



Clinical Applications of the Wechsler Memory Scale-Fourth Edition and
Advanced Clinical Solutions for WAIS-IV, WMS-IV
Amy Dilworth Gabel, Ph.D., NCSP

PEARSON 

Forensic Evaluations: Using Data from WAIS-IV, WMS-IV and The Advanced Clinical Solutions (ACS) for WAIS-IV and WMS-IV

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 **Setting the Stage-**

The Supreme Court of the United States has repeatedly, stated that "the criminal trial of an incompetent defendant violates due process."
Medina v. California, 505 U.S. 437, 553; 112 S. Ct. 2572, 2581–2582 (1992). The Supreme Court has noted that competence to stand trial is "rudimentary," *Riggins v. Nevada*, 504 U.S. 127,139–140; 112 S. Ct. 1810, 1817–1818 (1992), Chief Justice Kennedy, concurring.

<http://www.ap-ls.org/aboutpsychlaw/3182011sqfdraft.pdf>
<http://www.ap-ls.org/aboutpsychlaw/currentforensicguidelines.pdf>

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 **Disclosure**

◆ Please note:

- the presenter is the Director of Training, Professional Development, and Consultation for Pearson Clinical Assessment
- Pearson products will be used in case examples during this free webinar.

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Objectives

- ♦ Provide a brief description of several contemporary standardized measures for forensic applications
- ♦ Describe best practices in assessment in child custody and other forensic evaluations
- ♦ Use sample case information to describe use of instruments such as WAIS-IV, WMS-IV and ACS, TFLS to answer a specific clinical question.

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Three Batteries

- ♦ WAIS-IV, WMS-IV, and ACS were developed to be used together.
- ♦ Decisions made in the development of one instrument affected the development of other components.
- ♦ Each instrument provides unique information about the examinee.

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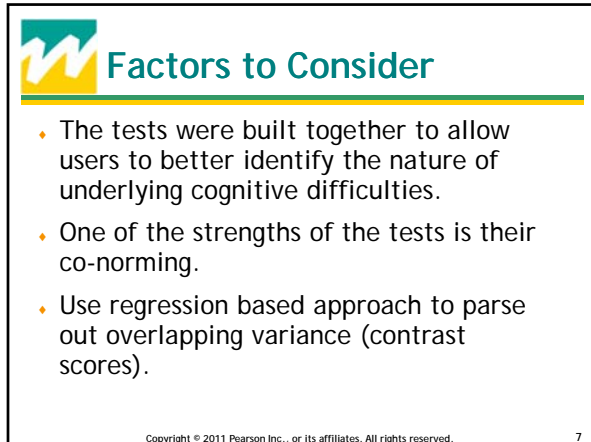


Factors to Consider

- ♦ Difficult to build one instrument to answer all possible questions.
- ♦ Not all clinicians will need all pieces of information.
- ♦ Expectation is that clinicians will select those measures that best fit their practice and workflow.

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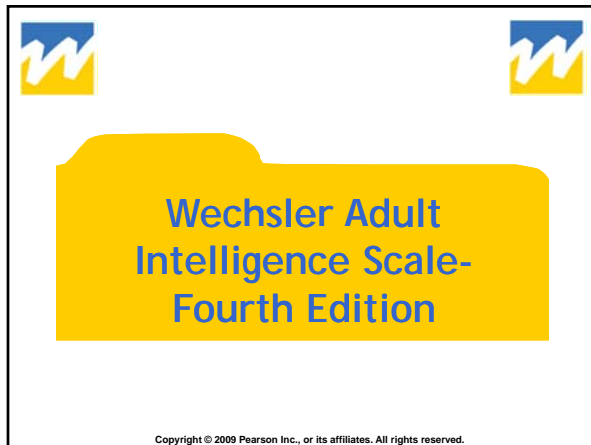
6



Factors to Consider

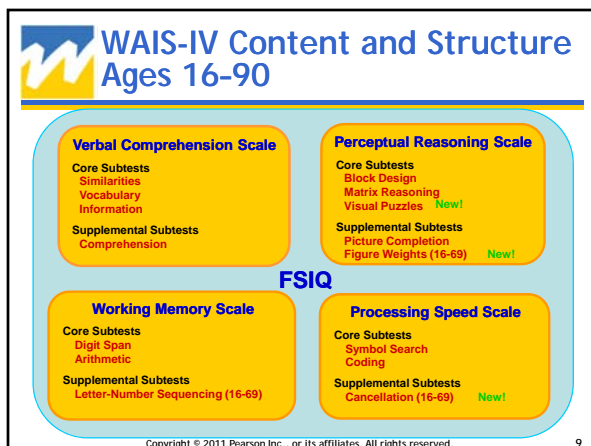
- The tests were built together to allow users to better identify the nature of underlying cognitive difficulties.
- One of the strengths of the tests is their co-norming.
- Use regression based approach to parse out overlapping variance (contrast scores).

