

# MMPI<sup>®</sup> 3

Minnesota Multiphasic Personality Inventory<sup>®</sup>-3

## TECHNICAL Manual

Yossef S. Ben-Porath  
Auke Tellegen

With Contributions by  
Martin Sellbom  
Anthony M. Tarescavage  
and

Jaime L. Anderson  
Paul A. Arbisi  
Andrew R. Block  
Bruce M. Cappel  
David M. Corey  
Roger O. Gervais  
Allan R. Harkness  
Tayla T. C. Lee  
John L. McNulty  
Dustin B. Wygant



# Technical Manual

---

Yossef S. Ben-Porath  
Auke Tellegen

With Contributions by  
Martin Sellbom  
Anthony M. Tarescavage

and

Jaime L. Anderson  
Paul A. Arbisi  
Andrew R. Block  
Bruce M. Cappo  
David M. Corey

Roger O. Gervais  
Allan R. Harkness  
Tayla T. C. Lee  
John L. McNulty  
Dustin B. Wygant



For inquiries or reordering:  
800.627.7271  
[www.PearsonAssessments.com](http://www.PearsonAssessments.com)

## Minnesota Multiphasic Personality Inventory®-3 (MMPI®-3) Technical Manual

Copyright © 2020 by the Regents of the University of Minnesota. All rights reserved. Distributed exclusively under license from the University of Minnesota by NCS Pearson, Inc., P.O. Box 1416, Minneapolis, MN 55440. 800.627.7271 [www.PearsonAssessments.com](http://www.PearsonAssessments.com)

**Warning:** Professional use only; resale not permitted. No part of this publication may be copied, reproduced, modified, or transmitted by any means, electronic or mechanical, without written permission from the University of Minnesota Press, 111 Third Avenue South, Suite 290, Minneapolis, MN 55401-2520 (612-301-4821).

The following are registered trademarks of the Regents of the University of Minnesota: **MMPI**, **MMPI-2-RF**, **MMPI-A-RF**, **Minnesota Multiphasic Personality Inventory**, and **Minnesota Multiphasic Personality Inventory-2-Restructured Form**. The following are unregistered, common law trademarks of the Regents of the University of Minnesota: **MMPI-2**, **MMPI-3**, **MMPI-A**, **Minnesota Multiphasic Personality Inventory-2**, **Minnesota Multiphasic Personality Inventory-3**, **Minnesota Multiphasic Personality Inventory-Adolescent**, **Minnesota Multiphasic Personality Inventory-Adolescent-Restructured Form**, **Inventario Multifásico de la Personalidad Minnesota**, **Inventaire de personnalité multiphasique du Minnesota**, and **The Minnesota Report**. **Pearson**, **BHI**, and **Q** are trademarks, in the U.S. and/or other countries, of Pearson PLC or its affiliates. **California Psychological Inventory** and **CPI** are trademarks of CPP, Inc. **Facebook** is a trademark of Facebook. **Google** is a trademark of Google, Inc. **DAPS**, **Detailed Assessment of Posttraumatic Stress**, and **Personality Assessment Inventory** are trademarks and **PAI** is a registered trademark of PAR, Inc.

NCS Pearson, Inc. 5601 Green Valley Drive Bloomington, MN 55437

Produced in the United States of America.



# Contents

<b>Publisher’s Note</b>	. . . . .	xxix
<b>Acknowledgments</b>	. . . . .	xxxi
<b>Preface</b>	. . . . .	xxxiii
<b>Chapter 1: Historical Foundations and Evolution of the MMPI</b>	. . . . .	1
The Original MMPI	. . . . .	1
Initial Development	. . . . .	1
Evolution of the MMPI	. . . . .	2
Clinical Scale Code Types	. . . . .	2
Content-Based Assessment	. . . . .	2
Validity Scales	. . . . .	2
The MMPI-2	. . . . .	3
Rationale for the Revision	. . . . .	3
Methods of the Revision	. . . . .	4
Outcome of the Revision	. . . . .	4
MMPI-2 Booklet	. . . . .	4
MMPI-2 Norms	. . . . .	4
MMPI-2 Scales	. . . . .	5
Subsequent Developments	. . . . .	5
The MMPI-2 RC Scales	. . . . .	6
Why Restructure the Clinical Scales?	. . . . .	6
Development of the RC Scales	. . . . .	7
Psychometric Findings With the RC Scales	. . . . .	8
The MMPI-2-RF	. . . . .	8
Validity Scales	. . . . .	9
Inconsistent Responding Indicators	. . . . .	9
Over-Reporting Indicators	. . . . .	9

Under-Reporting Indicators . . . . .	13
Substantive Scales . . . . .	13
H-O Scales . . . . .	13
SP and Interest Scales . . . . .	14
PSY-5 Scales . . . . .	15
Norms . . . . .	16

## Chapter 2: Test Development

Preliminary Research . . . . .	19
Response Format . . . . .	19
Item Modification . . . . .	20
Expanding Test Content . . . . .	20
Development Samples and Instruments . . . . .	20
Samples . . . . .	20
Instruments . . . . .	22
MMPI-2-RF-Expanded (MMPI-2-RF-EX) . . . . .	22
Initial Validation Data . . . . .	22
Scale Development . . . . .	22
Substantive Scales . . . . .	23
RC and SP Scales . . . . .	23
New SP Scales . . . . .	23
H-O and PSY-5 Scales . . . . .	24
Validity Scales . . . . .	24
Inconsistent Responding Indicators . . . . .	24
Over-Reporting Scales . . . . .	25
Under-Reporting Scales . . . . .	26
The MMPI-3 Scales . . . . .	27
The MMPI-3 Norms . . . . .	33
Data Collection . . . . .	33
Assembling the English-Language Normative Sample . . . . .	35
Composition of the MMPI-3 Normative Sample . . . . .	36
Comparison of the MMPI-2-RF and MMPI-3 Normative Samples . . . . .	36
Validity Scales . . . . .	37
Substantive Scales . . . . .	37

<b>Chapter 3: Psychometric Properties and Empirical Correlates</b> . . . . .	43
Reliability . . . . .	46
Validity Scales . . . . .	48
Substantive Scales . . . . .	49
Validity . . . . .	49
Validity Scales . . . . .	49
Inconsistent Responding Indicators . . . . .	49
Over-Reporting Indicators . . . . .	50
Under-Reporting Indicators . . . . .	53
Substantive Scales . . . . .	54
External Correlates . . . . .	54
Community Mental Health Center Outpatient Sample . . . . .	54
Private Practice Outpatient Sample . . . . .	55
Spine Surgery/Spinal Cord Stimulator Candidate Sample . . . . .	55
Disability Claimant Sample . . . . .	55
Pacific Northwest Police Candidate Sample . . . . .	55
Prison Inmate Sample . . . . .	55
College Validation Sample . . . . .	56
MMPI-3/MMPI-2-RF External Correlate Comparisons . . . . .	56
Intercorrelations . . . . .	56
MMPI-3/MMPI-2-RF Substantive Scale Correlations . . . . .	57
Summary . . . . .	57
<b>References</b> . . . . .	95
<b>Appendixes</b>	
A. Measures Used in MMPI-3 Development and Validation . . . . .	103
Figure A-1. Biographical Information Collected With the MMPI-2-RF-EX . . . . .	104
Table A-1. College Validation Sample Measures . . . . .	106
B. Organization of the MMPI-3 Externalizing and Interpersonal Scales: Assessment of Disinhibited and Antagonistic Externalizing Psychopathology . . . . .	111
B-1. Correlations Between MMPI-2-RF Externalizing Scales and SCID-5 Externalizing Disorder Symptom Counts and Psychopathy Scales in the Community Sample . . . . .	114
B-2. Correlations Between MMPI-2-RF Externalizing Scales and Personality Constructs in Two University Samples . . . . .	115

C. Normative Sample ( <i>N</i> = 1,620) Biographical Data Summary . . . . .	119
C-1. Biographical Data: Are you currently enrolled in or attending school? ( <i>N</i> = 1,620). . . . .	121
C-2. Biographical Data: Father’s highest grade (year of education) completed. . . . .	121
C-3. Biographical Data: Mother’s highest grade (year of education) completed. . . . .	121
C-4. Biographical Data: Employment Status (mark all that apply) . . . . .	122
C-5. Biographical Data: If not now employed, have you ever held a regular full-time job? ( <i>N</i> = 596) . . . . .	122
C-6. Biographical Data: If not now employed, are you currently looking for work? ( <i>N</i> = 593) . . . . .	122
C-7. Biographical Data: What is your usual occupation? (If now retired, disabled, unemployed, or on leave, what was the previous occupation?) . . . . .	123
C-8. Biographical Data: Father’s usual occupation. (If now retired, disabled, unemployed, or on leave, what was the previous occupation?) . . . . .	123
C-9. Biographical Data: Mother’s usual occupation. (If now retired, disabled, unemployed, or on leave, what was the previous occupation?) . . . . .	124
C-10. Biographical Data: How are you paid? . . . . .	124
C-11. Biographical Data: Total Annual Family Income . . . . .	125
C-12. Biographical Data: What is your native language? . . . . .	125
C-13. Biographical Data: From what part of the world did your ancestors come (mark all that apply)? . . . . .	125
C-14. Biographical Data: Where have you lived most of your life? . . . . .	126
C-15. Biographical Data: What is your present dwelling? . . . . .	126
C-16. Biographical Data: Have you ever been given a ticket for speeding?. . . . .	126
C-17. Biographical Data: Have you ever been arrested for anything other than a motor vehicle violation? . . . . .	126
C-18. Biographical Data: Are you now taking any medicine prescribed by a doctor? . . . . .	126
C-19. Biographical Data: Do you have a physical disability? . . . . .	126
C-20. Biographical Data: Have you had an operation or major physical illness in the last year? . . . . .	126
C-21. Biographical Data: Have you ever been treated by a psychologist or psychiatrist for a mental health problem? . . . . .	126
C-22. Biographical Data: Are you now in psychological or psychiatric treatment? . . . . .	127
C-23. Biographical Data: Have you ever been hospitalized for mental health problems? . . . . .	127
C-24. Biographical Data: Have you ever been in treatment for drug or alcohol problems? . . . . .	127
D. External Correlates Tables . . . . .	129
D-1. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample—Men ( <i>N</i> = 116) . . . . .	130

D-2.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample—Men ( <i>N</i> = 116) . . . . .	131
D-3.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample—Men ( <i>N</i> = 116) . . . . .	132
D-4.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample—Men ( <i>N</i> = 116) . . . . .	133
D-5.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample—Women ( <i>N</i> = 184) . . . . .	134
D-6.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample—Women ( <i>N</i> = 184) . . . . .	135
D-7.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample—Women ( <i>N</i> = 184) . . . . .	136
D-8.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample—Women ( <i>N</i> = 184) . . . . .	137
D-9.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample—Men ( <i>N</i> = 70–116) . . . . .	138
D-10.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample—Men ( <i>N</i> = 70–116) . . . . .	139
D-11.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample—Men ( <i>N</i> = 70–116) . . . . .	140
D-12.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample—Men ( <i>N</i> = 70–116) . . . . .	141
D-13.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample—Women ( <i>N</i> = 95–180) . . . . .	142
D-14.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample—Women ( <i>N</i> = 95–180) . . . . .	143
D-15.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample—Women ( <i>N</i> = 95–180) . . . . .	144



