



1 Introduction

When SPSS Inc. of Chicago, Illinois, USA was founded in 1968, the letters SPSS stood for Statistical Package for the Social Sciences. Later, as the company grew beyond its purely academic roots, this was changed to Statistical Product and Service Solutions. Today, the company uses SPSS as a name and no longer as an abbreviation for something else. The detailed operations described in this book apply specifically to versions 14, 15, and 16, and the screenshots are from version 15. For earlier versions of SPSS, there are slight variations, but most of the essential features remain the same. In version 16, most of the buttons are the same as in versions 14 and 15, but some are transposed, so the ones that appear in the screenshots on the right-hand side are now along the bottom, and those on the bottom are now down the right.

SPSS is the oldest and most popular of the many packages of computer programs currently available for statistical analysis. Although it's extremely powerful, it's relatively easy to use once you've been taught the rudiments. We can teach you the rudiments quite quickly, and you'll certainly need our guidance, because the package is not self-explanatory and you cannot simply teach yourself to use it just by fiddling around and using the help menu, as one of us was annoyed to discover long ago. For both of us, and many people we've spoken to, the chief problem in learning to use it is that the various manuals on the market – some issued by SPSS Inc. and many more by independent writers – are too detailed, too complicated, and above all too *long* to provide the quick introduction that we need. This book is aimed at readers like ourselves who lack the time to plough through thick manuals, or the patience to submit to a screen-based tutor, but who want to be able to pick up the essential skills for performing standard statistical analyses with SPSS, and who prefer to learn these skills rapidly and painlessly. If you are one of those people who *are* happy to spend many evenings and



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weekends learning SPSS the long way, then our considered advice to you is that you should get out more and develop some new leisure activities.

Chapter 2 will focus on the essential information that you need for getting started. If you're already familiar with Windows, then you only really need to read sections 2.3 and 2.4. The chapters that follow will tell you how to load data, how to print results, how to obtain descriptive statistics, including means, standard deviations, and variances, how to compute Pearson's correlation coefficient, partial correlations, Spearman's rho, chi-square tests, t tests for independent and paired samples, Mann-Whitney U tests, Wilcoxon matched-pairs tests, analysis of variance in all its major forms, multiple regression, log-linear analysis, and factor analysis, how to draw charts and graphs, how to change and create variables, how to handle data files, and how to work with SPSS syntax windows. The statistical procedures covered by this book include the most important ones used by psychologists and other social and behavioural scientists. Once you've mastered these techniques, you should have little difficulty teaching yourself other procedures available in SPSS.

This book will not teach you statistics. We assume that you already know enough about statistics to understand what assumptions are made about the data that you enter into SPSS, what procedures to use for analysing the data, and how to interpret the results. There's no point trying to analyse data unless you know what you're doing. If you need to brush up on your statistics, there are many good books for you to consult. Among the ones that we're happy to recommend are Hays (2007), Howell (2008), Huck (2008), Norman and Streiner (2008), and Pagano (2007). (Bibliographical details can be found in the list of references at the back of this book.) We have, none the less, included very brief introductions to the essential ideas behind the statistical procedures at the beginning of most chapters, and in the preliminary pages there's a flow chart to help you choose an appropriate statistical procedure and a table showing where to find things in SPSS. The flow chart and table are restricted to the most commonly used procedures specifically dealt with in this book. There are far more statistical procedures available in SPSS, and both the flow chart and the table are only rudimentary, in the spirit of the book as a whole.

Even if you know what you're doing, the output that you obtain will be of little value if your data are of poor quality. This nugget of truth is expressed in the computer slang word *gigo*, which stands for *garbage in, garbage out*. Awesome though it is, SPSS is not a magic oven that can miraculously transform garbage input into *haute cuisine* output. To get useful output, you need properly collected data and carefully considered statistical analysis.

We hope and expect that this book will put you on the road to becoming a fluent and efficient SPSS data analyst. Believe it or not, data analysis is fun, once you get the hang of it. Our usability trials, referred to in the preface, suggest that our *Crash Course in SPSS for Windows* should not take more than about 10 hours and that most people find it quite enjoyable. Happy computing!