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Wechsler Adult Intelligence Scale-Fourth Edition

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WAIS-IV Content and Structure Ages 16-90

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) *New!*

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

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

FSIQ

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What is the GAI?

As compared to the FSIQ, the **WAIS-IV GAI** provides the practitioner with a summary score that minimizes the influence of working memory and processing speed.

GAI = sum of scaled scores for VCI subtests and PRI subtests


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What is the GAI?

- ♦ WAIS-IV GAI should be used for discrepancy comparisons
 - Ability and Memory
 - Ability and achievement
- ♦ GAI is **NOT** a replacement for FSIQ

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General Ability Index - Note!

- ♦ The GAI is used when neuropsychological deficits adversely impact performance on WM and PS.
- ♦ Impaired performance on WM and/or PS may mask actual differences between general cognitive ability (FSIQ) and other cognitive functions (e.g., memory).
- ♦ The GAI does not replace the FSIQ. Report and interpret GAI along with FSIQ.

[see WAIS-IV Technical Manual]

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General Ability Index

Consider* using the GAI if a significant and unusual discrepancy exists between

- ✓ VCI and WMI; or
- ✓ PRI and PSI; or
- ✓ WMI and PSI, or
- ✓ between subtests within WMI and/or PSI.


Note: The FSIQ is the most valid measure of overall cognitive ability and WM and PS are vital to comprehensive evaluation of cognitive ability.

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Wechsler Memory Scale-Fourth Edition


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Memory and Learning

- ◆ Encoding: External information is transformed into mental representations or memories and stored in STM.
- ◆ Consolidation: Information from immediate memory is solidified into long-term memory stores.
- ◆ Retrieval: Information is brought into conscious awareness.


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 **WMS-IV Test Battery**

Seven subtests:

- ♦ Logical Memory, Verbal Paired Associates, and Visual Reproduction - retained from WMS-III.
- ♦ Brief Cognitive Status Exam, Designs, Spatial Addition, and Symbol Span - NEW.

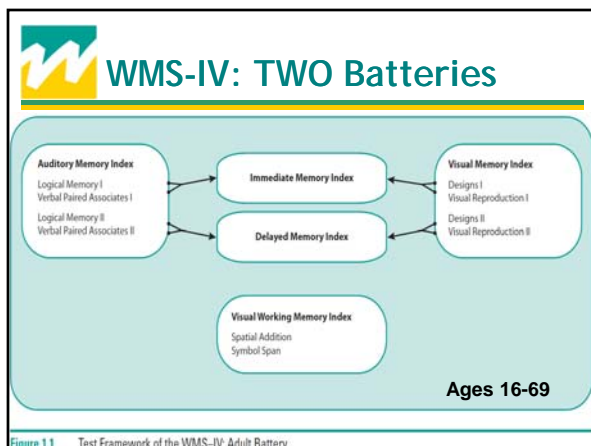
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 **WMS-IV Test Battery**

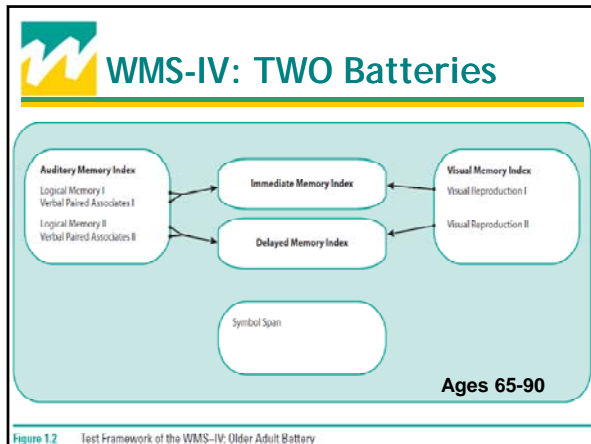
Logical Memory, Verbal Paired Associates, Designs, and Visual Reproduction have two conditions:

the immediate condition (I) and the delayed condition (II), which are administered about 20-30 minutes apart.