D-16.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Ratings on Patient Description Form—Intake Version—Outpatient, Community Mental Health Center Sample—Women ( <i>N</i> = 95–180)	145
D-17.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample—Men ( <i>N</i> = 85–122)	146
D-18.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample—Men ( <i>N</i> = 85–122)	147
D-19.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample—Men ( <i>N</i> = 85–122)	148
D-20.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample—Men ( <i>N</i> = 85–122)	149
D-21.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample—Women ( <i>N</i> = 93–137)	150
D-22.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample—Women ( <i>N</i> = 93–137)	151
D-23.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample—Women ( <i>N</i> = 93–137)	152
D-24.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample—Women ( <i>N</i> = 93–137)	153
D-25.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample—Men ( <i>N</i> = 267)	154
D-26.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample—Men ( <i>N</i> = 267)	154
D-27.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample—Men ( <i>N</i> = 267)	155
D-28.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample—Men ( <i>N</i> = 267)	155
D-29.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample—Women ( <i>N</i> = 284)	156

D-30.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample—Women ( <i>N</i> = 284)	156
D-31.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample—Women ( <i>N</i> = 284)	157
D-32.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample—Women ( <i>N</i> = 284)	157
D-33.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 185)	158
D-34.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 185)	158
D-35.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 185)	159
D-36.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 185)	159
D-37.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 150)	160
D-38.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 150)	160
D-39.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 150)	161
D-40.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 150)	161
D-41.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 185)	162
D-42.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 185)	163
D-43.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 185)	164

D-44.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 185)	165
D-45.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 150)	166
D-46.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 150)	167
D-47.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 150)	168
D-48.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 150)	169
D-49.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample—Men ( <i>N</i> = 224)	170
D-50.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample—Men ( <i>N</i> = 224)	170
D-51.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample—Men ( <i>N</i> = 224)	171
D-52.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample—Men ( <i>N</i> = 224)	171
D-53.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample—Women ( <i>N</i> = 176)	172
D-54.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample—Women ( <i>N</i> = 176)	172
D-55.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample—Women ( <i>N</i> = 176)	173
D-56.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample—Women ( <i>N</i> = 176)	173
D-57.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 188)	174
D-58.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 188)	174

D-59.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 188)	175
D-60.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 188)	175
D-61.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 154)	176
D-62.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 154)	176
D-63.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 154)	177
D-64.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 154)	177
D-65.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 153)	178
D-66.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 153)	179
D-67.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 153)	180
D-68.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 153)	181
D-69.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 132)	182
D-70.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 132)	183
D-71.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 132)	184
D-72.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 132)	185

D-73.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 153)	186
D-74.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 153)	187
D-75.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 153)	188
D-76.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 153)	189
D-77.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 132)	190
D-78.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 132)	191
D-79.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 132)	192
D-80.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 132)	193
D-81.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 224)	194
D-82.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 224)	194
D-83.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 224)	195
D-84.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample—Men ( <i>N</i> = 224)	195
D-85.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 176)	196

D-86.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 176).	196
D-87.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 176).	197
D-88.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample—Women ( <i>N</i> = 176)	197
D-89.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 351–472)	198
D-90.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 351–472)	199
D-91.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 351–472)	200
D-92.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 351–472)	201
D-93.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample—Women ( <i>N</i> = 50–74)	202
D-94.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample—Women ( <i>N</i> = 50–74).	203
D-95.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample—Women ( <i>N</i> = 50–74).	204
D-96.	Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample—Women ( <i>N</i> = 50–74).	205
D-97.	Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Internalizing Dysfunction—College Validation Sample—Men ( <i>N</i> = 56–233)	206
D-98.	Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Internalizing Dysfunction—College Validation Sample—Men ( <i>N</i> = 56–233)	208
D-99.	Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Measures of Internalizing Dysfunction—College Validation Sample—Men ( <i>N</i> = 56–233)	210

D-100. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Internalizing Dysfunction—College Validation Sample—Men (N = 56–233) . . . . .	212
D-101. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Internalizing Dysfunction—College Validation Sample—Women (N = 160–643) . . . . .	214
D-102. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Internalizing Dysfunction—College Validation Sample—Women (N = 160–643) . . . . .	216
D-103. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Measures of Internalizing Dysfunction—College Validation Sample—Women (N = 160–643) . . . . .	218
D-104. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Internalizing Dysfunction—College Validation Sample—Women (N = 160–643) . . . . .	220
D-105. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Thought Dysfunction—College Validation Sample—Men (N = 62–230) . . . . .	222
D-106. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Thought Dysfunction—College Validation Sample—Men (N = 62–230) . . . . .	222
D-107. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Measures of Thought Dysfunction—College Validation Sample—Men (N = 62–230) . . . . .	223
D-108. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Thought Dysfunction—College Validation Sample—Men (N = 62–230) . . . . .	223
D-109. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Thought Dysfunction—College Validation Sample—Women (N = 187–641) . . . . .	224
D-110. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Thought Dysfunction—College Validation Sample—Women (N = 187–641) . . . . .	224
D-111. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Measures of Thought Dysfunction—College Validation Sample—Women (N = 187–641) . . . . .	225
D-112. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Thought Dysfunction—College Validation Sample—Women (N = 187–641) . . . . .	225
D-113. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Externalizing Dysfunction—College Validation Sample—Men (N = 65–231) . . . . .	226
D-114. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Externalizing Dysfunction—College Validation Sample—Men (N = 65–231) . . . . .	227

D-115. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Measures of Externalizing Dysfunction—College Validation Sample—Men (N = 65–231) . . . . .	228
D-116. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Externalizing Dysfunction—College Validation Sample—Men (N = 65–231) . . . . .	229
D-117. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Externalizing Dysfunction—College Validation Sample—Women (N = 187–641) . . . . .	230
D-118. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Externalizing Dysfunction—College Validation Sample—Women (N = 187–641) . . . . .	231
D-119. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Measures of Externalizing Dysfunction—College Validation Sample—Women (N = 187–641) . . . . .	232
D-120. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Externalizing Dysfunction—College Validation Sample—Women (N = 187–641) . . . . .	233
D-121. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Various Measures of Somatic/Cognitive Dysfunction—College Validation Sample—Men (N = 66–296) . . . . .	234
D-122. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Various Measures of Somatic/Cognitive Dysfunction—College Validation Sample—Men (N = 66–296) . . . . .	235
D-123. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Various Measures of Somatic/Cognitive Dysfunction—College Validation Sample—Men (N = 66–296) . . . . .	236
D-124. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Various Measures of Somatic/Cognitive Dysfunction—College Validation Sample—Men (N = 66–296) . . . . .	237
D-125. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample—Women (N = 185–846) . . . . .	238
D-126. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample—Women (N = 185–846) . . . . .	239
D-127. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample—Women (N = 185–846) . . . . .	240
D-128. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample—Women (N = 185–846) . . . . .	241



D-129. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample—Men ( <i>N</i> = 68) . . . . .	242
D-130. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample—Men ( <i>N</i> = 68). . . . .	243
D-131. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample—Men ( <i>N</i> = 68). . . . .	244
D-132. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample—Men ( <i>N</i> = 68). . . . .	245
D-133. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample—Women ( <i>N</i> = 187). . . . .	246
D-134. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample—Women ( <i>N</i> = 187) . . . . .	247
D-135. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample—Women ( <i>N</i> = 187) . . . . .	248
D-136. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample—Women ( <i>N</i> = 187) . . . . .	249
D-137. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Narcissism—College Validation Sample—Men ( <i>N</i> = 233) . . . . .	250
D-138. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Narcissism—College Validation Sample—Men ( <i>N</i> = 233) . . . . .	251
D-139. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Measures of Narcissism—College Validation Sample—Men ( <i>N</i> = 233) . . . . .	252
D-140. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Narcissism—College Validation Sample—Men ( <i>N</i> = 233) . . . . .	253
D-141. Correlations Between MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Narcissism—College Validation Sample—Women ( <i>N</i> = 643) . . . . .	254
D-142. Correlations Between MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Narcissism—College Validation Sample—Women ( <i>N</i> = 643) . . . . .	255
D-143. Correlations Between MMPI-3 Externalizing and Interpersonal Scales and Measures of Narcissism—College Validation Sample—Women ( <i>N</i> = 643) . . . . .	256
D-144. Correlations Between MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Narcissism—College Validation Sample—Women ( <i>N</i> = 643) . . . . .	257

E. MMPI-2-RF/MMPI-3 Scale Correlations. . . . .	259
E-1. Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample (N = 300) . . . . .	260
E-2. Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample (N = 300) . . . . .	261
E-3. Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample (N = 300) . . . . .	262
E-4. Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample (N = 300) . . . . .	263
E-5. Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample (N = 300) . . . . .	264
E-6. Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample (N = 300) . . . . .	265
E-7. Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Ratings on Intake Forms—Outpatient, Community Mental Health Center Sample (N = 300) . . . . .	266
E-8. Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample (N = 163–297) . . . . .	267
E-9. Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample (N = 163–297) . . . . .	268
E-10. Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample (N = 163–297) . . . . .	269
E-11. Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample (N = 163–297) . . . . .	270
E-12. Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample (N = 163–297). . . . .	271
E-13. Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample (N = 163–297) . . . . .	272
E-14. Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Ratings on Patient Description Form-Intake Version—Outpatient, Community Mental Health Center Sample (N = 163–297) . . . . .	273

E-15.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample ( <i>N</i> = 172–259) . . . . .	274
E-16.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample ( <i>N</i> = 172–259) . . . . .	275
E-17.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample ( <i>N</i> = 172–259) . . . . .	276
E-18.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample ( <i>N</i> = 172–259). . . . .	277
E-19.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample ( <i>N</i> = 172–259) . . . . .	278
E-20.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample ( <i>N</i> = 172–259) . . . . .	279
E-21.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Therapist Ratings on Intake Forms—Outpatient, Private Practice Sample ( <i>N</i> = 172–259) . . . . .	280
E-22.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample ( <i>N</i> = 630) . . . . .	281
E-23.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample ( <i>N</i> = 630) . . . . .	281
E-24.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample ( <i>N</i> = 630) . . . . .	282
E-25.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample ( <i>N</i> = 630) . . . . .	282
E-26.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample ( <i>N</i> = 630) . . . . .	283
E-27.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample ( <i>N</i> = 630) . . . . .	283
E-28.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Self-Report Measures of Somatic Difficulties—Spine Surgery/Spinal Cord Stimulator Candidate Sample ( <i>N</i> = 630) . . . . .	284
E-29.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	284

E-30.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	285
E-31.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	285
E-32.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	286
E-33.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	286
E-34.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	287
E-35.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Battery for Health Improvement-2 (BHI-2) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	287
E-36.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	288
E-37.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	289
E-38.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	290
E-39.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	291
E-40.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	292
E-41.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	293
E-42.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Battery for Health Improvement-2 (BHI-2) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 335) . . . . .	294
E-43.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample ( <i>N</i> = 400) . . . . .	295

