brief contents

PART 1 GETTING STARTED 1

1 ▪ Introduction to R 3
2 ▪ Creating a dataset 20
3 ▪ Getting started with graphs 46
4 ▪ Basic data management 71
5 ▪ Advanced data management 89

PART 2 BASIC METHODS 115

6 ▪ Basic graphs 117
7 ▪ Basic statistics 137

PART 3 INTERMEDIATE METHODS 165

8 ▪ Regression 167
9 ▪ Analysis of variance 212
10 ▪ Power analysis 239
11 ▪ Intermediate graphs 255
12 ▪ Resampling statistics and bootstrapping 279

PART 4 ADVANCED METHODS 299

13 ▪ Generalized linear models 301
14 ▪ Principal components and factor analysis 319
15 ▪ Time series 340
16 ▪ Cluster analysis 369
17 ▪ Classification 389
18 ▪ Advanced methods for missing data 414

PART 5 EXPANDING YOUR SKILLS 435

19 ▪ Advanced graphics with ggplot2 437
20 ▪ Advanced programming 463
21 ▪ Creating a package 491
22 ▪ Creating dynamic reports 513
23 ▪ Advanced graphics with the lattice package *online only*