Book Review

SSD FOR R: AN R PACKAGE FOR ANALYZING SINGLE-SUBJECT DATA

Book details:

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This book is addressed to scholars who would like to employ single-subject analysis with the use of statistical software despite not being skilled in either statistics or data analysis. The authors' aim was to introduce readers to the various functions available in SSD for R, and to step them through the analytical process based on the characteristics of the collected data. Nevertheless, the book cannot be considered a simple handbook on the SSD package, for it helps the reader to understand the functions that it employs in relation to any single-subject analysis.

The book is organised into seven chapters (Getting your data into SSD for R; Overview of SSD for R function; Analyzing baseline phase data; Comparing baseline and intervention phases; Statistical tests of type error I and Analyzing group data and building support for practice), one long introduction and four pertinent appendices (Entering and editing data directly in R; SSD for R quick function guide; Decision trees and a bibliography of additional resources). In the preface, there is a quick but exhaustive historical treatment of single-subject research. The need to jointly utilise statistical and graphical tools is explained, and the peculiarities in the utilisation of the existing software by scholars who are not statisticians are highlighted.

Each chapter starts with a section that introduces the reader to the topics therein and ends with a summary. In chapters one and two, a lay reader can learn the basic concepts of a data structure and the first commands of the R software. In the third to sixth chapters, the reader is invited to learn the proper statistical tools

for data analysis and to test them with examples using the functions of the SSD package. The visual tools to study the stability of a single baseline and its statistical parameters are introduced in chapter three along with the package functions that allow one to plot a control chart or a box-plot and the evaluate trends and autocorrelation functions. Chapter four presents the statistical techniques used to compare baseline and intervention phases, and chapter five outlines the statistical tests on the parameters used in the comparisons. In chapter six, the graphics and statistics introduced for single-subject data are proposed for the processing of group data. If the data are collected in a proper way, as shown in chapter six, all the package functions can be used to analyse group data. The authors state that chapter seven 'was written to give you the opportunity to consider the context of your organization along with what may be required to include practice research into an rganization's core activities'. A simple and clear guide to the SSD package functions, grouped according to usage, is presented in Appendix B.

In each chapter, the proper statistical tools for the problem at hand are introduced by means of simple examples; the corresponding SSD package functions are explained, and their outputs are analysed, both from the point of view of the software used and the data analysis. For each topic, the results of the analysis of various examples are presented, and a comparison of the results is used to help readers to conduct single-subject research at the data collection, analysis and interpretation phases. The data files used in the examples can be downloaded from the authors' website, www.ssdanalysis.

The book can be useful to two categories of scholars. It may introduce the most common tools of visual and statistical analysis to non-experts of single-subject analysis and may also supply those involved in social work, psychology, rehabilitation and the like with a guide to analysing their data with the R software and the SSD package. The book is a good example of how statistics for social research purposes can be popularised in a clear and accessible manner.

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