E-44.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample (N = 400).	295
E-45.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample (N = 400).	295
E-46.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample (N = 400)	296
E-47.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample (N = 400)	296
E-48.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample (N = 400)	296
E-49.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Brief Pain Inventory (BPI) Items—Forensic Disability Claimant Sample (N = 400)	297
E-50.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample (N = 342)	297
E-51.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample (N = 342).	298
E-52.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample (N = 342)	298
E-53.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample (N = 342)	299
E-54.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample (N = 342)	299
E-55.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample (N = 342).	300
E-56.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Detailed Assessment of Posttraumatic Stress (DAPS) Scales—Forensic Disability Claimant Sample (N = 342).	300
E-57.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample (N = 285)	301
E-58.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample (N = 285)	302

E-59.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	303
E-60.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	304
E-61.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	305
E-62.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	306
E-63.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Personality Assessment Inventory (PAI) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	307
E-64.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	308
E-65.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	309
E-66.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	310
E-67.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	311
E-68.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	312
E-69.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	313
E-70.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Personality Assessment Inventory (PAI) Subscales—Forensic Disability Claimant Sample ( <i>N</i> = 285).	314
E-71.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 400).	315
E-72.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 400).	315

E-73.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 400)	316
E-74.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 400)	316
E-75.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 400)	317
E-76.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 400)	317
E-77.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Pain Rating Scale (PRS) and Modified Somatic Perception Questionnaire (MSPQ) Scales—Forensic Disability Claimant Sample ( <i>N</i> = 400)	318
E-78.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Collateral Self-Report Measures—Prison Inmate Sample—Men ( <i>N</i> = 377–395)	318
E-79.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Collateral Self-Report Measures—Prison Inmate Sample—Men ( <i>N</i> = 377–395)	319
E-80.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Collateral Self-Report Measures—Prison Inmate Sample—Men ( <i>N</i> = 377–395)	319
E-81.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Collateral Self-Report Measures—Prison Inmate Sample—Men ( <i>N</i> = 377–395)	320
E-82.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Collateral Self-Report Measures—Prison Inmate Sample—Men ( <i>N</i> = 377–395)	320
E-83.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Collateral Self-Report Measures—Prison Inmate Sample—Men ( <i>N</i> = 377–395)	321
E-84.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Collateral Self-Report Measures—Prison Inmate Sample—Men ( <i>N</i> = 377–395)	321
E-85.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample ( <i>N</i> = 403–548)	322
E-86.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample ( <i>N</i> = 403–548)	323
E-87.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample ( <i>N</i> = 403–548)	324

E-88.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample ( <i>N</i> = 403–548)	325
E-89.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample ( <i>N</i> = 403–548)	326
E-90.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Self-Report Measures—Pacific Northwest Police Candidate Sample ( <i>N</i> = 403–548)	327
E-91.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Composite Low-Score Variables and Self-Report Measures—Pacific Northwest Police Candidate Sample ( <i>N</i> = 403–548)	328
E-92.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Selection Validation Survey (SVS) Variables—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 134)	329
E-93.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Selection Validation Survey (SVS) Variables—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 134)	330
E-94.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Selection Validation Survey (SVS) Variables—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 134)	331
E-95.	Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Selection Validation Survey (SVS) Variables—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 134)	332
E-96.	Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Selection Validation Survey (SVS) Variables—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 134)	333
E-97.	Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Selection Validation Survey (SVS) Variables—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 134)	334
E-98.	Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Composite Low-Score Variables and Selection Validation Survey (SVS) Variables—Pacific Northwest Police Candidate Sample—Men ( <i>N</i> = 134)	335
E-99.	Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and California Psychological Inventory (CPI) Scales—Southern California Police Candidate Sample ( <i>N</i> = 145)	336
E-100.	Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and California Psychological Inventory (CPI) Scales—Southern California Police Candidate Sample ( <i>N</i> = 145)	337
E-101.	Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and California Psychological Inventory (CPI) Scales—Southern California Police Candidate Sample ( <i>N</i> = 145)	338



E-102. Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and California Psychological Inventory (CPI) Scales—Southern California Police Candidate Sample ( <i>N</i> = 145) . . . . .	339
E-103. Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and California Psychological Inventory (CPI) Scales—Southern California Police Candidate Sample ( <i>N</i> = 145) . . . . .	340
E-104. Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and California Psychological Inventory (CPI) Scales—Southern California Police Candidate Sample ( <i>N</i> = 145) . . . . .	341
E-105. Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Composite Low-Score Variables and California Psychological Inventory (CPI) Scales—Southern California Police Candidate Sample ( <i>N</i> = 145) . . . . .	342
E-106. Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Internalizing Dysfunction—College Validation Sample ( <i>N</i> = 242–876) . . . . .	343
E-107. Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Measures of Internalizing Dysfunction—College Validation Sample ( <i>N</i> = 242–876) . . . . .	345
E-108. Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Internalizing Dysfunction—College Validation Sample ( <i>N</i> = 242–876) . . . . .	347
E-109. Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Measures of Internalizing Dysfunction—College Validation Sample ( <i>N</i> = 242–876) . . . . .	349
E-110. Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Measures of Internalizing Dysfunction—College Validation Sample ( <i>N</i> = 242–876) . . . . .	351
E-111. Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Measures of Internalizing Dysfunction—College Validation Sample ( <i>N</i> = 242–876) . . . . .	353
E-112. Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Internalizing Dysfunction—College Validation Sample ( <i>N</i> = 242–876) . . . . .	355
E-113. Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Thought Dysfunction—College Validation Sample ( <i>N</i> = 288–871) . . . . .	357
E-114. Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Measures of Thought Dysfunction—College Validation Sample ( <i>N</i> = 288–871) . . . . .	357
E-115. Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Thought Dysfunction—College Validation Sample ( <i>N</i> = 288–871) . . . . .	358
E-116. Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Measures of Thought Dysfunction—College Validation Sample ( <i>N</i> = 288–871) . . . . .	358

E-117. Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Measures of Thought Dysfunction—College Validation Sample ( <i>N</i> = 288–871) . . . . .	359
E-118. Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Measures of Thought Dysfunction—College Validation Sample ( <i>N</i> = 288–871) . . . . .	359
E-119. Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Thought Dysfunction—College Validation Sample ( <i>N</i> = 288–871) . . . . .	360
E-120. Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Externalizing Dysfunction—College Validation Sample ( <i>N</i> = 284–872) . . . . .	361
E-121. Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Measures of Externalizing Dysfunction—College Validation Sample ( <i>N</i> = 284–872) . . . . .	362
E-122. Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Externalizing Dysfunction—College Validation Sample ( <i>N</i> = 284–872) . . . . .	363
E-123. Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Measures of Externalizing Dysfunction—College Validation Sample ( <i>N</i> = 284–872). . . . .	364
E-124. Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Measures of Externalizing Dysfunction—College Validation Sample ( <i>N</i> = 284–872). . . . .	365
E-125. Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Measures of Externalizing Dysfunction—College Validation Sample ( <i>N</i> = 284–872) . . . . .	366
E-126. Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Externalizing Dysfunction—College Validation Sample ( <i>N</i> = 284–872) . . . . .	367
E-127. Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample ( <i>N</i> = 282–1,156) . . . . .	368
E-128. Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample ( <i>N</i> = 282–1,156) . . . . .	369
E-129. Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample ( <i>N</i> = 282–1,156) . . . . .	370
E-130. Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample ( <i>N</i> = 282–1,156) . . . . .	371
E-131. Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample ( <i>N</i> = 282–1,156) . . . . .	372

E-132. Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample ( <i>N</i> = 282–1,156).	373
E-133. Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Somatic/Cognitive Dysfunction—College Validation Sample ( <i>N</i> = 282–1,156)	374
E-134. Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample ( <i>N</i> = 288)	375
E-135. Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample ( <i>N</i> = 288)	376
E-136. Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample ( <i>N</i> = 288)	377
E-137. Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample ( <i>N</i> = 288)	378
E-138. Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample ( <i>N</i> = 288)	379
E-139. Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample ( <i>N</i> = 288)	380
E-140. Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Computerized Adaptive Test of Personality Disorder (CAT-PD) Scales—College Validation Sample ( <i>N</i> = 288)	381
E-141. Correlations Between MMPI-2-RF and MMPI-3 Higher-Order (H-O) and Restructured Clinical (RC) Scales and Measures of Narcissism—College Validation Sample ( <i>N</i> = 876)	382
E-142. Correlations Between MMPI-2-RF and MMPI-3 Restructured Clinical (RC) Scales and Measures of Narcissism—College Validation Sample ( <i>N</i> = 876)	383
E-143. Correlations Between MMPI-2-RF and MMPI-3 Somatic/Cognitive and Internalizing Scales and Measures of Narcissism—College Validation Sample ( <i>N</i> = 876)	384
E-144. Correlations Between MMPI-2-RF and MMPI-3 Internalizing Scales and Measures of Narcissism—College Validation Sample ( <i>N</i> = 876)	385
E-145. Correlations Between MMPI-2-RF and MMPI-3 Externalizing Scales and Measures of Narcissism—College Validation Sample ( <i>N</i> = 876)	386
E-146. Correlations Between MMPI-2-RF and MMPI-3 Interpersonal and Additional Scales and Measures of Narcissism—College Validation Sample ( <i>N</i> = 876).	387

E-147. Correlations Between MMPI-2-RF and MMPI-3 Personality Psychopathology Five (PSY-5) Scales and Measures of Narcissism—College Validation Sample (N = 876) . . . . .	388
F. Comparison Group T-Score Means and Standard Deviations . . . . .	389
F-1. Comparison Group T-Score Means and Standard Deviations . . . . .	390

<b>Index</b> . . . . .	397
------------------------	-----

## Tables

1-1. The MMPI-2-RF Scales . . . . .	10
2-1. Demographic Characteristics of the MMPI-3 Development Samples . . . . .	21
2-2. The MMPI-3 Scales . . . . .	28
2-3. MMPI-3 Scale Overlap With MMPI-2-RF Scales . . . . .	30
2-4. MMPI-3 Scale Composition by Test Version . . . . .	31
2-5. Race Distribution of Participants in the MMPI-3 Normative Sample Compared to 2020 Projected Census Data and MMPI-2-RF Normative Sample . . . . .	34
2-6. Age Distribution of Participants in the MMPI-3 Normative Sample Compared to 2020 Projected Census Data and MMPI-2-RF Normative Sample . . . . .	34
2-7. Education of Participants in the MMPI-3 Normative Sample Compared to 2020 Projected Census Data and MMPI-2-RF Normative Sample . . . . .	34
3-1. Demographic Characteristics of Psychometric Analyses Samples . . . . .	45
3-2. Reliability and Standard Errors of Measurement of the MMPI-3 Validity Scales . . . . .	46
3-3. Reliability and Standard Errors of Measurement of the MMPI-3 Higher-Order (H-O) Scales and Restructured Clinical (RC) Scales . . . . .	47
3-4. Reliability and Standard Errors of Measurement of the MMPI-3 Somatic/Cognitive and Internalizing Scales . . . . .	47
3-5. Reliability and Standard Errors of Measurement of the MMPI-3 Externalizing and Interpersonal Scales . . . . .	48
3-6. Reliability and Standard Errors of Measurement of the MMPI-3 Personality Psychopathology Five (PSY-5) Scales . . . . .	48
3-7. MMPI-2-RF/MMPI-3 Validity Scale Correlations—Normative Sample With Random Response Insertion (N = 1,492) . . . . .	50
3-8. MMPI-2-RF/MMPI-3 Validity Scale Correlations—Normative Sample With Fixed (True) Response Insertion (N = 1,486) . . . . .	51
3-9. MMPI-2-RF/MMPI-3 Validity Scale Correlations—Normative Sample With Fixed (False) Response Insertion (N = 1,486) . . . . .	51
3-10. MMPI-2-RF/MMPI-3 Validity Scale Correlations—Over-Reporting Sample (N = 558) . . . . .	51
3-11. MMPI-2-RF/MMPI-3 Validity Scale Correlations—ADHD Simulation Sample (N = 204) . . . . .	52

