Appendix G	Distribution of Chi-Square ( $\chi^2$ )	455
Appendix H	Factor Analysis	456
	References	460
	Glossary	506
	Name Index	512
	Subject Index	519

---

---

# Detailed Contents

## Chapter 1 Introduction to Criminal Justice Research Methods: Theory and Method

1

Scientific Research in Criminal Justice	1
Common Sense and Nonsense	3
Why Study Research Methods in Criminal Justice?	5
The Emergence of Science and Criminal Justice	6
Probabilistic Nature of Science	7
Proper Conduct of Critical Inquiry	8
<i>Exhibit 1.1 Merton's "Matthew Effect" in Science</i>	9
Approaches to Theory and Method in Criminal Justice	10
Pure versus Applied Research	12
Qualitative and Quantitative Research	14
Researchese: The Language of Research	16
<i>Concepts</i>	16
<i>Operationalization</i>	17
<i>Variables</i>	17
<i>Dependent and Independent Variables</i>	17
<i>Theories/Hypotheses</i>	18
Examples of the Research Process	18
<i>Recidivism among Juvenile Offenders</i>	20
General Steps in Empirical Research in Criminal Justice	21
Problem Formulation: Selection of Research Problem	21
Problem Formulation: Specification of Research Problem	23
<i>Exhibit 1.2 Feminist Perspectives and Research Methods</i>	24
<i>Exhibit 1.3 PAVNET Online</i>	26
Summary	27
Key Concepts	28
Review Questions	29

## Chapter 2 Ethics in Criminal Justice Research

30

Ethical Horror Stories	30
<i>Biomedical Examples</i>	30
<i>Social Science Examples</i>	32
<i>Researcher Fraud and Plagiarism</i>	34
<i>Exhibit 2.1 Legendary Research Scams</i>	35
The Researcher's Role	35
Research Targets in Criminal Justice	37
Ethical Relativism	37
Ethics and Professionalism	38

Ethics in Criminal Justice Research	39
<i>History of Federal Regulation of Research</i>	40
<i>The Belmont Report</i>	42
<i>HHS Guidelines</i>	43
<i>Research Activities Exempt from HHS Review</i>	43
<i>National Institute of Justice's Human Subject Protection Requirements</i>	46
Confidentiality of Criminal Justice Research	47
A Code of Ethics for Criminology/Criminal Justice Research	48
<i>Avoid Research That May Harm Respondents</i>	49
<i>Honor Commitments to Respondents and Respect Reciprocity</i>	50
<i>Exercise Objectivity and Professional Integrity in Performing and Reporting Research</i>	50
<i>Protect Confidentiality and Privacy of Respondents</i>	51
Ethical Problems	52
<i>The Brajuha Case (Weinstein Decision)</i>	54
<i>The Ofshe Case</i>	56
<i>The Hutchinson Case</i>	56
<i>Additional Ethical Concerns</i>	58
Avoiding Ethical Problems	58
Summary	59
Key Concepts	61
Review Questions	61

### **Chapter 3    Research Design: The Experimental Model and Its Variations**

62

Types of Research Design	63
The Experimental Model	65
Research Design in a Nutshell	65
Causality	67
<i>Resolution of the Causality Problem</i>	67
Rival Causal Factors	68
<i>Validity</i>	69
Internal Factors: Variables Related to Internal Validity	69
<i>History</i>	69
<i>Maturation</i>	70
<i>Testing</i>	71
<i>Instrumentation</i>	71
<i>Statistical Regression</i>	71
<i>Selection Bias</i>	72
<i>Experimental Mortality</i>	72
<i>Selection—Maturation Interaction</i>	73
External Factors: Variables Related to External Validity	73
<i>Testing Effects</i>	73
<i>Selection Bias</i>	74
<i>Reactivity or Awareness of Being Studied</i>	74
<i>Multiple-Treatment Interferences</i>	74

