

SOCIAL STATISTICS

for a DIVERSE SOCIETY

SIXTH EDITION



Chava Frankfort-Nachmias | Anna Leon-Guerrero

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Chava Frankfort-Nachmias | Anna Leon-Guerreo
University of Wisconsin – Milwaukee



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Anna Leon-Guerrero is Professor of Sociology at Pacific Lutheran University in Washington. She received her PhD in sociology from the University of California, Los Angeles. She teaches courses in statistics, social theory, and social problems. Her areas of research and publications include family business, social welfare policy, and social service program evaluation. She is also the author of *Social Problems: Community, Policy, and Social Action* and coeditor of *Contemporary Readings in Social Problems*.

PREFACE

You may be reading this introduction on the first day or sometime during the first week of your statistics class. You probably have some questions about statistics and concerns about what your course will be like. Math, formulas, calculations? Yes, those will be part of your learning experience. However, there is more.

Throughout our text, we emphasize the relevance of statistics in our daily and professional lives. In fact, statistics is such a part of our lives that its importance and uses are often overlooked. How Americans feel about a variety of political and social topics—safety in schools, the environment, the economy, abortion, health care reform, or our president—are measured by surveys and polls and reported daily by the news media. The latest from a health care study on women was just reported on a morning talk show. And that outfit you just purchased—it didn't go unnoticed. The study of consumer trends, specifically focusing on teens and young adults, helps determine commercial programming, product advertising and placement, and, ultimately, consumer spending.

Statistics is not just a part of our lives in the form of news bits or information. And it isn't just numbers either. Throughout this book, we encourage you to move beyond being just a consumer of statistics and begin to recognize and use the many ways that statistics can increase our understanding of our world. As social scientists, we know that statistics can be a valuable set of tools to help us analyze and understand the differences in our American society and the world. We use statistics to track demographic trends, to assess differences among groups in society, and to make an impact on social policy and social change. Statistics can help us gain insight into real-life problems that affect our lives.

▣ TEACHING AND LEARNING GOALS

The following three teaching and learning goals continue to be the guiding principles of our book, as they were in the fifth edition.

The first goal is to introduce you to social statistics and demonstrate its value. Although most of you will not use statistics in your own student research, you will be expected to read and interpret statistical information presented by others in professional and scholarly publications, in the workplace, and in the popular media. This book will help you understand the concepts behind the statistics so that you will be able to assess the circumstances in which certain statistics should and should not be used.

Our second goal is to demonstrate that substance and statistical techniques are truly related in social science research. A special quality of this book is its integration of statistical techniques with substantive issues of particular relevance in the social sciences. Your learning will not be limited to statistical calculations and formulas. Rather, you will become proficient in statistical techniques while

learning about social differences and inequality through numerous substantive examples and real-world data applications. Because the world we live in is characterized by a growing diversity—where personal and social realities are increasingly shaped by race, class, gender, and other categories of experience—this book teaches you basic statistics while incorporating social science research related to the dynamic interplay of social variables.

Many of you may lack substantial math background, and some of you may suffer from the “math anxiety syndrome.” This anxiety often leads to a less-than-optimal learning environment, with students trying to memorize every detail of a statistical procedure rather than attempting to understand the general concept involved. Hence, our third goal is to address math anxiety by using straightforward prose to explain statistical concepts and by emphasizing intuition, logic, and common sense over rote memorization and derivation of formulas.

▣ DISTINCTIVE AND UPDATED FEATURES OF OUR BOOK

The three learning goals we emphasize are accomplished through a variety of specific and distinctive features throughout this book.

A Close Link Between the Practice of Statistics, Important Social Issues, and Real-World Examples. A special quality of this book is its integration of statistical technique with pressing social issues of particular concern to society and social science. We emphasize how the conduct of social science is the constant interplay between social concerns and methods of inquiry. In addition, the examples throughout the book—mostly taken from news stories, government reports, scholarly research, the National Opinion Research Center General Social Survey, and the Monitoring the Future Survey—are formulated to emphasize to students like you that we live in a world in which statistical arguments are common. Statistical concepts and procedures are illustrated with real data and research, providing a clear sense of how questions about important social issues can be studied with various statistical techniques.

