Contents

Preface xiii

PART An Overview

SELF-ASSESSMENT 36

REFERENCES 36

1 Psychological Testing and Assessment 1
TESTING AND ASSESSMENT 1
Psychological Testing and Assessment Defined 2
THE TOOLS OF PSYCHOLOGICAL ASSESSMENT 8
The Test 8
The Interview 10
The Portfolio 12
Case History Data 13
Behavioral Observation 13
Role-Play Tests 14
Computers as Tools 15
Other Tools 18
WHO, WHAT, WHY, HOW, AND WHERE? 18
Who Are the Parties? 19
In What Types of Settings Are Assessments Conducted, and Why? 21
How Are Assessments Conducted? 27
Where to Go for Authoritative Information: Reference Sources 33
CLOSE-UP Behavioral Assessment Using Smartphones 5
MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Alan Ogle 25

2 Historical, Cultural, and Legal/Ethical Considerations 41

EVERYDAY PSYCHOMETRICS Everyday Accommodations 32

A HISTORICAL PERSPECTIVE 41	
Antiquity to the Nineteenth Century 41	
The Twentieth Century 44	
CULTURE AND ASSESSMENT 47	
Evolving Interest in Culture-Related Issues 47	
Some Issues Regarding Culture and Assessment 5	2
Tests and Group Membership 58	
LEGAL AND ETHICAL CONSIDERATIONS 60	
The Concerns of the Public 60	
The Concerns of the Profession 68	
The Rights of Testtakers 74	

CLOSE-UP The Controversial Career of Henry Herbert Goddard 49

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Neil Krishan Aggarwal 56

EVERYDAY PSYCHOMETRICS Life-or-Death Psychological Assessment 71

SELF-ASSESSMENT 79

REFERENCES 80

PART | The Science of Psychological Measurement

3 A Statistics Refresher 85

SCALES OF MEASUREMENT 86

Nominal Scales 88

Ordinal Scales 89

Interval Scales 90

Ratio Scales 91

Measurement Scales in Psychology 91

DESCRIBING DATA 93

Frequency Distributions 93

Measures of Central Tendency 98

Measures of Variability 101

Skewness 105

Kurtosis 105

THE NORMAL CURVE 106

The Area Under the Normal Curve 107

STANDARD SCORES 110

z Scores 110

T Scores 111

Other Standard Scores 111

CORRELATION AND INFERENCE 113

The Concept of Correlation 114

The Pearson r 116

The Spearman Rho 118

Graphic Representations of Correlation 119

Meta-Analysis 123

EVERYDAY PSYCHOMETRICS Consumer (of Graphed Data), Beware! 97

CLOSE-UP The Normal Curve and Psychological Tests 108

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Joni L. Mihura 124

SELF-ASSESSMENT 126

REFERENCES 127

The Standard Error of the Difference Between Two Scores 187 4 Of Tests and Testing 129 CLOSE-UP Psychology's Replicability Crisis 169 CLOSE-UP Psychology's Replicability Crisis 169 CLOSE-UP Psychology's Replicability Crisis 169 CLOSE-UP Psychology S Replicability C