Related Rival Causal Factors	75
<i>Hawthorne Effect</i>	75
<i>Halo Effect</i>	75
<i>Post Hoc Error</i>	76
<i>Placebo Effect</i>	76
Other Rival Causal Factors in Criminal Justice Field Experiments	77
<i>Diffusion of Treatment</i>	77
<i>Compensatory Equalization of Treatment</i>	77
<i>Local History</i>	77
<i>Masking Effects</i>	78
<i>Contamination of Data</i>	78
<i>Erosion of Treatment Effect</i>	78
<i>Criterion Problems</i>	78
Experimental Designs	79
The Classic Experimental Design	80
Some Criminal Justice Examples of the Classic Experimental Design	82
<i>Candid Camera</i>	82
<i>Scared Straight</i>	82
<i>Community Policing</i>	83
<b><i>Exhibit 3.1 The Kansas City Gun Experiment</i></b>	<b>84</b>
Other Experimental Designs	86
<i>Posttest-Only Control Group Design</i>	86
<i>Solomon Four-Group Design</i>	87
Preexperimental Designs	87
<i>One-Group Ex Post Facto Design</i>	88
<i>One-Group Before-After Design</i>	89
<i>Two-Group Ex Post Facto Design</i>	89
Cross-Sectional and Longitudinal Designs	90
<b><i>Exhibit 3.2 The Cycle of Violence and Victims of Child Abuse</i></b>	<b>91</b>
<b><i>Exhibit 3.3 The Project of Human Development</i></b>	<b>92</b>
Quasi-Experimental Designs	93
<i>Time-Series Designs</i>	94
<i>Multiple Interrupted Time-Series Designs</i>	96
<i>Counterbalanced Designs</i>	97
Some Other Criminal Justice Examples of Variations of the Experimental Model	97
<i>The Provo and Silverlake Experiments</i>	97
<b><i>Exhibit 3.4 Evaluations of Shock Incarceration</i></b>	<b>99</b>
<i>The Kansas City Preventive Patrol Experiment</i>	100
<i>The Minneapolis Domestic Violence Experiment</i>	100
The Experiment as a Data-Gathering Strategy	102
<i>Advantages of Experiments</i>	103
<i>Disadvantages of Experiments</i>	104
Summary	105
Key Concepts	106
Review Questions	106

<b>Chapter 4</b>	<b>An Introduction to Alternative Data-Gathering Strategies and the Special Case of Uniform Crime Reports</b>	<b>107</b>
Alternative Data-Gathering Strategies	107	
Social Surveys	109	
Participant Observation	110	
Life History and Case Studies	111	
Unobtrusive Measures	111	
The Special Case of Uniform Crime Reports	112	
The Crime Index	114	
Crime Rate	114	
Cautions in the Use of UCR Data	115	
<i>Factors Affecting the UCR</i>	118	
Related UCR Issues	120	
UCR Redesign	121	
<i>National Incident-Based Reporting System</i>	121	
<i>NIBRS versus UCR</i>	122	
<b><i>Exhibit 4.1 The National Incident-Based Reporting System (NIBRS)</i></b>	<b>123</b>	
Summary	127	
Key Concepts	127	
Review Questions	128	
<b>Chapter 5</b>	<b>Sampling and Survey Research: Questionnaires</b>	<b>129</b>
Types of Sampling	130	
<i>Probability Samples</i>	130	
<i>Nonprobability Samples</i>	136	
<i>Sample Size</i>	139	
Survey Research	140	
Some Guidelines for Questionnaire Construction	141	
<i>Questionnaire Wording</i>	142	
<i>Pretest</i>	146	
Organization of the Questionnaire	147	
Mail Surveys	147	
Advantages of Mail Surveys	149	
Disadvantages of Mail Surveys	150	
Ways of Eliminating Disadvantages in Mail Surveys	150	
<i>Follow-up</i>	151	
<i>Offering Remuneration</i>	152	
<i>Attractive Format</i>	152	
<i>Sponsorship and Endorsements</i>	152	
<i>Personalization</i>	153	
<i>Shortened Format</i>	153	
<i>Good Timing</i>	154	
Self-Reported Measures of Crime	155	
Some Problems with Self-Report Surveys	156	

Strengths of Self-Report Surveys	158
<i>Reliability</i>	158
<i>Validity</i>	158
<i>Use of Other Data</i>	159
<i>Use of Other Observers</i>	159
<i>Use of Polygraph</i>	159
<i>“Known Group” Validation</i>	160
<i>Use of Lie Scales</i>	160
<i>Measures of Internal Consistency</i>	161
<i>Use of Interviews</i>	161
Summary	162
Key Concepts	163
Review Questions	163

