Contents

List of Figures
List of Tables
List of Contributors
Acknowledgments

PART I CLINICAL PSYCHOLOGICAL SCIENCE: AN EVOLVING FIELD

1 Trends in the Evolving Discipline of Clinical Psychology
   Aidan G. C. Wright and Michael N. Hallquist
   page 3

2 Defining and Redefining Phenotypes: Operational Definitions as Open Concepts
   Peter Zachar, Eric Turkheimer, and Kenneth F. Schaffner
   5

3 Building Models of Psychopathology Spanning Multiple Modalities of Measurement
   Noah C. Venables and Christopher J. Patrick
   18

PART II OBSERVATIONAL APPROACHES

4 The Conceptual Foundations of Descriptive Psychopathology
   Trevor F. Williams and Leonard J. Simms
   33

5 Survey and Interview Methods
   Douglas B. Samuel, Meredith A. Bucher, and Takakuni Suzuki
   45

6 Psychometrics in Clinical Psychological Research
   R. Michael Furr
   54

7 Latent Variable Models in Clinical Psychology
   Aidan G. C. Wright
   66

8 Psychiatric Epidemiology Methods
   David S. Fink, Hyunsik Kim, and Nicholas R. Eaton
   80

PART III EXPERIMENTAL AND BIOLOGICAL APPROACHES

9 Conceptual Foundations of Experimental Psychopathology: Historical Context, Scientific Posture, and Reflections on Substantive and Method Matters
   Mark F. Lenzenweger
   93
Cynthia Huang-Pollock, Zvi Shapiro, Hilary Galloway-Long, and Jason Feldman

11 Peripheral Psychophysiology ..................................................... 118
Amanda Levinson and Greg Hajcak

12 Behavioral and Molecular Genetics ............................................ 136
Gretchen Saunders and Matt McGue

13 Concepts and Principles of Clinical Functional Magnetic Resonance Imaging ......................................................... 153
Avram J. Holmes and Angus W. MacDonald III

14 Clinical Computational Neuroscience ...................................... 168
Michael N. Hallquist and Alexandre Y. Dombrovski

PART IV DEVELOPMENTAL PSYCHOPATHOLOGY AND LONGITUDINAL METHODS

15 Studying Psychopathology in Early Life: Foundations of Developmental Psychopathology ..................................................... 193
Dante Cicchetti

16 Adolescence and Puberty: Understanding the Emergence of Psychopathology ......................................................... 205
Sarah D. Lynne, Allison S. Metz, and Julia A. Graber

17 Quantitative Genetic Research Strategies for Studying Gene-Environment Interplay in the Development of Child and Adolescent Psychopathology ..................................................... 219
Isabell Brikell and Henrik Larsson

18 Designing and Managing Longitudinal Studies ......................... 230
M. Brent Donnellan and Deborah A. Kashy

19 Measurement and Comorbidity Models for Longitudinal Data ........ 241
Phillip K. Wood

PART V INTERVENTION APPROACHES

20 The Multiphase Optimization Strategy for Developing and Evaluating Behavioral Interventions ........................................... 267
Kate Guastaferro, Chad E. Shenk, and Linda M. Collins

21 Future Directions in Developing and Evaluating Psychological Interventions ................................................................. 279
Shannon Sauer-Zavala

22 Health Psychology and Behavioral Medicine: Methodological Issues in the Study of Psychosocial Influences on Disease ................. 287
Timothy W. Smith

PART VI INTENSIVE LONGITUDINAL DESIGNS

23 Ambulatory Assessment ............................................................. 301
Stuart G. Ferguson, Tina Jahnle, Katherine Elliston, and Saul Shiffman

24 Modeling Intensive Longitudinal Data ...................................... 312
Marlies Houben, Eva Ceulemans, and Peter Kuppens
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Modeling the Individual: Bridging Nomothetic and Idiographic Levels of Analysis</td>
<td>Peter C. M. Molenaar and Adriene M. Beltz</td>
<td>327</td>
</tr>
<tr>
<td>27</td>
<td>Models for Dyadic Data</td>
<td>Eduardo Estrada, David A. Sbarra, and Emilio Ferrer</td>
<td>350</td>
</tr>
<tr>
<td></td>
<td><strong>PART VII GENERAL ANALYTIC CONSIDERATIONS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Reproducibility in Clinical Psychology</td>
<td>Christopher J. Hopwood and Simine Vazire</td>
<td>371</td>
</tr>
<tr>
<td>29</td>
<td>Meta-Analysis: Integration of Empirical Findings through Quantitative Modeling</td>
<td>Kristian E. Markon</td>
<td>383</td>
</tr>
<tr>
<td>30</td>
<td>Mediation, Moderation, and Conditional Process Analysis: Regression-Based Approaches for Clinical Research</td>
<td>Nicholas J. Rockwood and Andrew F. Hayes</td>
<td>396</td>
</tr>
<tr>
<td>31</td>
<td>Statistical Inference for Causal Effects in Clinical Psychology: Fundamental Concepts and Analytical Approaches</td>
<td>Reagan Mozer, Donald B. Rubin, and Jose Zubizarreta</td>
<td>415</td>
</tr>
<tr>
<td>33</td>
<td>Missing Data Analyses</td>
<td>Amanda N. Baraldi and Craig K. Enders</td>
<td>444</td>
</tr>
<tr>
<td>34</td>
<td>Machine Learning for Clinical Psychology and Clinical Neuroscience</td>
<td>Marc N. Coutanche and Lauren S. Hallion</td>
<td>467</td>
</tr>
<tr>
<td></td>
<td><strong>Index</strong></td>
<td></td>
<td>483</td>
</tr>
</tbody>
</table>