SOME ASSUMPTIONS ABOUT PSYCHOLOGICAL TESTING AND ASSESSMENT 130

Assumption 1: Psychological Traits and States Exist 130

Types of Norms 146

SELF-ASSESSMENT 154

Assumption 2: Psychological Traits and States Can Be Quantified and Measured Assumption 3: Test-Related Behavior Predicts Non-Test-Related Behavior 133 Assumption 4: All Tests Have Limits and Imperfections 133 Assumption 5: Various Sources of Error Are Part of the Assessment Process 134 Assumption 6: Unfair and Biased Assessment Procedures Can Be Identified and Reformed 134 Assumption 7: Testing and Assessment Offer Powerful Benefits to Society 135 WHAT'S A "GOOD TEST"? 136 Reliability 136 Validity 137 Other Considerations NORMS 140 140 Sampling to Develop Norms Types of Norms 146 Fixed Reference Group Scoring Systems 149 Norm-Referenced versus Criterion-Referenced Evaluation 150 Culture and Inference 153 EVERYDAY PSYCHOMETRICS Putting Tests to the Test 138 CLOSE-UP How "Standard" Is Standard in Measurement? 141 MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Steve Julius and Dr. Howard W. Atlas 152 IVICASUTES OF Variability 101 SELF-ASSESSMENT 154 REFERENCES 155 5 Reliability 157 MEASUREMENT ERROR 157 TRUE SCORES VERSUS CONSTRUCT SCORES 158 THE CONCEPT OF RELIABILITY 159 Sources of Error Variance 160 RELIABILITY ESTIMATES 163 Test-Retest Reliability Estimates 163 Parallel-Forms and Alternate-Forms Reliability Estimates 164 Split-Half Reliability Estimates 167 Other Methods of Estimating Internal Consistency 170 Measures of Inter-Scorer Reliability 172 USING AND INTERPRETING A COEFFICIENT OF RELIABILITY 174 The Purpose of the Reliability Coefficient 175 The Nature of the Test 176 The True Score Model of Measurement and Alternatives to It 179 RELIABILITY AND INDIVIDUAL SCORES 183 The Standard Error of Measurement 183 The Standard Error of the Difference Between Two Scores 187 CLOSE-UP Psychology's Replicability Crisis 165 EVERYDAY PSYCHOMETRICS The Importance of the Method Used for Estimating Reliability 173

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Bryce B. Reeve 184

SELF-ASSESSMENT 189 REFERENCES 190

Validity 193

THE CONCEPT OF VALIDITY 193 Face Validity 195 Content Validity 196

CRITERION-RELATED VALIDITY 200

What Is a Criterion? 200 Concurrent Validity 202 Predictive Validity 202

CONSTRUCT VALIDITY 205

Evidence of Construct Validity 206

VALIDITY, BIAS, AND FAIRNESS 211

Test Bias 211 080 et 370 082 zizylanA mail avinaniano Test Fairness 214

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Adam Shoemaker 197

CLOSE-UP The Preliminary Validation of a Measure of Individual Differences in Constructive versus Unconstructive Worry 212

Adjustment of Test Scores by Group Membership: Fairness in Testing **EVERYDAY PSYCHOMETRICS** or Foul Play? 216

CLOSEPHE CHESTING Validating at Test of Asexuanty

SELF-ASSESSMENT 218 REFERENCES 218

Utility 221

WHAT IS TEST UTILITY? 222

Factors That Affect a Test's Utility 222

UTILITY ANALYSIS

What Is a Utility Analysis? 227

How Is a Utility Analysis Conducted? 228

Some Practical Considerations 242

METHODS FOR SETTING CUT SCORES 245

The Angoff Method 246

The Known Groups Method 246

IRT-Based Methods 247

Other Methods 248

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Delphine Courvoisier 225

CLOSE-UP Utility Analysis: An Illustration 229

EVERYDAY PSYCHOMETRICS The Utility of Police Use of Body Cameras 239 The Flynn Effective 340 Maintelance ASSESSA WILLAMOSSAG

SELF-ASSESSMENT 248

REFERENCES 249

Test Development 251

TEST CONCEPTUALIZATION 252

Some Preliminary Questions 254

CLOSE-UP Factor Analysis 302

MEASURING INTELLIGENCE: 312

Pilot Work 256

TEST CONSTRUCTION 256

Scaling 256

Writing Items 261
Scoring Items 268

TEST TRYOUT 268

What Is a Good Item? 269

ITEM ANALYSIS 270

The Item-Difficulty Index 270

The Item-Reliability Index 271

The Item-Validity Index 272

The Item-Discrimination Index 272

Item-Characteristic Curves 275

Other Considerations in Item Analysis 278

Qualitative Item Analysis 280

TEST REVISION 282

Test Revision as a Stage in New Test Development

Test Revision in the Life Cycle of an Existing Test 284

The Use of IRT in Building and Revising Tests 288

INSTRUCTOR-MADE TESTS FOR IN-CLASS USE 291

Addressing Concerns About Classroom Tests 291

CLOSE-UP Creating and Validating a Test of Asexuality 253

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Scott Birkeland 276

EVERYDAY PSYCHOMETRICS Adapting Tools of Assessment for Use with Specific Cultural Groups 283