## **Chapter 6    Survey Research: Interviews and Telephone Surveys    164**

Types of Interviews	165
Advantages of Interviews	167
Disadvantages of Interviews	168
Interviewing Aids and Variations	168
<b><i>Exhibit 6.1 Public Opinion Polls</i></b>	<b>169</b>
General Procedures in Interviews	171
Training and Orientation Session	171
Arranging the Interview	172
Demeanor of Interviewer	172
Administration of the Structured Interview	173
Probing	173
The Exit	174
Recording the Interview	175
Telephone Surveys	176
Advantages and Prospects of Telephone Surveys	176
Disadvantages of Telephone Surveys	176
Computers in Survey Research	177
Random Digit Dialing	178
Techniques Employed in Telephone Surveys	179
Victim Surveys in Criminal Justice	180
National Crime Victimization Survey	181
<i>Sampling</i>	181
<i>Panel Design</i>	182
A Comparison of UCR, NCVS, and Self-Report Data	183
Some Problems in Victim Surveys	184
<i>Cost of Large Samples</i>	185
<i>False Reports</i>	185
<i>Mistaken Reporting</i>	185
<i>Poor Memory</i>	186
<i>Telescoping</i>	186
<i>Sampling Bias</i>	186

<i>Overreporting and Underreporting</i>	186
<i>Interviewer Effects</i>	187
<i>Coding Unreliability and Mechanical Error</i>	187
<i>Problems Measuring Certain Crimes</i>	188
<i>Benefits of Victim Surveys</i>	188
A Defense of Victim Surveys	189
Controlling for Error in Victim Surveys	189
<i>Bounding</i>	189
<i>Reverse Record Checks</i>	190
Victim Surveys: A Balanced View	190
Redesign of the National Crime Victimization Survey	191
<b><i>Exhibit 6.2 The Redesigned National Crime Victimization Survey</i></b>	<b>192</b>
Summary	195
Key Concepts	197
Review Questions	197

## **Chapter 7 Participant Observation and Case Studies**

198

A Critique of Experiments and Surveys	199
<i>Verbal Reports versus Behavior</i>	199
A Defense of Quantitative Research	200
Participant Observation	201
Types of Participant Observation	202
Characteristics of Participant Observation	204
<i>Objectivity in Research</i>	204
<i>"Going Native"</i>	206
General Procedures in Participant Observation	207
<i>Field Notes</i>	207
<i>Mnemonics</i>	208
<i>Caution in Use of Other Recording Methods</i>	208
Tips on Participant Observation	209
<i>Gaining Access</i>	210
<b><i>Exhibit 7.1 American Skinheads</i></b>	<b>211</b>
<i>Gatekeepers</i>	212
<i>Announcement of Intentions</i>	212
<i>Sampling</i>	212
<i>Reciprocity and Protection of Identity</i>	213
<i>Concern for Accuracy</i>	213
Examples of Participant Observation	214
<b><i>Exhibit 7.2 Islands in the Streets</i></b>	<b>215</b>
Advantages of Participant Observation	216
Disadvantages of Participant Observation	216
Case Studies	218
<i>Life History/Oral History</i>	218
Some Examples of Case Studies	219
<i>Journalistic Field Studies</i>	219
Single-Subject Designs	220

Summary	222	
Key Concepts	223	
Review Questions	223	
<b>Chapter 8</b>	<b>Unobtrusive Measures, Secondary Analysis, and the Uses of Official Statistics</b>	<b>224</b>
Major Types of Unobtrusive Methods	225	
Physical Trace Analysis	226	
Use of Available Data and Archives	227	
<i>Secondary Analysis</i>	228	
<i>Personal Documents and Biographies</i>	229	
<i>Examples of Secondary Analysis</i>	231	
<i>Limitations of Official Data</i>	234	
<i>Measuring Hidden Populations</i>	235	
<i>Historical and Archival Data</i>	235	
<i>Content Analysis</i>	237	
<i>Content Analysis by Computer</i>	238	
<i>Meta-Analysis</i>	240	
Sources of Existing Data	241	
<i>Exhibit 8.1 Violence Research Data from the     National Archive of Criminal Justice Data</i>	244	
Observation	244	
Disguised Observation	246	
Simulations	250	
Advantages of Unobtrusive Measures	251	
Disadvantages of Unobtrusive Measures	252	
Summary	252	
Key Concepts	253	
Review Questions	254	
<i>Chapter Appendix 8.1 Street Gang Crime in Chicago</i>	255	
<b>Chapter 9</b>	<b>Validity, Reliability, and Triangulated Strategies</b>	<b>258</b>
Levels of Measurement	258	
Error in Research	261	
Reasons for Lack of Validation Studies in Criminal Justice	262	
Ways of Determining Validity	263	
<i>Face Validity</i>	264	
<i>Content Validity</i>	265	
<i>Construct Validity</i>	265	
<i>Pragmatic Validity</i>	266	
<i>Convergent-Discriminant Validation/Triangulation</i>	267	
Reliability	269	
<i>Test-Retest</i>	270	
<i>Multiple Forms</i>	271	
<i>Split-Half Technique</i>	271	
Mythical Numbers	272	
<i>Phantom Army of Addicts</i>	272	