3-12. MMPI-2-RF/MMPI-3 Validity Scale Correlations—Forensic Disability Claimant Sample—Men ( <i>N</i> = 227).	52
3-13. MMPI-2-RF/MMPI-3 Validity Scale Correlations—Forensic Disability Claimant Sample—Women ( <i>N</i> = 177)	52
3-14. MMPI-2-RF/MMPI-3 Validity Scale Correlations—Under-Reporting Sample ( <i>N</i> = 561)	53
3-15. MMPI-2-RF/MMPI-3 Validity Scale Correlations—Public Safety Candidate—Men ( <i>N</i> = 1,873).	53
3-16. MMPI-2-RF/MMPI-3 Validity Scale Correlations—Public Safety Candidate—Women ( <i>N</i> = 551)	54
3-17. MMPI-3 Scale Intercorrelations—Normative Sample—Men ( <i>N</i> = 810)	58
3-18. MMPI-3 Scale Intercorrelations—Normative Sample—Women ( <i>N</i> = 810)	63
3-19. MMPI-3 Scale Intercorrelations—Outpatient, Mental Health Sample—Men ( <i>N</i> = 339)	68
3-20. MMPI-3 Scale Intercorrelations—Outpatient, Mental Health Sample—Women ( <i>N</i> = 452)	73
3-21. Correlations Between MMPI-3 Scales and MMPI-2-RF Scales—Normative Sample—Men ( <i>N</i> = 810).	78
3-22. Correlations Between MMPI-3 Scales and MMPI-2-RF Scales—Normative Sample—Women ( <i>N</i> = 810)	82
3-23. Correlations Between MMPI-3 Scales and MMPI-2-RF Scales—Composite Outpatient Mental Health Sample—Men ( <i>N</i> = 339)	86
3-24. Correlations Between MMPI-3 Scales and MMPI-2-RF Scales—Composite Outpatient Mental Health Sample—Women ( <i>N</i> = 452)	90

## Figures

2-1. MMPI-2-RF Scores of MMPI-3 Normative Sample Men and Women—Validity Scales	38
2-2. MMPI-2-RF Scores of MMPI-3 Normative Sample Men and Women—Higher-Order and Restructured Clinical Scales	39
2-3. MMPI-2-RF Scores of MMPI-3 Normative Sample Men and Women—Somatic/Cognitive and Internalizing Scales	40
2-4. MMPI-2-RF Scores of MMPI-3 Normative Sample Men and Women—Externalizing, Interpersonal, and Interest Scales	41
2-5. MMPI-2-RF Scores of MMPI-3 Normative Sample Men and Women—Personality Psychopathology Five (PSY-5) Scales	42

# Historical Foundations and Evolution of the MMPI

The Minnesota Multiphasic Personality Inventory® (MMPI) has been a mainstay of psychological assessment since the early 1940s. The original test authors, Hathaway and McKinley (1940), sought to “create a large reservoir of items from which various scales might be constructed in the hope of *evolving* a greater variety of valid personality descriptions than are available at the present time” (p. 249; emphasis added). It is noteworthy that the authors viewed their initial efforts at scale development as a starting point for what they hoped would be an evolving instrument. The Minnesota Multiphasic Personality Inventory-3 (MMPI-3; Ben-Porath & Tellegen, 2020) represents the next step in this evolution.

This chapter surveys the historical foundations of the MMPI, beginning with a brief overview of the development and evolution of the original MMPI (Hathaway & McKinley, 1943) and then turning to a description of the incremental changes introduced with the second edition of the inventory, the MMPI-2 (Butcher et al., 1989; Butcher et al., 2001). The next section outlines the rationale and methods used for, and outcome of, the data-based and construct-oriented revision of the MMPI-2, which produced the Minnesota Multiphasic Personality Inventory-2-Restructured Form® (MMPI-2-RF®; Ben-Porath & Tellegen, 2008/2011; Tellegen & Ben-Porath, 2008/2011), the starting point for development of the MMPI-3. Ben-Porath and Sellbom (2021) describe the evolution of the MMPI instruments in detail.

## The Original MMPI

### Initial Development

Hathaway and McKinley (1943) sought to develop a psychological test that would be used for the direct differential diagnosis of psychopathology. In selecting targets for scale development, Hathaway and McKinley followed the diagnostic classification system of the 1930s, which was a derivative of the descriptive system developed by Kraepelin (1921). This neo-Kraepelinian nosology allowed for reliable diagnoses of disorders such as hysteria, schizophrenia, and manic depression, and it supplied the model for the initial designation of MMPI scales and a combination of behavioral, psychodynamic, and psychometric thinking characterized early theoretical writings on the test (Meehl, 1945). Hathaway and McKinley described the development of several of the original Clinical Scales in a series of articles (Hathaway & McKinley, 1940, 1942; McKinley & Hathaway, 1940, 1942, 1944).

Applying a methodology intended to be analogous to but actually critically different from the one Strong (1938) used to construct his Vocational Interest Blank (a topic revisited later in this manual), Hathaway and McKinley assembled the scales by contrasting responses of differentially diagnosed patient samples (to a broad set of candidate items) with the responses of a nonclinical sample of “normals” and, for each of the Clinical Scales, selecting items judged satisfactorily to differentiate the former from the latter. Additional contrast groups were used in constructing some of the scales. The nonclinical sample consisted primarily of visitors to the University of Minnesota Hospital who volunteered to answer the broad list of candidate test items. They were mostly rural Minnesotans with an average of 8 years of education, employed primarily as

skilled and semiskilled laborers and farmers. These individuals served as the normal contrast group for item selection, and their responses were also used to develop norms for the MMPI.

## Evolution of the MMPI

Despite the care and ingenuity that characterized Hathaway and McKinley's efforts, the MMPI never worked as its authors had intended for many reasons. Attempts to replicate the validity of the Clinical Scales as differential diagnostic indicators were only marginally successful for some scales and largely unsuccessful for others (Hathaway, 1960). However, rather than fading away, as had many of its predecessors, the MMPI underwent a substantial transformation. Led by Paul Meehl, Hathaway's students and colleagues reinvented the MMPI by directing its use away from the narrow task of differential diagnosis to a considerably broader application.

## Clinical Scale Code Types

Although no doubt disappointed by the failure of the test to meet its original goal, early users of the MMPI observed that certain patterns of Clinical Scale scores tended to recur in the settings in which they practiced, and test takers who produced these combinations shared certain clinical characteristics. Researchers began to focus on identifying replicable empirical correlates of these patterns of scale scores. The term *profile* was adopted to refer to the complete set of Clinical Scale scores for a given test taker, and the term *code type*, which alluded to a numeric code assigned to each of the Clinical Scales, was used to identify certain patterns or combinations of scale scores. Within a decade of its initial publication, the prevailing use of the MMPI had changed dramatically. The Kraepelinian nosological model was dropped in favor of the considerably broader and more ambitious goal of describing normal and abnormal personality characteristics. Code types became the primary source of information provided by the test.

## Content-Based Assessment

Hathaway and McKinley, for the most part, ignored item content in selecting items for the Clinical Scales. However, they assumed that individuals who were judged to have provided a valid test result (see next section) would not have ignored item content. Subsequent scale development efforts were intended to take advantage of opportunities to optimize this feature of self-report measures. Early efforts to develop content-based MMPI measures (e.g., Harris & Lingo, 1955) involved construction of subscales intended to assist in interpreting the Clinical Scale scores by indicating which of several diverse sources of content contributed to an elevated score on a given scale. Wiggins (1966) set the standard for rigorous construction of content-based scales for the MMPI, citing research that had demonstrated equivalence, if not superiority, of content-based measures over empirically keyed ones and the desirability of developing psychometrically sound dimensional means of gauging the information conveyed by the test taker.

The significance of Wiggins's (1966) efforts cannot be overstated. His methods served as the prototype for all subsequent efforts to develop content-based scales for the MMPI. The psychometric success of his endeavor provided much-needed empirical support for the still-fledgling content-based approach to MMPI interpretation specifically and to personality assessment more generally.

## Validity Scales

To provide useful information when completing a self-report inventory, a test taker must read, comprehend, and respond accurately to the test statements. Failure to do so, intentionally or unintentionally, can compromise the utility of the resulting test scores and, in extreme cases, render them uninterpretable. Therefore, prior to drawing any substantive inferences from self-report inventory test scores, users must

carefully consider the quality of the information provided by the test taker (i.e., the validity of the individual test protocol).

Validity Scales, initially labeled *validating scores*, have been an integral component of the MMPI since its initial publication. As implied by their label, these scales were designed to assist the MMPI interpreter in identifying threats to test protocol validity. These threats fall broadly into two categories that reflect the role of item content in invalid responding: non-content-based and content-based. Non-content-based invalid responding occurs when the test taker's responses are affected by an inaccurate reading and/or lack of comprehension of the test items. This invalid test-taking approach can be divided further into three subtypes: nonresponding, random responding, and fixed responding. By contrast, content-based invalid responding occurs when the test taker skews his or her responses to items and, as a result, creates a misleading impression. This test-taking approach falls broadly into two classes: over-reporting and under-reporting.

Described in detail by Ben-Porath and Sellbom (2021), the original MMPI Validity Scales included measures of nonresponding (Cannot Say [CNS]), random responding (Infrequency [F]), over-reporting (Infrequency [F]), and under-reporting (Lie [L]). A second under-reporting scale (K) was added soon after the test was first published.

## The MMPI-2

### Rationale for the Revision

Convened in 1970, the Fifth Annual Symposium on Recent Developments in the Use of the MMPI was devoted to consideration of whether the time had come for a revision of the test and, if so, what form it should take. The conference produced an edited volume (Butcher, 1972) that included most of the presentations and a detailed discussion of the topic by Meehl (1972). Contributors described what they viewed as some fundamental problems with the MMPI and how they would recommend addressing these concerns in a revision. Loevinger (1972) noted that the code-type approach, like the Clinical Scales, was largely bereft of any theoretical foundation, and Norman (1972) commented that code-type interpretation was hindered by excessive intercorrelations between the Clinical Scales, stemming from a strong general factor and item overlap. Meehl (1972) agreed that sound psychometric practice should include consideration of item content at the various stages of scale development. He also advocated reliance on statistical analyses, including possibly factor analyses, to control for competing (with the targeted construct) sources of variance at the stage of scale development. Relatedly, he viewed internal consistency of scales as desirable and heterogeneity as undesirable.