SELF-ASSESSMENT 293

REFERENCES 294

The Assessment of Intelligence

Test-Rerest Reliability Estimates 163chc anoisersbiano Isoiros 5mo? Intelligence and Its Measurement 297

WHAT IS INTELLIGENCE? 297

Perspectives on Intelligence 299

MEASURING INTELLIGENCE 312

Some Tasks Used to Measure Intelligence 312

Some Tests Used to Measure Intelligence 314

ISSUES IN THE ASSESSMENT OF INTELLIGENCE 334

Culture and Measured Intelligence 335

The Flynn Effect 340

The Construct Validity of Tests of Intelligence 341

A PERSPECTIVE 341

CLOSE-UP Factor Analysis 302

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Rebecca Anderson 315

EVERYDAY PSYCHOMETRICS The Armed Services Vocational Aptitude Battery (ASVAB): A Test You Can Take 330

Contents

viii

10 Assessment for Education 349

THE ROLE OF TESTING AND ASSESSMENT IN EDUCATION 349
THE CASE FOR AND AGAINST EDUCATIONAL TESTING IN THE SCHOOLS 350
THE COMMON CORE STATE STANDARDS 351

Response to Intervention (RtI) 352

Dynamic Assessment 358

ACHIEVEMENT TESTS 360

Measures of General Achievement 360

Measures of Achievement in Specific Subject Areas 361

APTITUDE TESTS 363

The Preschool Level 365

The Elementary-School Level 370

The Secondary-School Level 372

The College Level and Beyond 373

DIAGNOSTIC TESTS 376

Reading Tests 377

Math Tests 378

PSYCHOEDUCATIONAL TEST BATTERIES 378

The Kaufman Assessment Battery for Children, Second Edition Normative Update (KABC-II NU) 378

12 Personality Assessment Me

The Woodcock-Johnson IV (WJ IV) 380

OTHER TOOLS OF ASSESSMENT IN EDUCATIONAL SETTINGS 381

Performance, Portfolio, and Authentic Assessment 381

Peer Appraisal Techniques 383

Measuring Study Habits, Interests, and Attitudes 384

EVERYDAY PSYCHOMETRICS The Common Core Controversy 353

MEET AN ASSESSMENT PROFESSIONAL Meet Eliane Keyes, M.A. 357

CLOSE-UP Educational Assessment: An Eastern Perspective 371

SELF-ASSESSMENT 385

REFERENCES 385

PART IV The Assessment of Personality

11 Personality Assessment: An Overview 390

PERSONALITY AND PERSONALITY ASSESSMENT 390

Personality 390

Personality Assessment 391

Traits, Types, and States 391

PERSONALITY ASSESSMENT: SOME BASIC QUESTIONS 395

Who? 396

What? 402

Where? 404

How? 404

DEVELOPING INSTRUMENTS TO ASSESS PERSONALITY 413

Logic and Reason 413

Theory 416

Data Reduction Methods 416

Criterion Groups 419

PERSONALITY ASSESSMENT AND CULTURE 431

Acculturation and Related Considerations 431

CLOSE-UP The Personality of Gorillas 397

EVERYDAY PSYCHOMETRICS Some Common Item Formats 408

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Rick Malone 414

SELF-ASSESSMENT 435

REFERENCES 435

12 Personality Assessment Methods 444

OBJECTIVE METHODS 444

How Objective Are Objective Methods of Personality Assessment? 445

tions in Item Analysis 278 Coc level looriseers adT

PROJECTIVE METHODS 445

Inkblots as Projective Stimuli 447

Pictures as Projective Stimuli 453

Words as Projective Stimuli 461

Sounds as Projective Stimuli 464

The Production of Figure Drawings 465

Projective Methods in Perspective 468

BEHAVIORAL ASSESSMENT METHODS 472

The Who, What, When, Where, Why, and How of It 474

Varieties of Behavioral Assessment 478

Issues in Behavioral Assessment 485

A PERSPECTIVE 487

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Monica Webb Hooper 476

EVERYDAY PSYCHOMETRICS Confessions of a Behavior Rater 479

CLOSE-UP General (g) and Specific (s) Factors in the Diagnosis of Personality

Disorders 488

SELF-ASSESSMENT 490

REFERENCES 490

PART V Testing and Assessment in Action

13 Clinical and Counseling Assessment 499

AN OVERVIEW 499

The Diagnosis of Mental Disorders 501

	The Interview in Clinical Assessment 504
	Case History Data 511
	Psychological Tests 511
C	ULTURALLY INFORMED PSYCHOLOGICAL ASSESSMENT 513
	Cultural Aspects of the Interview 515
S	PECIAL APPLICATIONS OF CLINICAL MEASURES 518
	The Assessment of Addiction and Substance Abuse 518