Drug Use Forecasting (DUF)	273	
<i>Exhibit 9.1 The Drug Use Forecasting Program</i>	273	
Other Examples of Research Validation	275	
Summary	276	
Key Concepts	277	
Review Questions	277	
<b>Chapter 10</b>	<b>Scaling and Index Construction</b>	<b>278</b>
Scaling Procedures	279	
Arbitrary Scales	280	
The Uniform Crime Report as an Arbitrary Scale	280	
Attitude Scales	281	
<i>Thurstone Scales</i>	282	
<i>Likert Scales</i>	283	
<i>Guttman Scales</i>	286	
Other Scaling Procedures	290	
<i>Q Sort</i>	290	
<i>Semantic Differential</i>	290	
<i>Other Variations</i>	291	
Crime Seriousness Scales	292	
<i>Sellin-Wolfgang Index</i>	293	
<i>Types of Crime Seriousness Scales</i>	293	
Prediction Scales	295	
<i>The Salient Factor Score</i>	296	
<i>Greenwood's "Rand Seven-Factor Index"</i>	296	
<i>Career Criminal Programs</i>	298	
Advantages of Scales	298	
Disadvantages of Scales	299	
Summary	300	
Key Concepts	301	
Review Questions	301	
<b>Chapter 11</b>	<b>Data Analysis: Coding, Tabulation, and Simple Data Presentation</b>	<b>302</b>
Variables List	303	
Computers	304	
Data Management	305	
<i>Editing</i>	305	
<i>Coding</i>	306	
<i>Coder Monitoring</i>	309	
<i>Keyboard Entry</i>	309	
<i>Data Verification</i>	310	
Simple Data Presentation	310	
<i>Rates</i>	312	
<i>Proportions</i>	312	
<i>Percentages</i>	313	
<i>Ratios</i>	313	

The Frequency Distribution	314
Graphic Presentations	315
<i>Pie Charts</i>	315
<i>Bar Graphs</i>	315
<i>Frequency Polygons (Line Charts)</i>	317
<i>Crime Clocks</i>	319
Table Reading	323
<i>Why Bother with Tables?</i>	323
<i>What to Look for in a Table</i>	323
Steps in Reading a Table	325
<i>Summary of Table 11.3</i>	326
How to Construct Tables	327
Presentation of Complex Data	328
General Rules for Percentaging a Table	329
<i>Improper Percentaging</i>	330
<i>An Example of Table Percentaging</i>	332
Elaboration	333
Lying with Statistics	336
Summary	337
Key Concepts	338
Review Concepts	338

## **Chapter 12 Data Analysis: A User's Guide to Statistics**

339

Why Study Statistics?	340
Types of Statistics	341
Measures of Central Tendency for a Simple Distribution	341
<i>Mode</i>	342
<i>Median</i>	342
<i>Mean</i>	343
<i>Pop Quiz 12.1</i>	344
Measures of Dispersion	344
<i>Range</i>	344
<i>Standard Deviation (<math>\sigma</math>)</i>	346
<i>Pop Quiz 12.2</i>	348
Standard Deviation Units (Z Scores)	349
<i>Pop Quiz 12.3</i>	350
Chi-Square ( $\chi^2$ )	350
<i>Calculation of Chi-Square</i>	351
<i>Cautions</i>	353
<i>Pop Quiz 12.4</i>	353
Chi-Square-Based Measures of Association	353
<i>Phi Coefficient (<math>\phi</math>) and Phi-Square (<math>\phi^2</math>)</i>	354
<i>Contingency Coefficient (C)</i>	354
<i>Cramer's V</i>	355
<i>Pop Quiz 12.5</i>	355
Nature and Types of Statistics	355
<i>Nonparametric Statistics</i>	355

<i>Null Hypothesis</i>	356
<i>Tests of Significance</i>	357
The <i>t</i> Test (Difference of Means Test)	357
<i>Types of t Tests</i>	358
<i>Pop Quiz 12.6</i>	360
ANOVA (Analysis of Variance)	360
<i>Calculation of ANOVA</i>	361
<i>Pop Quiz 12.7</i>	363
Other Measures of Relationship	363
<i>The Concept of Relationship</i>	363
Correlation Coefficient (Pearson's <i>r</i> )	364
<i>Interpretation of Pearson's r</i>	364
<i>Calculation of Pearson's r</i>	365
<i>Statistical Significance of Pearson's r</i>	367
<i>Pop Quiz 12.8</i>	367
Regression	367
<i>Pop Quiz 12.9</i>	369
Ordinal Level Measures of Relationship	369
<i>Spearman's Rho (<math>r_s</math>)</i>	369
<i>Interpretation of Rho</i>	371
<i>Gamma</i>	371
<i>Pop Quiz 12.10</i>	373
Multivariate Analysis	374
<i>Partial Correlation</i>	374
<i>Multiple Correlation and Regression</i>	374
<i>Final Quiz</i>	375
Statistical Software	376
Caveat Emptor	376
The Ecological Fallacy	377
Summary	378
Key Concepts	380
Review Questions	380