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- Types of Scores**
- Primary Subtest Scaled Scores (mean=10, sd = 3)
 - Index Scores (mean=100, sd = 15)
 - Process Scores (Scaled Score or Cumulative Percentage)
 - Contrast Scaled Scores
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ACS for WAIS-IV/WMS-IV

Advanced Clinical Solutions for WAIS-IV and WMS-IV is an individually administered array of tests, procedures, and scores addressing specific clinical questions and needs.

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 **Applications of ACS**

Additional assessments of:

- premorbid functioning
- effort
- social cognition
- executive function

A separate instrument, *Texas Functional Living Scale*, linked with the WAIS-IV and WMS-IV, can be used to assess daily living skills.


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 **Applications of ACS**




and software that delivers:

- Demographically Adjusted Norms
- Additional scores for WAIS-IV and WMS-IV
- Reliable Change scores

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Components of ACS


Memory Grid
Cards
Word Choice Stimulus Book
Record Forms/Booklets

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Key Best Practices

In Forensic Evaluations




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Neutrality on the Part of Examiners

- ◆ Difficult cases
- ◆ Contentious
- ◆ Follow strict professional boundaries
- ◆ Conduct standard assessment
 - Reliable data essential
- ◆ Recognize your own values and beliefs
 - biases




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Important First Steps


- ◆ Determine the purpose and scope of the evaluation
- ◆ Obtain informed consent
 - If capacity an issue, assent and consent from authorized person
 - Suggested with collateral informants as well

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 **Sample Case Study**


**Clinical Application
Custody Evaluation**

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 **Guiding Principles in Custody Evaluations**

- ◆ The purpose of these evaluations surrounds the best interests of the child
 - Child's welfare is top concern
- ◆ Evaluation focuses on parenting capabilities, child's needs, and the fit between these two
- ◆ See *APA Guidelines for Child Custody Evaluations in Family Law Proceedings February 2009*

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 **Guidelines for Evaluation**

- ◆ Always interpret within the context relevant to key issues in these cases
 - Access
 - Decision-making
 - Caretaking
- ◆ Align findings with environmental conditions such as support from family and/or treatment

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Key Components-

- ◆ Psychological testing, clinical interview, behavioral observation.
- ◆ Information from varied sources (*e.g.* school, physician, child care providers, extended family, friends, etc.)
- ◆ Corroborated evidence
- ◆ May or may not culminate in a final recommendation to the court

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Background Information

- ◆ Evaluation to assist in the determination of access and caretaking.
- ◆ Client Y, as part of the divorce proceedings has asserted that X is unfit to assume primary caretaking for the children (aged 2 and 4-years).

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Background Information

- ◆ Y reported that X was in a mountain biking accident about a year ago.
- ◆ Since then, she's been "different."
 - Forgetful
 - Irritable - really "short fuse"
 - Disorganized
 - Sometimes depressed

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Assessment Methods

- Record Review
- Clinical Interview
- WAIS-IV
- WMS-IV + Additional Scores
- Texas Functional Living Scales
- D-KEFS: Trail Making, Verbal Fluency
- ACS: Social Perception (considered)
- ACS: Suboptimal Effort


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WAIS-IV Scores

Index/Subtest	Composite Score/ Scaled Score	Index/Subtest	Composite Score/ Scaled Score
Verbal Comprehension	105	Perceptual Reasoning	75
Similarities	8	Block Design	5
Vocabulary	14	Matrix Reasoning	7
Information	11	Visual Puzzles	5
Working Memory	83	Processing Speed	79
Digit Span	7	Coding	6
Arithmetic	7	Symbol Search	6
Full Scale IQ = 83 General Ability Index = 89			


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Index-Level Discrepancy Comparisons

Comparison	Score 1	Score 2	Difference	Critical Value .05	Significant Difference Y / N	Base Rate Overall Sample
VCI - PRI	105	70	30	8.32	Y	1.5
VCI - WMI	105	83	22	8.81	Y	4.4
VCI - PSI	105	79	26	12.12	Y	5.7
PRI - WMI	75	83	-8	8.81	N	28.9
PRI - PSI	75	79	-4	12.12	N	42
WMI - PSI	83	79	4	12.47	N	38.2
FSIQ - GAI	83	89	-6	3.68	Y	12.4


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Interpretation - Ability

- ◆ X's general cognitive ability is within the low average range of intellectual functioning, as measured by the FSIQ (83). The resulting conclusion using GAI is the same, but GAI = 89.
- ◆ Her score on VCI within the average range, while PR and PS are borderline.
- ◆ Her score on the WMI is within the low average range.