Forensic Psychological Assessment 520

Diagnosis and evaluation of emotional injury 526 design the arms of service

Profiling 526

Custody Evaluations 527

CHILD ABUSE AND NEGLECT

Elder Abuse and Neglect 532

Suicide Assessment 534

THE PSYCHOLOGICAL REPORT

The Barnum Effect 535

Clinical Versus Mechanical Prediction 537

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Stephen Finn 507

CLOSE-UP PTSD in Returning Veterans and Military Culture 516

EVERYDAY PSYCHOMETRICS Measuring Financial Competency 524

SELF-ASSESSMENT 539

REFERENCES 540

14 Neuropsychological Assessment 550

THE NERVOUS SYSTEM AND BEHAVIOR 550

Neurological Damage and the Concept of Organicity 551

THE NEUROPSYCHOLOGICAL EVALUATION 554

When a Neuropsychological Evaluation Is Indicated 554

General Elements of a Neuropsychological Evaluation 556

The Physical Examination 559

NEUROPSYCHOLOGICAL TESTS 565

Tests of General Intellectual Ability 565

Tests to Measure the Ability to Abstract 567

Tests of Executive Function 568

Tests of Perceptual, Motor, and Perceptual-Motor Function 572

Tests of Verbal Functioning 573

Tests of Memory 573

Neuropsychological Test Batteries 576

OTHER TOOLS OF NEUROPSYCHOLOGICAL ASSESSMENT 580

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Jeanne P. Ryan 566

EVERYDAY PSYCHOMETRICS Medical Diagnostic Aids and Neuropsychological Assessment 581

CLOSE-UP A Typical In-Office Dementia Evaluation 583

SELF-ASSESSMENT 584

REFERENCES 584

Interviews, 603

Assessment, Careers, and Business 590

CAREER CHOICE AND CAREER TRANSITION

The Structure of Vocational Interests 590

Measures of Interest 592

Measures of Ability and Aptitude 594

Measures of Personality 596 The Assessment of Addiction and Substance-

Other Measures

SCREENING, SELECTION, CLASSIFICATION, AND PLACEMENT 601

The Résumé and the Letter of Application 602

The Application Form 602

Letters of Recommendation 602

Interviews 603

Portfolio Assessment 604

Performance Tests 604

Physical Tests 609

COGNITIVE ABILITY, PRODUCTIVITY, AND MOTIVATION MEASURES 611

Measures of Cognitive Ability 611

Productivity 612

Motivation 613

JOB SATISFACTION, ORGANIZATIONAL COMMITMENT,

AND ORGANIZATIONAL CULTURE 617

Job Satisfaction 617

Organizational Commitment 618

Organizational Culture 619

OTHER TOOLS OF ASSESSMENT FOR BUSINESS APPLICATIONS 619

Consumer Psychology 620

The Measurement of Attitudes 621

Surveys 623

General Elements of a Neuropsychological Evaluation Motivation Research Methods 625

EVERYDAY PSYCHOMETRICS The Selection of Personnel for the Office of Strategic Services (OSS):

OTHER TOOLS OF NEUROPSYCHOLOGICAL ASSESSMENT.

Neuropsychological Test Batteries 575

Assessment and Psychometrics in Action 606

MEET AN ASSESSMENT PROFESSIONAL Meet Dr. Jed Yalof 620 Tests to Measureding Ability 10 Abstract a 25 of the same)

SELF-ASSESSMENT 629

REFERENCES 629 Tests of Perceptual, Motor, and Perceptual-Motor Functions8572 ambrosid

Name Index I-1

Glossary/Index I-22

Timeline T-1