Introducing the WAIS-IV
Overview

• Introduction
• Revision Goals
• Test Structure
• Normative / Validity / Clinical Information
Wechsler’s View of Intelligence

"The global capacity of a person to act purposefully, to think rationally, and to deal effectively with his/her environment."

WAIS: A Historical Perspective

Wechsler-Bellevue
Wechsler-Bellevue II
WAIS
WAIS-R
WAIS-III
WAIS-IV

1939
1946
1955
1981
1997
2008
Revision Goals
Update Theoretical Foundations

- Eliminate Dual IQ/Index Score Structure
  • Consistent with WISC-IV

- Enhance Measure of Fluid Intelligence
  • Develop additional measure of fluid reasoning: Figure Weights

- Enhance Measure of Working Memory
  • Revise Arithmetic and Digit Span to emphasize WM

- Enhance Measure of Processing Speed
  • Develop additional PS subtest: Cancellation
Enhance Clinical Utility

- Co-normed with the Wechsler Memory Scale-IV
- Additional Special Group Studies (e.g., Mild Cognitive Impairment, Borderline Intellectual Functioning)
- Develop an Upgrade Kit in 2009 for Specialists (e.g., Geropsychologists & Neuropsychologists)
Improve Psychometric Properties

- Update Norms
- Expand FSIQ Range
- Improve Floors and Ceilings
- Maintain or improve subtest and composite reliability
- Provide initial evidence of validity
Enhance User-Friendliness

• Reduce Testing Time
• Revise Instructions
• Redesign Record Form
• Increase Portability
• Separate WAIS-IV and WMS-IV Technical Manuals
Increase Developmental Appropriateness

- Add demonstration and sample items
- Reduce vocabulary level of instructions
- Drop Object Assembly
- Reduce emphasis on motor demands
- Reduce emphasis on time-bonus
- Enlarge visual stimuli
- Eliminate auditory concerns on DS and LN
Test Structure
Test Structure

Verbal Comprehension Scale
Core Subtests
Similarities
Vocabulary
Information
Supplemental Subtests
Comprehension

Perceptual Reasoning Scale
Core Subtests
Block Design
Matrix Reasoning
Visual Puzzles New!
Supplemental Subtests
Picture Completion
Figure Weights (16-69) only New!

Working Memory Scale
Core Subtests
Digit Span
Arithmetic
Supplemental Subtests
Letter-Number Sequencing (16-69 only)

Processing Speed Scale
Core Subtests
Symbol Search
Coding
Supplemental Subtests
Cancellation (16-69 only) New!

FSIQ

Ages 16:0 – 90:11

New!
Subtest Modifications

• 4 Subtests Dropped
  - Object Assembly, Picture Arrangement, Coding Recall (Digit Symbol-Incidental Learning), and Coding Copy (Digit Symbol-Copy)

• 12 Subtests Retained with Modifications
  - Similarities, Vocabulary, Information, Comprehension
  - Block Design, Matrix Reasoning, Picture Completion
  - Digit Span, Arithmetic, Letter-Number Sequencing
  - Symbol Search, Coding

• 3 New Subtests
  - Visual Puzzles, Figure Weights, Cancellation
Changes to Verbal Subtests

- **Similarities**
  - Replaced items, Revised scoring rules, Added sample responses

- **Vocabulary**
  - Replaced items, Revised scoring rules, Added sample responses, Added picture items

- **Information**
  - Replaced items, Revised scoring rules, Added sample responses

- **Comprehension**
  - Replaced items, Revised scoring rules, Added sample responses
Changes to Performance Subtests

- **Block Design**
  - Used Model and Stimulus Book for all teaching items, Added 4-block diamond items before 9-block items, Reduced # of items with time bonus, Added BDN process score

- **Matrix Reasoning**
  - Retained 2 of 4 item-types, Added sample item for each type, Clarified 30-second guideline

- **Picture Completion**
  - Enlarged visual stimuli and Added ceiling items
Changes to Working Memory Subtests

- **Digit Span**
  - Added new sequencing task, Eliminated rhyming numbers

- **Arithmetic**
  - Omitted reference to English measurement system and currency, Decreased emphasis on mathematical skills to increase emphasis on working memory

- **Letter-Number Sequencing**
  - Eliminated rhyming numbers and letters, Omitted use of L, I, O, and zero, Implemented graduated teaching strategy
Changes to Processing Speed Subtests

- Symbol Search
  - Enlarged symbols, Revised format and instructions
- Coding
  - Enlarged symbols and writing space, Redesigned for more equivalent item difficulty across task, Revised instructions for consistency with WISC-IV
# Reduced Discontinue Rules

<table>
<thead>
<tr>
<th>Subtest</th>
<th>WAIS-III</th>
<th>WAIS-IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>BD</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>SI, MR, AR, CO</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>VC, IN</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>PCm</td>
<td>5</td>
<td>4</td>
</tr>
</tbody>
</table>
New Subtests: Visual Puzzles

“Which 3 of these pieces go together to make this puzzle?”
New Subtests: Figure Weights

“Which one of these goes here to balance the scale?”
New Subtests: Cancellation

“When I say go, draw a line through each red square and yellow triangle.”
Composite Scores

- FSIQ
  - Based on 10 core subtests
- Index Scores: Primary interpretation level
  - VCI & PRI: 3 core subtests each
  - WMI & PSI: 2 core subtests each
- GAI = VCI + PRI
  - Optional Index score
Process Scores

- **Block Design**
  - Block Design No Time Bonus (BDN)

- **Digit Span**
  - Digit Span Forward (DSF), Digit Span Backward (DSB), Digit Span Sequencing (DSS)
  - Longest Digit Span Forward (LDSF), Longest Digit Span Backward (LDSB), Longest Digit Span Sequence (LDSS)

- **Letter-Number Sequencing**
  - Longest Letter-Number Sequence (LLNS)
Normative Sample Information

Validity Study Information

Clinical Study Information
WAIS-IV Normative Sample

- Ages 16-90
- Normative sample: N = 2200
  - 200 examinees per age band for ages 16-69
  - 100 examinees per age band for ages 70-90
- National sample stratified by:
  - Sex
  - Education Level
  - Ethnicity
  - Region
WAIS-IV Validity Studies

- WMS-IV Co-norming Study (2009 pub)
- WMS-III Correlational Study (16:0-89:11)
- WAIS-III Equating Study (16:0-89:11)
- WISC-IV Equating Study (16:0-16:11)
- WIAT-II Linking Study (16:0-19:11)
- CMS Correlational Study (16:0-16:11)
WAIS-IV Clinical Studies

- Intellectual Disability: Mild Severity
- Intellectual Disability: Moderate Severity
- Borderline Intellectual Functioning
- Gifted Intellectual Functioning
- Autistic Disorder
- Asperger’s Disorder
- Learning Disability: Reading
- Learning Disability: Math
- ADHD
- TBI
- Mild Cognitive Impairment
- Dementia of the Alzheimer’s Type
- Depression