In the 1989 MMPI-2 manual (Butcher et al., 1989), there is no discussion of the proposals by Loevinger (1972), Meehl (1972), and Norman (1972) for addressing fundamental problems with the MMPI Clinical Scales. Early on, the committee charged with revising the test made a strategic (majority-based) decision to keep the Clinical Scales essentially intact to allow for continued and unchanged reliance on the reported empirical correlates of code types formed by these scales, which, as discussed previously, had become the primary focus of MMPI interpretation. The MMPI-2 developers formulated two goals: to improve the test and to maintain as much continuity as possible with the original MMPI. Improvement was to be attained by updating the normative base and correcting some item-level deficiencies. Continuity was to be accomplished by minimizing changes to the Validity and Clinical Scales, making it possible for test interpreters to continue to rely on decades of accumulated research and clinical experience with these measures.



## Methods of the Revision

The MMPI-2 developers' first step was to create an experimental booklet with which the new normative data would be collected and from which new items could be added to the test. The MMPI-AX was developed by retaining all 550 original MMPI items (although 82 were reworded slightly to correct for archaic or otherwise problematic language), deleting the 16 repeated items that had been added to the test for machine scoring, and writing 154 new, experimental items that were candidates for replacing nonworking and objectionable items.

The MMPI-2 normative sample (later also used as the normative sample for the MMPI-2-RF) was collected throughout the United States using a variety of procedures designed to sample the general population. Over 2,900 individuals completed the test battery. Of these, 2,600 (1,462 women and 1,138 men) produced valid and complete protocols and were included in the normative sample; 1,680 members of the normative sample participated along with their spouses or live-in partners and provided ratings of each other's behavioral tendencies and personality characteristics to be used as validity criteria. Individual participants were paid \$15 for their participation; couples received \$40.

Several additional clinical and nonclinical datasets were compiled and used in various scale development and validation studies. These included a sample of psychiatric inpatients (Graham & Butcher, 1988), individuals undergoing substance abuse treatment (McKenna & Butcher, 1987), patients at a pain-treatment clinic (Keller & Butcher, 1991), college students (Ben-Porath & Butcher, 1989; Butcher, Graham, Dahlstrom, & Bowman, 1990), military personnel (Butcher, Jeffrey, et al., 1990), mothers at risk for child abuse (Egeland et al., 1991), and participants in the Boston Normative Aging Study (Butcher et al., 1991). Altogether, over 10,000 individuals were tested as part of the MMPI-2 development project.

## Outcome of the Revision

### MMPI-2 Booklet

From the 704 MMPI-AX items, 567 were selected for inclusion in the MMPI-2 test booklet; 372 of the 383 items scored on the 13 basic Validity (L, F, and K) and Clinical Scales of the original MMPI were retained in the MMPI-2; 11 items were deleted owing to objectionable content (Butcher & Tellegen, 1966), but no basic scale lost more than 4 items and most scales did not lose any; 64 of the 82 reworded items were included on the MMPI-2. Ben-Porath and Butcher (1989) found the revised items to have a negligible impact on the psychometric functioning of the scales on which they were scored. Thus, consistent with the goal of maintaining continuity, the basic Validity and Clinical Scales of the MMPI-2 were nearly identical to those of the MMPI. Improvements were made with the introduction of new norms, a new way of calculating MMPI-2 standard scores (Tellegen & Ben-Porath, 1992), new validity scales, and the MMPI-2 Content Scales (Butcher, Graham, Williams, & Ben-Porath, 1990).

### MMPI-2 Norms

As noted, the MMPI-2 norms were based on the national sample of 2,600 individuals. For many reasons, members of the MMPI-2 normative sample produced higher raw scores on the Clinical Scales than did their 1930s counterparts. A change in the instructions given to MMPI test takers contributed significantly to this difference. During the original normative data collection, test takers were not discouraged from using the Cannot Say response option. The instructions used in collecting the MMPI-2 norms encouraged test takers to respond to all items. As a result, members of the new normative sample responded to a larger number of the test items than did their counterparts who responded to the original MMPI, thus contributing to the increase in raw scores on the Clinical Scales. Societal changes over the 40-plus years that separated the two normative

data collections also contributed to higher Clinical Scale raw scores in the MMPI-2 normative sample. These included both real shifts in psychological functioning and a greater willingness to admit holding potentially unattractive beliefs and engaging in undesirable behaviors. A final factor potentially contributing to normative changes was the collection of a broader, much more diverse sample than the one used to derive the original MMPI norms. Regardless of the cause, higher raw scores in the new normative sample resulted in lower T scores.

Another potential source of change at the T-score level was the development of uniform T scores for the MMPI-2 (Tellegen & Ben-Porath, 1992). Uniform T scores were developed to correct a fundamental problem with MMPI T scores. Because the raw-score distributions for the Clinical Scales were differentially skewed, when using linear T scores (as was the case with the original MMPI norms), the same T-score value did not necessarily correspond to the same percentile for different scales. The lack of percentile equivalence across scales made direct comparisons of T scores on different Clinical Scales potentially misleading. The solution entailed computing the average distribution of non-K-corrected raw scores on the eight original Clinical Scales for men and women in the new normative sample and then adjusting (in the transformation of raw score to T score) the distribution of each of the scales to fit this composite distribution. This approach yielded percentile-equivalent T scores while retaining the skewed nature of the distributions of the Clinical Scales (Tellegen & Ben-Porath, 1992). Uniform T scores have also been adopted for use with the MMPI-3 and are described in detail in Chapter 3 of the *Manual for Administration, Scoring, and Interpretation* (Ben-Porath & Tellegen, 2020).

## MMPI-2 Scales

As discussed earlier, the MMPI-2 development project had two potentially conflicting goals: to improve the instrument and to maintain continuity with its empirical and experiential foundations. Continuity was fostered by leaving the 13 basic Validity and Clinical Scales of the MMPI largely intact. Improvement at the scale level was accomplished primarily through the introduction of 21 new measures, including three new validity scales (described later), the MMPI-2 Content Scales (Butcher, Graham, Williams, & Ben-Porath, 1990), and three Supplementary Scales, two designed to measure gender roles and a posttraumatic stress disorder (PTSD) indicator.

## Subsequent Developments

During the decade following its publication, the MMPI-2 was the subject of over 800 journal articles, 70 book chapters, 20 books, and approximately 360 doctoral dissertations. Some research focused initially on comparing MMPI Clinical Scale scores with MMPI and MMPI-2 norms. Concerns about possible incongruence between the two sets of norms were resolved after it was determined that if code-type interpretation was limited to well-defined profiles, the two sets of standard scores yielded similar code types. The focus then shifted to validating the new scales and exploring further scale development based (in part) on the new items in the inventory. A revised edition of the MMPI-2 manual (Butcher et al., 2001) was designed to update interpretive guidelines for some scales, formalize the discontinuation of other scales, and provide guidelines for interpreting several new measures developed during the decade following the revision.

The revised manual did not introduce any changes to the norms or the item composition of the MMPI-2 scales included in the 1989 manual. Consequently, the psychometric challenges associated with the original MMPI Clinical Scales continued to have an impact on the use of the MMPI-2. MMPI-2 subscales and the Supplementary Scales provided ad hoc, indirect means for addressing these deficiencies. A set of Restructured Clinical (RC) Scales was added to the MMPI-2 (Tellegen et al., 2003) to provide a psychometric

solution to these challenges. It also represented the first step toward, and a roadmap for, an eventual restructuring of the inventory.

## The MMPI-2 RC Scales

### Why Restructure the Clinical Scales?

As the name implies, the RC Scales were the result of an effort to restructure the MMPI-2 Clinical Scales. Two jointly compelling observations motivated this first step: (1) many of the Clinical Scale *items* captured important distinctive features of the major psychopathologies because of the broad range and the largely empirical derivation of the scales; (2) however, as *aggregate measures*, the Clinical Scales had significant psychometric deficiencies.

The strength of the MMPI-2 Clinical Scales was derived from Hathaway and McKinley's empirical method of selecting items. For each Clinical Scale, they selected from a diverse and clinically relevant item pool those items whose endorsement frequencies differentiated a carefully diagnosed criterion group from a representative nonpatient sample. Over time, however, it became evident that a program of test construction based strictly on empiricism, deliberately stripped of significant conceptual inputs regarding the content and structure of the measures and relying on superficial and ephemeral criteria, jeopardized the broader and longer-term personological and clinical significance and usefulness (the construct validity) of the resulting measures.

Two features of the MMPI-2 Clinical Scales stood out as the most problematic: (1) higher than theoretically expected intercorrelations and (2) overly heterogeneous item content (Tellegen et al., 2003). The extensive item overlap between the Clinical Scales was also often mentioned (e.g., Helmes & Reddon, 1993) but was best seen as a concomitant phenomenon, a secondary problem that could be readily addressed once the other two had been resolved.

A major factor that increased Clinical Scale intercorrelations was the emotionally colored MMPI-2 dimension labeled *demoralization*. Persons high on demoralization describe themselves as discouraged, helpless, having low self-esteem, expecting to fail or having failed in various aspects of their lives, and despairing. The pervasiveness of this factor is most likely an unintended consequence of Hathaway and McKinley's method of identifying discriminating items, in this crucial respect differing from Strong's method of comparing responses of individuals belonging to a particular occupational group with individuals in all other occupational groups rather than with unemployed persons. The probable result of Hathaway and McKinley's comparison of each diagnostic criterion group with a sample of nonpatients (i.e., "normals") was not just to select for each Clinical Scale those items that were specifically associated with belonging to that scale's particular criterion group. It was also likely to have included demoralization markers, items that distinguish psychiatric patients in general from nonpatients and are indicative of a "sense of patienthood" (Tellegen et al., 2003). The MMPI-2 authors adopted the demoralization label from Jerome Frank (1973, 1974a, 1974b, 1985), who used it to characterize self-appraisals that closely match MMPI-2 descriptors. Frank asserted that demoralization occurs frequently in medical and psychiatric illnesses and is the main and common problem of patients seeking psychotherapy. Tellegen and colleagues' (2003) sense of patienthood interpretation is congruent with Frank's view.

The Clinical Scales were also heterogeneous to varying degrees. One source of the content heterogeneity was noise. As a result of inevitable sampling or other errors, the Clinical Scales included questionable items. Many so-called subtle items lacking in empirical validity appeared to belong in this category (e.g., Weed et al., 1990). A lack of systematic cross-validation as part of the scale development process (owing to the limited financial resources available to Hathaway and McKinley at the time) undoubtedly contributed to these

occurrences. A second source of Clinical Scale heterogeneity was Hathaway and McKinley's "one-scale, one-syndrome" strategy (Tellegen et al., 2006). Their intent was to represent the dimensionally complex makeup of psychiatric syndromes with single scales (even those that included negatively correlated components).

Nunnally (1967) viewed it a "fallacy" to assume that a heterogeneous variable could "be predicted with one test, which to be effective must be heterogeneous in content" (p. 248). In the case of the Clinical Scales, each scale, viewed factor analytically, would have to implicitly model a factorially complex syndrome as a particular weighted sum of the item factor scales that represented the different syndrome features. As an alternative to developing scales through empirical keying, Nunnally (1967) recommended that the predictor domain be represented dimensionally by meaningful factor scales. Yet, in seeming contradiction of Nunnally's plausible argument in favor of multiple regression methods, empirical analyses and simulation studies appeared to suggest otherwise. Dana and Dawes (2004), for example, found that nonoptimized prediction weights, including equal weights, are on cross-validation superior to multiple regression weights when predictive power is modest, as is often true in psychology. They concluded that "regression is rarely useful for prediction in most social science contexts" (p. 317).