A Focus on Diversity: U.S. and International. A strong emphasis on race, class, and gender as central substantive concepts is mindful of a trend in the social sciences toward integrating issues of diversity in the curriculum. This focus on the richness of social differences within our society and our global neighbors is manifested in the application of statistical tools to examine how race, class, gender, and other categories of experience shape our social world and explain social behavior. Data examples from the International Social Survey Programme data set help expand our statistical focus beyond the United States to other nations.

Reading the Research Literature. In your student career and in the workplace, you may be expected to read and interpret statistical information presented by others in professional and scholarly publications. The statistical analyses presented in these publications are a good deal more complex than most class and textbook presentations. To guide you in reading and interpreting research reports written by social scientists, most chapters include a section presenting excerpts of published research reports using the statistical concepts under discussion.

Tools to Promote Effective Study. Each chapter concludes with a list of main points and key terms discussed in that chapter. Boxed definitions of the key terms also appear in the body of the chapter, as do learning checks keyed to the most important points. Key terms are also clearly defined and explained in the glossary, another special feature in our book. Answers to all the odd-numbered exercises and Learning Checks in the text are included at the end of the book, as well as on the study site at www.pineforge.com/ssds6e. Complete step-by-step solutions are in the manual for instructors, available from the publisher on adoption of the text.

Emphasis on Computing. SPSS for Windows is used throughout the book, although the use of computers is not required to learn from the text. Real data are used to motivate and make concrete the coverage of statistical topics. These data, from the General Social Survey (GSS), Health Information National Trends Survey (HINTS), and the Monitoring the Future (MTF) survey, are available on the study site at www.pineforge.com/ssds6e. At the end of each chapter, we feature a demonstration of a related SPSS procedure along with a set of exercises.

▣ HIGHLIGHTS OF THE SIXTH EDITION

We have made a number of important changes to this book in response to the valuable comments that we have received from the many instructors adopting the fifth edition and from other interested instructors (and their students).

- *Real-world examples and exercises:* A hallmark of our first five editions was the extensive use of real data from a variety of sources for chapter illustrations and exercises. Throughout the sixth edition, we have updated the majority of exercises and examples based on GSS, MTF, or HINTS surveys, or U.S. Census data.
- *SPSS version 18.0:* Packaged with this text, on an optional basis, is IBM® SPSS® Student version 18.0. SPSS demonstrations and exercises have been updated, using version 18.0 format. Please contact the publisher at (805) 499-4224 or access the publisher's website at www.pineforge.com to learn how to order the book packaged with the student version of SPSS version 18.0.
- *GSS 2008, HINTS 2007, and MTF 2008:* As a companion to the sixth edition's SPSS demonstrations and exercises, we have created five data sets. Those of you with the student version of SPSS 18.0 can work with four separate files: GSS Module A, GSS Module B, HINTS2007, and MTF2008. The GSS08PFPS.SAV contains an expanded selection of variables and cases from the 2008 GSS. The HINTS2007.SAV contains 50 variables from the 2007 Health Information National Trends Survey, administered by the National Cancer Institute. HINTS, a nationally representative survey collected in both English and Spanish, aims to monitor changes in the rapidly evolving field of health communication. The MTF2008.SAV contains a selection of variables and cases from the Monitoring the Future 2008 survey conducted by the University of Michigan Survey Research Center. MTF is a survey of 12th-grade students, and it explores drug use and criminal behavior. SPSS exercises at the end of each chapter use certain variables from all data modules. There is ample opportunity for instructors to develop their own SPSS exercises using these data.
- *Supplemental tools on important topics:* The sixth edition's discussion of inferential statistics remains focused on Z , t , and χ^2 . For selected chapters, we have added a new section, A Cautionary Note, advising students about the common errors and limitations in data collection and analysis.

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Anna Leon-Guerrero expresses her thanks to the following: I wish to thank my statistics teaching assistants and students. My passion for and understanding of teaching statistics grow with each semester and class experience. I am grateful for the teaching and learning opportunities that we have shared.