### **Chapter 13 Policy Analysis, Evaluation Research, and Proposal Writing**

381

Policy Analysis	381
Evaluation Research	382
<i>Policy Experiments</i>	384
Policy Analysis: The Case of the National Institute of Justice Research Program	385
<i>NIJ Mission Statement</i>	385
<i>NIJ Research Priorities</i>	386
A Systems Model of Evaluation Research	386
Types of Evaluation Research	388
<i>Will the Findings Be Used?</i>	390
<i>Is the Project Evaluable?</i>	390
<i>Who Can Do This Work?</i>	392

Steps in Evaluation Research	392
<i>Problem Formulation</i>	393
<i>Design of Instruments</i>	393
<i>Research Design</i>	393
<i>Data Collection</i>	394
<i>Data Analysis</i>	395
<i>Utilization</i>	396
Obstacles to Evaluation Research	397
Murphy's Law in Evaluation Research	397
Researchers and Host Agencies	399
<b><i>Exhibit 13.1 Evaluating Intensive Supervision</i></b>	
<b><i>Probation/Parole</i></b>	<b>400</b>
Proposal Writing	402
<i>Funding Agencies</i>	402
<i>Grantsmanship</i>	402
<i>Basic Elements of a Proposal</i>	403
NIJ Proposal Format and Content	408
Evaluation of Research Proposals	410
<i>NIJ Evaluation of Proposals</i>	411
Summary	411
Key Concepts	412
Review Questions	413
<b>Appendix A How to Write the Research Report</b>	<b>414</b>
General Advice	414
Steps in the Research Report	415
<i>Research Problem and Literature Review</i>	416
<i>Methodology</i>	416
<i>Analysis and Findings</i>	417
<i>Discussion and Conclusions</i>	417
<i>References</i>	417
<i>Appendix</i>	418
References	418
<b>Appendix B Table of Random Numbers</b>	<b>420</b>
<b>Appendix C An Overview of SPSS/PC+</b>	<b>422</b>
File Management	422
<i>Types of Files</i>	422
<i>Naming Files</i>	422
<i>General Information</i>	423
<i>Creating or Retrieving Files</i>	423
<i>Saving Files</i>	423
<i>Executing Programs</i>	424
<i>Examining the Listing (Output) File</i>	424
<i>Errors and Warnings</i>	424
<i>Exiting SPSS/PC+</i>	424

<i>Printing Files</i>	424
SPSS/PC+ Programming Commands	425
Data Definition	425
<i>Data List</i>	425
<i>Variable Labels</i>	426
<i>Value Labels</i>	427
<i>Set</i>	427
<i>Missing Value</i>	428
Transformations	428
<i>Recode</i>	429
<i>Compute</i>	429
<i>If</i>	430
<i>Select If</i>	430
<i>Process If</i>	430
Statistical Procedures	431
<i>Frequencies</i>	431
<i>Crosstabs</i>	432
<i>T-Test</i>	432
<i>Correlations</i>	433
<i>Regression</i>	433
Miscellaneous Issues	434
<i>In-line Data</i>	434
<i>System Files</i>	435
<i>Errors and Warnings</i>	436
Summary	436
Reference	436

## **Appendix D Statistics: An Addendum to Chapter 12** 437

Measures of Central Tendency for Grouped Data	437
Standard Deviations for Grouped Data	440
<i>Raw Score Approach</i>	440
<i>Deviation Score Approach</i>	441
Calculation of ANOVA	442
Regression Calculations	443
A Test of Significance for Gamma	444

<b>Appendix E Answers to Pop Quizzes in Chapter 12</b>	<b>445</b>
<b>Appendix F Normal Curve Areas</b>	<b>450</b>
<b>Appendix G Distribution of Chi-Square (<math>\chi^2</math>)</b>	<b>455</b>
<b>Appendix H Factor Analysis</b>	<b>456</b>
References	460
Glossary	506
Name Index	512
Subject Index	519