## Development of the RC Scales

To address the shortcomings just discussed, development of the RC Scales, described in detail by Tellegen et al. (2003) and Ben-Porath and Sellbom (2021), proceeded in four steps.

**1. Capturing demoralization.** In a series of analyses, the demoralization construct, hypothesized to parallel the general bipolar "Pleasantness-versus-Unpleasantness" dimension of self-reported mood (Tellegen et al., 1999a, 1999b; Watson & Tellegen, 1985), was empirically tested and (as noted earlier) corroborated. Based on these analyses, a set of MMPI-2 demoralization marker items was identified.

**2. Identifying major distinctive components of the Clinical Scales.** The items of each Clinical Scale were combined with the demoralization items, and each of these item sets was separately factor analyzed. A demoralization factor was recovered from each item set, defined, as expected, by the original demoralization markers and also by significant numbers of Clinical Scale items. In addition, two- or three-factor rotations allowed identification of a meaningful nondemoralization core factor for each scale. For each Clinical Scale, this factor was designated a major distinctive core component—the target for further scale development.

**3. Constructing seed scales.** Carefully delineated *seed scales*, designed to be optimally distinctive, were developed to represent demoralization and the identified core factors. A series of analyses was conducted to achieve the desired optimization of internal consistency and distinctiveness for the sets of items identified in step 2. First, only items with sufficient loadings on the factor they were designated to represent were retained. Next, any item that satisfied this criterion for more than one scale was deleted. This yielded nonoverlapping provisional seed scales. This was followed by deletion of items that did not correlate sufficiently with their provisional seed scale and then deletion of items that did not consistently have higher correlations with their provisional scale than they did with the other provisional measures.

**4. Deriving final RC Scales.** Exhaustive correlational analyses were conducted, in which the seed scales were correlated with all 567 MMPI-2 items (with due corrections for item overlap), to identify a set of adequately converging and discriminating candidate members for each of the nine RC Scales (i.e., the scales intended to represent demoralization and the eight distinctive core factors of the eight original Clinical Scales). These analyses, combined with evaluations of item content, item-scale correlations, and available external item validity data, resulted in the final set of RC Scales.

To minimize the possible impact of chance findings, all significant data-dependent decisions were made based on independent analyses of four different patient groups recruited from several clinical settings. Two of these groups were made up of 832 men and 380 women, respectively, who completed the MMPI-2 in a residential substance-abuse treatment facility (McKenna & Butcher, 1987). The remaining two groups consisted of 232 men and 191 women, respectively, who completed the MMPI-2 at one of three psychiatric facilities (Graham & Butcher, 1988).

## Psychometric Findings With the RC Scales

Tellegen et al. (2003) reported the results of comprehensive reliability and validity analyses of the RC Scales based on data from several thousand participants (other than those used in the developmental analyses just described) who completed the MMPI-2 at mental health inpatient and outpatient facilities. In comparisons with their Clinical Scale counterparts, the considerably shorter RC Scales were found to be about equally or more reliable, to be less saturated overall with demoralization, to have substantially lower intercorrelations, and to achieve comparable to improved convergent validities and substantially improved discriminant validities. Described in detail by Ben-Porath and Sellbom (2021), a substantial body of subsequent empirical research documented the criterion and construct validity of RC scale scores in a variety of settings in which the MMPI-2 and subsequently the MMPI-2-RF were used.

In the concluding paragraph of the monograph that introduced the RC Scales, Tellegen et al. (2003) observed:

The introduction of the RC Scales may stimulate additional scale development. It may prove worthwhile to search for and measure the distinctive core features of important MMPI-2 scales other than the MMPI-2 Clinical Scales, some of which may also be confounded with a strong demoralization component. Investigations along these lines may lead to additional scales that are incrementally informative beyond the RC Scales. Through such efforts it may be possible eventually to capture the full range of core attributes represented by the large body of MMPI-2 constructs with a set of new scales more transparent and effective than those currently available. (pp. 85–86)

Efforts of this sort resulted in the additional measures that, with the RC Scales, composed the MMPI-2-RF.

## The MMPI-2-RF

As just discussed, the RC Scales were not intended to represent all the information available in the very rich MMPI-2 item pool. Rather, each RC scale was designed to assess a major distinctive core component of an original Clinical Scale. The goal in completing the MMPI-2-RF was to produce a comprehensive set of measures representing the clinically significant substance of the entire MMPI-2 item pool.

Five additional sets of scales were developed to complete the MMPI-2-RF. Following previous efforts to identify a broad-based dimensional structure of personality and psychopathology, a series of factor analyses of the RC Scales were conducted, which led to the identification of three recognizable broad-band dimensions (Tellegen, 2012; Tellegen & Ben-Porath, 2008/2011) and the construction of Higher-Order (H-O) Scales to assess them. The authors also developed more narrowly focused measures related to Clinical Scale components not captured by the RC Scales, RC scale facets warranting separate measurement, and constructs assessable with the MMPI-2 items not represented directly by either the Clinical or the RC Scales. These analyses produced 23 Specific Problems (SP) Scales and two Interest Scales. In addition, the authors sought to include measures of the Personality Psychopathology Five (PSY-5; Harkness & McNulty, 1994), a dimensional model of personality disorder features that had already been studied extensively and provided

a link to other dimensional models of normal and abnormal personality. Harkness and McNulty revised the MMPI-2 versions of these scales using the 338 items of the MMPI-2-RF to construct the five revised PSY-5 Scales. Finally, the MMPI-2-RF authors sought to build on the solid foundation laid by the MMPI-2 Validity Scales by revising seven of the existing validity measures and adding a new one, yielding a set of eight Validity Scales for the MMPI-2-RF. A ninth validity scale was added in 2011.

The nine MMPI-2 RC Scales (listed and described in Table 1-1) were carried over to the MMPI-2-RF with identical item composition, enabling direct reliance in their interpretation on research reported by Tellegen et al. (2003) and the substantial body of subsequent peer-reviewed publications. The following sections describe the process followed in developing the remaining MMPI-2-RF scales.

## Validity Scales

The MMPI-2-RF Validity Scales were designed to provide an efficient yet comprehensive assessment of threats to the validity and interpretability of a test protocol. Efficiency was achieved by developing scales that, for the most part, were shorter than their MMPI-2 counterparts while adequately measuring the validity problems they were designed to assess. Comprehensiveness was accomplished by ensuring that the MMPI-2-RF Validity Scales adequately assessed the threats to protocol validity measured by the MMPI-2 Validity Scales.

## Inconsistent Responding Indicators

The inconsistency scales of the MMPI-2—Variable Response Inconsistency (VRIN) and True Response Inconsistency (TRIN)—introduced when the MMPI-2 was first published (Butcher et al., 1989), were fashioned after similar indicators developed by Tellegen (1978/1982) for the Multidimensional Personality Questionnaire (MPQ). The two scales were designed to assess nonresponsiveness to the content of the items by measuring response inconsistencies: “variable” (quasirandom responding) or “fixed” (True-versus-False or acquiescent-versus-counter-acquiescent response stereotypy). In constructing these scales, the full matrix of correlations between the 567 items of the MMPI-2 was examined. Pairs of items were selected that were strongly correlated (positively or negatively for VRIN and only negatively for TRIN) and the content of which was judged inconsistent (contradictory) if the two items were answered in opposite directions (TF and/or FT) and were positively correlated, or were answered in the same direction (TT and/or FF) and were negatively correlated. For each item pair, either one or both response patterns were scored as inconsistent. Development of the MMPI-2-RF inconsistency measures—VRIN-r and TRIN-r—required methodological changes to increase the independence of the two scales and to accommodate a substantially reduced item pool (from 567 to 338 items). The method used to construct these scales, similarly applied in development of the MMPI-3 VRIN and TRIN scales, is described in detail in Chapter 2.

## Over-Reporting Indicators

The MMPI-2 included four over-reporting scales, which were the starting point for developing over-reporting indicators for the MMPI-2-RF. This next section briefly describes the MMPI-2 scales and how they were revised and augmented for the MMPI-2-RF.

In keeping with the goal of maintaining continuity between the MMPI and MMPI-2, the MMPI validity scales L, F, and K were not revised when the MMPI-2 was introduced in 1989. The only change consisted of deleting 4 of the 64 F items that were deemed to have objectionable content (Butcher & Tellegen, 1966). The remaining 60 items were retained, although several no longer functioned as markers of infrequent responding in the MMPI-2 normative sample (Arbisi & Ben-Porath, 1995).

**Table 1-1.** The MMPI-2-RF Scales

<b>Validity Scales</b>	
<b>VRIN-r</b>	Variable Response Inconsistency – Random responding
<b>TRIN-r</b>	True Response Inconsistency – Fixed responding
<b>F-r</b>	Infrequent Responses – Responses infrequent in the general population
<b>Fp-r</b>	Infrequent Psychopathology Responses – Responses infrequent in psychiatric populations
<b>Fs</b>	Infrequent Somatic Responses – Somatic complaints infrequent in medical patient populations
<b>FBS-r</b>	Symptom Validity Scale – Somatic and cognitive complaints associated at high levels with over-reporting
<b>RBS</b>	Response Bias Scale – Exaggerated memory complaints
<b>L-r</b>	Uncommon Virtues – Rarely claimed moral attributes or activities
<b>K-r</b>	Adjustment Validity – Avowals of good psychological adjustment associated at high levels with under-reporting
<b>Higher-Order (H-O) Scales</b>	
<b>EID</b>	Emotional/Internalizing Dysfunction – Problems associated with mood and affect
<b>THD</b>	Thought Dysfunction – Problems associated with disordered thinking
<b>BXD</b>	Behavioral/Externalizing Dysfunction – Problems associated with under-controlled behavior
<b>Restructured Clinical (RC) Scales</b>	
<b>RCd</b>	Demoralization – General unhappiness and dissatisfaction
<b>RC1</b>	Somatic Complaints – Diffuse physical health complaints
<b>RC2</b>	Low Positive Emotions – Lack of positive emotional responsiveness
<b>RC3</b>	Cynicism – Non-self-referential beliefs expressing distrust and a generally low opinion of others
<b>RC4</b>	Antisocial Behavior – Rule breaking and irresponsible behavior
<b>RC6</b>	Ideas of Persecution – Self-referential beliefs that others pose a threat
<b>RC7</b>	Dysfunctional Negative Emotions – Maladaptive anxiety, anger, irritability
<b>RC8</b>	Aberrant Experiences – Unusual perceptions or thoughts
<b>RC9</b>	Hypomanic Activation – Over-activation, aggression, impulsivity, and grandiosity
<b>Specific Problems (SP) Scales</b>	
<b>Somatic/Cognitive Scales</b>	
<b>MLS</b>	Malaise – Overall sense of physical debilitation, poor health
<b>GIC</b>	Gastrointestinal Complaints – Nausea, recurring upset stomach, and poor appetite
<b>HPC</b>	Head Pain Complaints – Head and neck pain
<b>NUC</b>	Neurological Complaints – Dizziness, weakness, paralysis, loss of balance, etc.
<b>COG</b>	Cognitive Complaints – Memory problems, difficulties concentrating
<b>Internalizing Scales</b>	
<b>SUI</b>	Suicidal/Death Ideation – Direct reports of suicidal ideation and recent suicide attempts
<b>HLP</b>	Helplessness/Hopelessness – Belief that goals cannot be reached or problems solved
<b>SFD</b>	Self-Doubt – Lack of confidence, feelings of uselessness
<b>NFC</b>	Inefficacy – Belief that one is indecisive and inefficacious
<b>STW</b>	Stress/Worry – Preoccupation with disappointments, difficulty with time pressure
<b>AXY</b>	Anxiety – Pervasive anxiety, frights, frequent nightmares
<b>ANP</b>	Anger Proneness – Becoming easily angered, impatient with others
<b>BRF</b>	Behavior-Restricting Fears – Fears that significantly inhibit normal activities
<b>MSF</b>	Multiple Specific Fears – Fears of blood, fire, thunder, etc.