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BRIEF CONTENTS

About the Authors	xvi
Preface	xvii
1. The What and the Why of Statistics	1
2. Organization of Information: Frequency Distributions	27
3. Graphic Presentation	63
4. Measures of Central Tendency	94
5. Measures of Variability	132
6. The Normal Distribution	169
7. Sampling and Sampling Distributions	196
8. Estimation	227
9. Testing Hypotheses	256
10. Relationships Between Two Variables: Cross-Tabulation	293
11. The Chi-Square Test	338
12. Measures of Association for Nominal and Ordinal Variables	365
13. Regression and Correlation	399
14. Analysis of Variance	454
Appendix A. Table of Random Numbers	489
Appendix B. The Standard Normal Table	493
Appendix C. Distribution of t	497
Appendix D. Distribution of Chi-Square	499
Appendix E. Distribution of F	500

Appendix F. A Basic Math Review	502
Learning Check Solutions	507
Answers to Odd-Numbered Exercises	515
Glossary	558
Notes	563
Index	568

DETAILED CONTENTS

About the Authors	xvi
Preface	xvii
1. The What and the Why of Statistics	1
The Research Process	2
Asking Research Questions	3
The Role of Theory	4
Formulating the Hypotheses	5
<i>Independent and Dependent Variables: Causality</i>	7
<i>Independent and Dependent Variables: Guidelines</i>	9
Collecting Data	10
<i>Levels of Measurement</i>	10
Nominal Level of Measurement	11
Ordinal Level of Measurement	11
Interval-Ratio Level of Measurement	12
Cumulative Property of Levels of Measurement	12
Levels of Measurement of Dichotomous Variables	13
<i>Discrete and Continuous Variables</i>	15
A Closer Look 1.1: A Cautionary Note: Measurement Error	16
Analyzing Data and Evaluating the Hypotheses	17
<i>Descriptive and Inferential Statistics</i>	17
<i>Evaluating the Hypotheses</i>	18
Looking at Social Differences	19
A Closer Look 1.2: A Tale of Simple Arithmetic: How Culture May Influence How We Count	20
A Closer Look 1.3: Are You Anxious About Statistics?	20
2. Organization of Information: Frequency Distributions	27
Frequency Distributions	27
Proportions and Percentages	28
Percentage Distributions	31
Comparisons	31
Statistics in Practice: Labor Force Participation Among Latinos	32

The Construction of Frequency Distributions	34
<i>Frequency Distributions for Nominal Variables</i>	34
<i>Frequency Distributions for Ordinal Variables</i>	36
<i>Frequency Distributions for Interval-Ratio Variables</i>	39
Cumulative Distributions	41
A Closer Look 2.1: Real Limits, Stated Limits, and Midpoints of Class Intervals	42
Rates	44
Statistics in Practice: Marriage and Divorce Rates Over Time	45
Reading the Research Literature: Statistical Tables	46
<i>Basic Principles</i>	47
<i>Tables With a Different Format</i>	49
Conclusion	50
3. Graphic Presentation	63
The Pie Chart: Race and Ethnicity of the Elderly	64
The Bar Graph: Living Arrangements and Labor Force Participation of the Elderly	65
The Statistical Map: The Geographic Distribution of the Elderly	67
The Histogram	70
Statistics in Practice: The “Graying” of America	71
The Line Graph	73
Time-Series Charts	76
A Closer Look 3.1: A Cautionary Note: Distortions in Graphs	78
Statistics in Practice: Diversity at a Glance	79
4. Measures of Central Tendency	94
The Mode	95
The Median	97
<i>Finding the Median in Sorted Data</i>	98
An Odd Number of Cases	98
An Even Number of Cases	100
<i>Finding the Median in Frequency Distributions</i>	102
<i>Statistics in Practice: Gendered Income Inequality</i>	103
<i>Locating Percentiles in a Frequency Distribution</i>	104
The Mean	105
<i>Calculating the Mean</i>	106
A Closer Look 4.1: Finding the Mean in a Frequency Distribution	107
<i>Understanding Some Important Properties of the Arithmetic Mean</i>	110
Interval-Ratio Level of Measurement	110
Center of Gravity	110
Sensitivity to Extremes	110
The Shape of the Distribution: Television, Education, and Siblings	113
<i>The Symmetrical Distribution</i>	115
<i>The Positively Skewed Distribution</i>	115
<i>The Negatively Skewed Distribution</i>	116
<i>Guidelines for Identifying the Shape of a Distribution</i>	116

Considerations for Choosing a Measure of Central Tendency	118
<i>Level of Measurement</i>	119
<i>Skewed Distribution</i>	119
<i>Symmetrical Distribution</i>	119
A Closer Look 4.2: A Cautionary Note: Representing Income	119
5. Measures of Variability	132
The Importance of Measuring Variability	132
The Index of Qualitative Variation: A Brief Introduction	134
<i>Steps for Calculating the IQV</i>	135
A Closer Look 5.1: Statistics in Practice: Diversity at Berkeley Through the Years	137
Expressing the IQV as a Percentage	137
<i>Statistics in Practice: Diversity in U.S. Society</i>	138
The Range	139
The Interquartile Range: Increases in Elderly Population	141
The Box Plot	143
The Variance and the Standard Deviation: Changes in the Elderly Population	146
<i>Calculating the Deviation From the Mean</i>	148
<i>Calculating the Variance and the Standard Deviation</i>	149
Considerations for Choosing a Measure of Variation	153
Reading the Research Literature: Differences in College Aspirations and Expectations Among Latino Adolescents	154
6. The Normal Distribution	169
Properties of the Normal Distribution	170
<i>Empirical Distributions Approximating the Normal Distribution</i>	170
<i>An Example: Final Grades in Statistics</i>	171
<i>Areas Under the Normal Curve</i>	172
<i>Interpreting the Standard Deviation</i>	173
Standard (Z) Scores	173
<i>Transforming a Raw Score Into a Z Score</i>	174
<i>Transforming a Z Score Into a Raw Score</i>	174
The Standard Normal Distribution	176
The Standard Normal Table	176
<i>The Structure of the Standard Normal Table</i>	177
<i>Transforming Z Scores Into Proportions (or Percentages)</i>	178
Finding the Area Between the Mean and a Specified Positive Z Score	178
Finding the Area Between the Mean and a Specified Negative Z Score	179
Finding the Area Above a Positive Z Score or Below a Negative Z Score	180
<i>Transforming Proportions (or Percentages) Into Z Scores</i>	181
Finding a Z Score Bounding an Area Above It	181
Finding a Z Score Bounding an Area Below It	182
<i>Working With Percentiles in a Normal Distribution</i>	183
Finding the Percentile Rank of a Score Higher Than the Mean	184
Finding the Percentile Rank of a Score Lower Than the Mean	184

Finding the Raw Score Associated With a Percentile Higher Than 50	186
Finding the Raw Score Associated With a Percentile Lower Than 50	187
A Final Note	188
7. Sampling and Sampling Distributions	196
Aims of Sampling	197
Some Basic Principles of Probability	199
<i>Probability Defined</i>	199
<i>The Relative Frequency Method</i>	199
<i>The Normal Distribution and Probabilities</i>	200
Probability Sampling	201
<i>The Simple Random Sample</i>	201
<i>The Systematic Random Sample</i>	203
<i>The Stratified Random Sample</i>	204
A Closer Look 7.1: Disproportionate Stratified Samples and Diversity	205
The Concept of the Sampling Distribution	206
<i>The Population</i>	206
<i>The Sample</i>	208
<i>The Dilemma</i>	209
<i>The Sampling Distribution</i>	209
The Sampling Distribution of the Mean	209
<i>An Illustration</i>	209
<i>Review</i>	212
<i>The Mean of the Sampling Distribution</i>	212
<i>The Standard Error of the Mean</i>	213
The Central Limit Theorem	214
<i>The Size of the Sample</i>	217
<i>The Significance of the Sampling Distribution and the Central Limit Theorem</i>	217
8. Estimation	227
Estimation Defined	228
<i>Reasons for Estimation</i>	228
<i>Point and Interval Estimation</i>	228
Procedures for Estimating Confidence Intervals for Means	230
A Closer Look 8.1: Estimation as a Type of Inference	230
<i>Determining the Confidence Interval</i>	232
Calculating the Standard Error of the Mean	232
Deciding on the Level of Confidence and Finding the Corresponding Z Value	232
Calculating the Confidence Interval	232
Interpreting the Results	233
<i>Reducing Risk</i>	234
<i>Estimating Sigma</i>	235