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FSIQ: Functional Implication

- ◆ X may experience some difficulty applying abstract, visual thinking and reasoning abilities, particularly in time sensitive situations.
- ◆ She may also experience difficulties on tasks requiring cognitive flexibility, mental control, sustained attention.
- ◆ However, are the difficulties (in and of themselves) such that she would be unable to provide adequate care for 2 small children?

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WMS-IV Results (Selected Subtests)

WMS-IV Primary Subtest Scaled Score Summary				
Subtest	Domain	Raw Score	Scaled Score	Percentile Rank
Logical Memory I	AM	16	6	9
Logical Memory II	AM	0	1	0.1
Verbal Paired Associates I	AM	26	7	16
Verbal Paired Associates II	AM	8	7	16

Index Score Summary					
Index	Sum of Scaled Scores	Index Score	Percentile Rank	95% Confidence Interval	Qualitative Description
Auditory Memory	21	AMI 72	3	67-80	Borderline

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Subtest-Level Contrast Scaled Scores

Logical Memory			
Score	Score 1	Score 2	Contrast Scaled Score
LM II Recognition vs. Delayed Recall	51-75%	1	1
LM Immediate Recall vs. Delayed Recall	6	1	1
Verbal Paired Associates			
Score	Score 1	Score 2	Contrast Scaled Score
VPA II Recognition vs. Delayed Recall	17-25%	7	8
VPA Immediate Recall vs. Delayed Recall	7	7	10

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Ability and Memory Comparison

Predicted Difference Method						
Index	Predicted WMS-IV Index Score	Actual WMS-IV Index Score	Difference	Critical Value	Significant Difference Y / N	Base Rate
Auditory Memory	94	72	22	7.56	Y	4-5%

Contrast Scaled Scores			
Score	Score 1	Score 2	Contrast Scaled Score
General Ability Index vs. Auditory Memory Index	89	72	5
Verbal Comprehension Index vs. Auditory Memory Index	105	72	3
Working Memory Index vs. Auditory Memory Index	83	72	6

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Report Description

While initial encoding on these auditory memory tasks was not particularly strong (similar to performance on the encoding sections of the WAIS-IV memory items), her recall was unexpectedly poor in the delayed conditions particularly for more lengthy stimuli.

Specifically, on the Logical Memory-II subtest where she was asked to recall stories read to her previously, X recalled no details, resulting in a contrast scaled score of 1 between immediate and delayed conditions. This score is the lowest score that may be earned, and indicates that X performance on the delayed tasks, as we take into account her immediate memory, is unexpectedly poor, and poorer than most others with similar levels of encoding.

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Report Findings

When asked to recall the stories, X appeared to be frustrated, and was somewhat disbelieving that she'd even be asked to recall such information. She did not spend much time trying to recall any details, but relatively quickly stated that she had "no idea." Likewise, she demonstrated somewhat inconsistent recognition skills for these verbally presented stories, though this was a relatively stronger skill (also earning a Contrast Scaled Score of 1 as delayed recall was evaluated controlling for her ability to recognize details). She performs better, however, when there is repetition and less complex information to be recalled and recognized, as indicated by her performance on the delayed condition associated with the Verbal Paired Associates task (Scaled Score = 7).


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Additional Scores-AMI

Index	Index Score	Percentile Rank	Confidence Interval	Qualitative Description
Auditory Immediate	80	9	74-89	Low Average
Auditory Delayed	64	1	59-77	Extremely Low
Auditory Recognition	91	27	82-105	Average

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Additional Scores-AMI

WMS-IV Verbal Paired Associates Additional Contrast Scaled Scores

Score	Score 1	Score 2	Contrast Scaled Score
VPA I Recall A vs. Recall D	5	9	13
VPA I Easy Items vs. Hard Items	2	10	17

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Executive Function

ACS Assesses Executive Functions with selected tests from Delis-Kaplan Executive Function System (D-KEFS)

- ