

# Contents

<b>1 • A Gentle Introduction to Missing Data</b>	<b>1</b>
The Concept of Missing Data	2
The Prevalence of Missing Data	2
Why Data Might Be Missing	5
The Impact of Missing Data	6
A Cost–Benefit Approach to Missing Data	10
Missing Data—Not Just for Statisticians Anymore	13
Purpose of This Book	14
<b>2 • Consequences of Missing Data</b>	<b>17</b>
Three General Consequences of Missing Data	18
Consequences of Missing Data on Construct Validity	20
Consequences of Missing Data on Internal Validity	25
Consequences for Causal Generalization	35
Summary	39
<b>3 • Classifying Missing Data</b>	<b>40</b>
“The Silence That Betokens”	41
The Current Classification System:	
Mechanisms of Missing Data	42
Expanding the Classification System	52
Summary	62
<b>4 • Preventing Missing Data by Design</b>	<b>65</b>
Overall Study Design	66
Characteristics of the Target Population and the Sample	72
Data Collection Methods	75
Treatment Implementation	84

Data Entry Process	85
Summary	85

**5 • Diagnostic Procedures** 88

Traditional Diagnostics	89
Dummy Coding Missing Data	90
Numerical Diagnostic Procedures	92
Diagnostic Procedures Using Graphing	110
Summary	114

**6 • The Selection of Data Analytic Procedures** 116

Preliminary Steps	117
Decision Making	127
Summary	138

**7 • Data Deletion Methods for Handling Missing Data** 140

Data Sets	140
Complete Case Method	141
Available Case Method	147
Available Item Method	148
Individual Growth Curve Analysis	152
Multisample Analyses	156
Summary	158

**8 • Data Augmentation Procedures** 160

Model-Based Procedures	161
Markov Chain Monte Carlo	166
Adjustment Methods	168
Summary	172

**9 • Single Imputation Procedures** 173

Constant Replacement Methods	175
Random Value Imputation	181
Nonrandom Value Imputation: Single Condition	185
Nonrandom Value Imputation: Multiple Conditions	190
Summary	194

**10 • Multiple Imputation** 196

The MI Process	199
Summary	210

---

<b>11 • Reporting Missing Data and Results</b>	<b>213</b>
APA Task Force Recommendations	213
Missing Data and Study Stages	214
TFSI Recommendations and Missing Data	218
Reporting Format	221
Summary	223
<b>12 • Epilogue</b>	<b>225</b>
<b>References</b>	<b>229</b>
<b>Author Index</b>	<b>237</b>
<b>Subject Index</b>	<b>241</b>