Calculating the Estimated Standard Error of the Mean	236
Deciding on the Level of Confidence and Finding the Corresponding Z Value	236
Calculating the Confidence Interval	236
Interpreting the Results	236
<i>Sample Size and Confidence Intervals</i>	236
A Closer Look 8.2: What Affects Confidence Interval Width? Summary	239
Statistics in Practice: Hispanic Migration and Earnings	239
Confidence Intervals for Proportions	241
<i>Procedures for Estimating Proportions</i>	242
Calculating the Estimated Standard Error of the Proportion	243
Deciding on the Desired Level of Confidence and Finding the Corresponding Z Value	243
Calculating the Confidence Interval	243
Interpreting the Results	244
Statistics in Practice: Health Care Reform	244
<i>Calculating the Estimated Standard Error of the Proportion</i>	245
<i>Deciding on the Desired Level of Confidence and Finding the Corresponding Z Value</i>	245
<i>Calculating the Confidence Interval</i>	245
<i>Interpreting the Results</i>	246
A Closer Look 8.3: A Cautionary Note: the Margin of Error	246
9. Testing Hypotheses	256
Assumptions of Statistical Hypothesis Testing	257
Stating the Research and Null Hypotheses	257
<i>The Research Hypothesis (H_1)</i>	258
<i>The Null Hypothesis (H_0)</i>	258
<i>More About Research Hypotheses: One- and Two-Tailed Tests</i>	259
Determining What Is Sufficiently Improbable: Probability Values and Alpha	260
The Five Steps in Hypothesis Testing: A Summary	264
Errors in Hypothesis Testing	265
<i>The t Statistic and Estimating the Standard Error</i>	266
<i>The t Distribution and Degrees of Freedom</i>	266
<i>Comparing the t and Z Statistics</i>	267
<i>Statistics in Practice: The Earnings of White Women</i>	268
Testing Hypotheses About Two Samples	270
<i>The Assumption of Independent Samples</i>	271
<i>Stating the Research and Null Hypotheses</i>	271
The Sampling Distribution of the Difference Between Means	272
<i>Estimating the Standard Error</i>	273
<i>Calculating the Estimated Standard Error</i>	273
<i>The t Statistic</i>	273
<i>Calculating the Degrees of Freedom for a Difference Between Means Test</i>	274

A Closer Look 9.1: Calculating the Estimated Standard Error and the Degrees of Freedom (<i>df</i>) When the Population Variances Are Assumed to Be Unequal	274
The Five Steps in Hypothesis Testing About Difference Between Means: A Summary	275
<i>Statistics in Practice: First Time Drug Use Among Students</i>	276
Testing the Significance of the Difference Between Two Sample Proportions	278
<i>Statistics in Practice: Political Party Affiliation and Confidence in the Executive Branch</i>	279
<i>Statistics in Practice: Educational Attainment and Confidence in the Executive Branch</i>	280
A Closer Look 9.2: A Cautionary Note: Is There a Significant Difference?	281
Reading the Research Literature: Reporting the Results of Statistical Hypothesis Testing	282
10. Relationships Between Two Variables: Cross-Tabulation	293
Independent and Dependent Variables	294
How to Construct a Bivariate Table: Race and Home Ownership	295
How to Compute Percentages in a Bivariate Table	297
<i>Calculating Percentages Within Each Category of the Independent Variable</i>	297
<i>Comparing the Percentages Across Different Categories of the Independent Variable</i>	298
A Closer Look 10.1: Percentaging a Bivariate Table	299
How to Deal With Ambiguous Relationships Between Variables	300
Reading the Research Literature: Place of Death in America	302
The Properties of a Bivariate Relationship	304
<i>The Existence of the Relationship</i>	305
<i>The Strength of the Relationship</i>	306
<i>The Direction of the Relationship</i>	307
Elaboration	310
<i>Testing for Nonspuriousness: Firefighters and Property Damage</i>	310
<i>An Intervening Relationship: Religion and Attitude Toward Abortion</i>	314
<i>Conditional Relationships: More on Abortion</i>	319
<i>The Limitations of Elaboration</i>	320
Statistics in Practice: Family Support for the Transition From High School	322
11. The Chi-Square Test	338
The Concept of Chi-Square as a Statistical Test	340
The Concept of Statistical Independence	341
The Structure of Hypothesis Testing With Chi-Square	342
<i>The Assumptions</i>	342
<i>Stating the Research and the Null Hypotheses</i>	342
<i>The Concept of Expected Frequencies</i>	342
<i>Calculating the Expected Frequencies</i>	343
<i>Calculating the Obtained Chi-Square</i>	344