**Table 1-1.** The MMPI-2-RF Scales (*continued*)

Externalizing Scales	
<b>JCP</b>	Juvenile Conduct Problems – Difficulties at school and at home, stealing
<b>SUB</b>	Substance Abuse – Current and past misuse of alcohol and drugs
<b>AGG</b>	Aggression – Physically aggressive, violent behavior
<b>ACT</b>	Activation – Heightened excitation and energy level
Interpersonal Scales	
<b>FML</b>	Family Problems – Conflictual family relationships
<b>IPP</b>	Interpersonal Passivity – Being unassertive and submissive
<b>SAV</b>	Social Avoidance – Avoiding or not enjoying social events
<b>SHY</b>	Shyness – Bashful, prone to feel inhibited and anxious around others
<b>DSF</b>	Disaffiliativeness – Disliking people and being around them
Interest Scales	
<b>AES</b>	Aesthetic-Literary Interests – Literature, music, the theater
<b>MEC</b>	Mechanical-Physical Interests – Fixing and building things, the outdoors, sports
Personality Psychopathology Five (PSY-5) Scales	
<b>AGGR-r</b>	Aggressiveness-Revised – Instrumental, goal-directed aggression
<b>PSYC-r</b>	Psychoticism-Revised – Disconnection from reality
<b>DISC-r</b>	Disconstraint-Revised – Under-controlled behavior
<b>NEGE-r</b>	Negative Emotionality/Neuroticism-Revised – Anxiety, insecurity, worry, and fear
<b>INTR-r</b>	Introversion/Low Positive Emotionality-Revised – Social disengagement and anhedonia

All F scale items were placed in the first part of the MMPI-2 to allow for a 370-item abbreviated administration of the test that would include all the items on L, F, K, and the 10 Clinical Scales. As a result, it was necessary to develop a scale to assess infrequent responding to items in the second part of the inventory. The Back F ( $F_B$ ) scale was constructed by selecting 40 items in the second part of the MMPI-2 that were answered by 20% or less of both the men and women in the MMPI-2 normative sample.

A third MMPI-2 over-reporting indicator, Infrequency-Psychopathology ( $F_p$ ; Arbisi & Ben-Porath, 1995), was added later to assess infrequent responding by individuals with significant psychopathology. These test takers typically produced highly elevated but uninterpretable scores on the original F scale. Research findings indicated that the MMPI-2  $F_p$  scale generally outperformed F in differentiating test takers who over-report psychopathology from those with genuine, severe dysfunction (e.g., Arbisi & Ben-Porath, 1998). However, in some studies, the F scale outperformed  $F_p$  (e.g., Kucharski, Johnsen, & Procell, 2004, in a correctional setting), and in others  $F_B$  outperformed both F and  $F_p$  (e.g., Bagby et al., 2005) in the identification of over-reported symptoms of depression.

A fourth over-reporting indicator, the Symptom Validity Scale (previously labeled the Fake Bad Scale and retaining the abbreviation FBS), was added to the MMPI-2 scoring materials in 2007 (Ben-Porath et al., 2009). The FBS was developed by Lees-Haley et al. (1991) to identify noncredible responding by test takers involved in personal injury litigation. These authors observed that the F scale, a good indicator of over-reporting of symptoms of psychopathology, was not effective in personal injury evaluations, when over-reporting typically involves dissimulating being physically and/or emotionally “damaged” rather than severely psychologically disordered. A meta-analysis by Nelson and colleagues (2006), subsequently updated by Nelson et al. (2010), indicated that FBS was the best MMPI-2 indicator of over-reporting cognitive and somatic symptoms by individuals involved in personal injury litigation.



The goal in developing the MMPI-2-RF over-reporting indicators was to maintain a diverse set of measures that function in a complementary fashion to detect different types of over-reporting in the various settings in which the test is used. The following paragraphs describe the procedures used in developing the five MMPI-2-RF over-reporting scales.

As mentioned earlier, MMPI-2 studies indicated that in some settings (e.g., correctional) F outperformed F<sub>p</sub> and that F<sub>b</sub> outperformed both these scales in detecting over-reporting of symptoms of depression. To ensure that the MMPI-2-RF over-reporting indicators would function adequately in a broad range of settings and assessments, an infrequent response indicator was developed that was designed to incorporate elements of both the F and F<sub>b</sub> scales. As noted previously, the primary difference between the two scales was that F<sub>b</sub> items were selected on the basis of item response frequencies in the MMPI-2 normative sample, whereas the F items were selected on the basis of response patterns of the original MMPI normative sample. It was also noted that some of the F items were no longer infrequently endorsed by the MMPI-2 normative sample. The authors developed a revised F scale for the MMPI-2-RF by identifying in the 338-item pool those items that were endorsed by 10% or less of both the men and women in the normative sample and that were not already assigned to the other infrequency scales or the revised versions of L and K (discussed next). As reported in the *MMPI-2-RF Technical Manual*, scores on the resulting 32-item Infrequent Responses (F-r) scale were highly correlated with both F and F<sub>b</sub>, and in some analyses F-r was found to outperform the other MMPI-2-RF over-reporting indicators.

A meta-analysis by Rogers et al. (2003) indicated that the F<sub>p</sub> scale was the best MMPI-2 over-reporting indicator in studies involving over-reporting of psychopathology symptoms. However, Gass and Luis (2001) had previously observed that the inclusion of four L items on F<sub>p</sub> (scored in the same direction) may compromise the utility of the scale. By contrast, Arbisi and colleagues (2003) demonstrated that, overall, the F<sub>p</sub> scale functioned more effectively when the four items it shared with L were included. The goal to develop maximally distinctive scales for the MMPI-2-RF, coupled with the observation that sometimes moderate elevations on F<sub>p</sub> were primarily the product of the four L items, led the authors to delete these items from the revised version of the scale. In addition, three items were removed from F<sub>p</sub> that were included on the F<sub>s</sub> scale (described later). Correlational analyses indicated that two other F<sub>p</sub> items did not function as effectively as the others, while the addition of three items not scored on the original F<sub>p</sub> scale was found to improve the scale. Analyses reported and summarized in the *MMPI-2-RF Technical Manual* indicated that the resulting 21-item MMPI-2-RF version of F<sub>p</sub>, labeled Infrequent Psychopathology Responses (F<sub>p</sub>-r), was highly correlated with its MMPI-2 counterpart and thus remained an effective predictor of symptom over-reporting by individuals tested in settings with high base rates of severe psychopathology.

Of the 43 FBS items, 30 were retained in the 338-item MMPI-2-RF pool. Correlational analyses (reported in the *MMPI-2-RF Technical Manual*) indicated that scores on the 30-item version of the FBS were highly correlated (.96–.99) with scores on the full version of the scale in samples that included large numbers of individuals who failed performance validity tests. The 30-item version of FBS, called the Symptom Validity Scale and labeled FBS-r, was added to the MMPI-2-RF.

Next, a new infrequency scale developed by Wygant et al. (2004) was added to identify uncommon somatic complaints. The 16 items selected for the Infrequent Somatic Responses (F<sub>s</sub>) scale described somatic problems reported by 25% or less of men and women in several large samples of medical patients. Wygant (2007) presented evidence of the utility of F<sub>s</sub> in identifying noncredible somatic symptom reporting in a variety of settings. These analyses also showed that F<sub>s</sub> and FBS operated in a complementary manner, each scale outperforming the other in some settings and tasks.

A fifth over-reporting measure, the Response Bias Scale (RBS; Gervais et al., 2007), was added to the MMPI-2-RF Validity Scales in 2011 following a review conducted by the test publisher. Gervais et al. developed the scale to detect noncredible symptom reporting in forensic neuropsychological or disability assessment settings. The scale consists of 28 items that discriminated individuals who passed from those who failed performance validity testing in the context of disability evaluations, and it was found to be the most effective MMPI-2-RF measure of over-reported cognitive complaints.

## Under-Reporting Indicators

The MMPI-2 included three measures of under-reporting: unchanged versions of the original MMPI L and K scales and the Superlative Self-Presentation (S) scale (Butcher & Han, 1995), which was added to the test materials when the test manual was updated in 2001. Butcher and Han indicated that their goal in developing the S scale was to construct a measure that might be more suitable than K for assessing under-reporting in nonpsychiatric settings. The scale was constructed by identifying items endorsed more frequently by individuals tested in a preemployment context (assumed to be motivated to present themselves in a particularly good light) than by members of the normative sample, who were tested anonymously. Although not included among the standard MMPI-2 under-reporting indicators, two other measures—Cofer and colleagues' (1949) Positive Malingering ( $M_p$ ) scale and Wiggins's (1959) Social Desirability ( $W_{SD}$ ) scale—had been found in a meta-analysis by Baer and Miller (2002) to outperform L, K, and S in detecting under-reporting.

The under-reporting indicators for the MMPI-2-RF were developed by factor analyzing the L, K, S,  $M_p$ , and  $W_{SD}$  items in several samples, including individuals tested in the context of personnel selection, under-reporting simulation, and clinical settings. Results previously reported by Bagby and Marshall (2004) were replicated and consistently showed two primary factors in these analyses. Two nonoverlapping scales were constructed by selecting items that loaded substantially and consistently on one factor without substantial cross-loadings on the other. The labels assigned to the two scales—Uncommon Virtues and Adjustment Validity—were based on item content, and abbreviations were selected to link the MMPI-2-RF under-reporting indicator to the MMPI-2 scale with which it shared the most items. Uncommon Virtues (L-r) consisted of 14 items, 11 of which were on the original L scale. In contrast to the MMPI-2 L scale, for which all 15 items were keyed False, three L-r items were keyed True, reducing the likelihood that extreme scores on this scale were artifacts of fixed responding. Adjustment Validity (K-r) also consisted of 14 items, all of which appeared on the original K scale. Five of these items also appeared on the MMPI-2 S scale. Data reported in the *MMPI-2-RF Technical Manual* indicated that L-r and K-r were substantially correlated with their MMPI-2 counterparts in samples that included test takers instructed to under-report problems. In subsequent studies (e.g., Sellbom & Bagby, 2008), both scales were found to function effectively and in a complementary fashion in detecting MMPI-2-RF protocols marked by under-reporting.

The nine MMPI-2-RF Validity Scales are listed and described in Table 1-1.

## Substantive Scales

### H-O Scales

In developing the MMPI-2-RF, the authors set out to augment the RC Scales with a set of more narrowly focused measures (described in the next section) as well as with a set of scales designed to assess higher-order dimensions. A set of clinically and personologically meaningful higher-order measures would provide the diverse array of RC Scales and related additional measures an overall organizational structure and serve a potentially integrative function. Factor analyses of the RC Scales conducted with three clinical samples

consistently identified a coherent three-factor structure representing emotional, thought, and behavioral dysfunction. The first factor, labeled Emotional/Internalizing Dysfunction (EID), was characterized by high loadings on RCd, RC2, and RC7; a second factor, labeled Thought Dysfunction (THD), was marked by high loadings on RC6 and RC8; and a third factor, labeled Behavioral/Externalizing Dysfunction (BXD), reflected high loadings on RC4 and RC9.

The three MMPI-2-RF H-O Scales were derived in the following manner: First, the combined items of those RC scales that had been found to be the primary markers of the three higher-order factors (i.e., RCd, RC2, and RC7 for EID; RC6 and RC8 for THD; and RC4 and RC9 for BXD) were factor analyzed in derivation samples, and from each of these item-level analyses the rotated three-factor solution and corresponding factor scores were obtained. Next, the three factor scores were correlated with each of the 567 MMPI-2 items in each sample. Finally, the H-O Scales were obtained by selecting from the MMPI-2 item pool, based on the combined results, a set of diverse and distinctive item markers for each higher-order factor. The three H-O Scales are listed and described in Table 1-1.

## SP and Interest Scales

The goal in constructing the MMPI-2-RF was to represent the clinically significant substance of the MMPI-2 item pool with a comprehensive set of psychometrically adequate measures. In addition to the RC and H-O Scales, scales were needed to measure distinctive Clinical Scale components not represented by the RC Scales (e.g., shyness, a reversed component of original Clinical Scale 3) and RC scale facets that warranted separate assessment (e.g., substance abuse, a facet of RC4), as well as clinically significant attributes not or not directly assessed by the RC Scales (e.g., suicidal ideation, which is related to but not specifically assessed by the Demoralization scale).

Development of additional scales to assess the identified target areas generally followed the procedures used to construct the RC Scales. Using the same developmental samples (see Tellegen et al., 2003, for details), the authors factor analyzed item sets that represented each construct along with the demoralization markers used in the second step of constructing the RC Scales. Items that loaded on the demoralization factor were deleted, except for those that were considered important facets of demoralization and were used to develop separate measures (e.g., suicidal ideation). Next, seed scales were constructed by excluding candidate items that were too highly correlated with other seed scales. In a final step, correlations were calculated between a set of seed scales and the 567 MMPI-2 items; items were added to a scale if they were sufficiently correlated with its seed scale and more highly so than with the other seed scales.

The following section does not report the particulars of scale derivation in the same detail as provided for the RC Scales (noting that, as in the case of the RC Scales, what is most important is the result: the content, structure, correlates, and functions of each new scale). Instead, what follows is a narrative summary.

In the process of constructing the RC Scales, three distinctive components of MMPI-2 Clinical Scales 5 and 0 had been identified but were not included in the final step that yielded the RC Scales. (The RC Scales were intentionally limited to measures of psychopathology.) These three components, complemented by nonmajor components of the Clinical Scales for which RC Scales were not developed, provided an initial set of targets for additional scale construction. However, a systematic examination of other (than the Clinical Scales) MMPI-2 scales yielded a substantial number of additional targets for scale construction. The first round of additional scale construction yielded 14 scales. Further examination of the MMPI-2 item domain resulted in another three scales. Preliminary examination of external validity data for the 17 scales provided encouraging findings, and this set of provisional scales was presented at the annual MMPI-2 research symposium

(Tellegen & Ben-Porath, 2005). Based on feedback from attendees of the symposium and additional analyses, three more scales were added, yielding a preliminary list of 20 scales designed to complement the RC Scales.

The list of 20 scales, including representative items for each, was sent to 14 expert MMPI-2 researchers and users for review. The experts were informed of the goal for the MMPI-2-RF (to represent the clinically significant substance of the MMPI-2 item pool with a comprehensive set of psychometrically adequate measures) and that the revised inventory would include the RC Scales, a revised set of PSY-5 Scales (described later), and possibly the 20 scales described in the materials they received. They were asked whether any of the large number of existing MMPI-2 scales contained clinically significant content that might be lacking in the RC, PSY-5, and 20 additional scales. If they answered affirmatively, they were asked to identify the scale or scales and indicate what item content of the scale(s) in question struck them as distinctive and in need of representation. Our colleagues Paul Arbisi and Jack Graham also provided very helpful input regarding this list.

Based on feedback provided by the reviewers and others who subsequently examined the scales, additional analyses ultimately yielded the set of 25 new substantive MMPI-2-RF scales that are the subjects of this section. These scales were organized according to the areas they assess, with 23 designated as SP Scales and 2 as Interest Scales. The SP Scales were further subdivided into sets targeting somatic/cognitive complaints, internalizing and externalizing problems, and interpersonal functioning based on content and differential correlations with the H-O Scales. The 25 SP and Interest Scales are listed and described in Table 1-1. Empirical correlates reported in the *MMPI-2-RF Technical Manual* and in subsequent peer-reviewed journal articles documented the convergent, discriminant, and construct validity of scores on these scales.

## PSY-5 Scales

Documented in the revised edition of the MMPI-2 manual (Butcher et al., 2001), the PSY-5 Scales were a major addition to the MMPI-2. The scales were introduced by Harkness et al. (1995) as measures of a personality model developed by Harkness and McNulty (1994), who discussed how the five constructs compare with other five-factor models of personality. They reported that the origin for the PSY-5 Scales was research done by Harkness (1992) on the *DSM-III-R*<sup>TM</sup> (American Psychiatric Association, 1987) criteria for diagnosing personality disorders. In contrast to other five-factor models that had been explored at the time as ex post facto dimensional models of personality disorder symptomatology, the PSY-5 constructs originated from clinical criteria for diagnosing personality disorders.

Following their introduction, a considerable body of research established that the PSY-5 Scales provided MMPI-2 users an important link to a well-studied model of personality. They were particularly helpful as dimensional indicators of possible personality disorder symptomatology. Consequently, Allan Harkness and John McNulty agreed to consider revising the scales using the 338-item MMPI-2-RF pool.

Harkness et al. (2014) described the revision of the scales as an iterative process involving internal (item-scale) and external (item-criterion) analyses. They began by identifying the “surviving” 96 of the 139 PSY-5 items and went through a series of steps designed to yield revised scales that would provide comparable and possibly improved measures of the PSY-5 constructs. Based on these analyses, 22 of the 96 surviving items were deleted from the revised scales and 30 items not included on the original measures were added, yielding five nonoverlapping scales composed of 104 items. Harkness et al. (2014) compared the original and revised scales and concluded that the new measures showed several improvements, including a few lower intercorrelations and evidence of comparable-to-improved external validity. The PSY-5 Scales provide a link to contemporary psychopathology models such as the alternative *DSM-5* model of personality disorders (e.g.,

Anderson et al., 2013, 2015). An extensive set of empirical correlates for the PSY-5 Scales was provided in the *MMPI-2-RF Technical Manual* and augmented in subsequent peer-reviewed research. The scales are listed and described in Table 1-1.

The 51 MMPI-2-RF scales listed in Table 1-1 were the starting point for development of the MMPI-3. Chapter 2 of this manual describe the processes followed to revise and augment these measures.

## Norms

The MMPI-2-RF normative sample was essentially the same one used in standardizing the MMPI-2, with one modification. Beginning with the original version of the inventory, most MMPI standard scores were gender specific (referred to as “gendered”). Apparently, Hathaway and McKinley (1943) used gendered norms because they observed differences in the raw scores of women and men in the original MMPI normative sample. They did not address this issue in the test manual. However, later, when normative data for several new MMPI scales were reported, Hathaway and Briggs (1957) indicated that nongendered norms might be used if gendered norms yielded “nearly identical T-scores for the same raw score at about + 2 SD” (p. 366).

Use of group-specific norms (such as the gendered norms) is predicated on the assumption that group differences in raw scores are irrelevant with respect to the attributes being assessed and must therefore be eliminated when transforming raw scores to standard scores. This would be the case, for example, if members of a group were more willing to report certain characteristics about themselves than were nonmembers of that group, resulting in scale score differences that are a product of response style rather than true differences in the attribute being measured. Although they did not state this explicitly, Hathaway and McKinley apparently assumed that the gender differences they observed reflected a differential willingness of men and women to report certain personality characteristics rather than reflecting relevant group differences.

The practice of reporting and interpreting gendered norms for MMPI scales became standard and was maintained with the MMPI-2 (Butcher et al., 1989). Gendered norms were also reported for all the scales included in the revised edition of the MMPI-2 manual (Butcher et al., 2001). However, testing in certain areas, particularly in personnel screening, is governed by laws that prohibit the use of group-specific norms. The federal Civil Rights Act of 1991 has been interpreted as prohibiting use of gendered norms in personnel screening. Soon after this act was passed, Tellegen and colleagues (1993) explored the possibility of developing nongendered norms for the MMPI-2 and concluded that they operate in a manner similar to that of traditional gender-specific norms. They further observed that nongendered norms did not appear to disadvantage either gender. Tellegen and colleagues’ analyses did not incorporate all the MMPI-2 scales then being used. Subsequently, a set of nongendered norms for all MMPI-2 scales included in the test manual was developed by Ben-Porath and Forbey (2003), and this normative dataset was used to derive standard scores for the MMPI-2-RF.

Ben-Porath and Forbey (2003) conducted analyses to explore the impact of using nongendered versus gendered MMPI-2 norms on each of the 118 MMPI-2 scales and subscales (except for Clinical Scale 5 and the Gender Role–Masculine [GM] and Gender Role–Feminine [GF] Supplementary Scales) included in the MMPI-2 manual. The nongendered T score was subtracted from the corresponding gendered T score for each raw-score level for every MMPI-2 scale. There was a remarkable dearth of meaningful differences between gendered and nongendered norms. Among the 118 comparisons conducted for each gender, nearly all of the mean differences were below 3 T-score points. Overall, these analyses indicated considerable similarity in T scores based on gendered versus nongendered norms. Moreover, it was reasonable to conclude that the few

instances of clinically significant differences were substantive (which would be masked by gendered norms) rather than nonsubstantive (e.g., stylistic).

Based on these analyses, only nongendered norms were developed for the MMPI-2-RF. The nongendered normative sample was created by combining data for the 1,138 men of the MMPI-2 normative sample with those of 1,138 women selected randomly from the 1,462 normative women. Uniform T scores (described and discussed earlier) were generated for the Substantive Scales (with the exception of the Interest Scales). However, it was also possible to compare a test taker's scores with just the men or just the women of the MMPI-2-RF normative sample by using comparison groups, which provided descriptive statistics (means and standard deviations) by gender for a wide range of settings, including the normative sample.

Copyright © 2020 by the Regents of the University of Minnesota. All rights reserved.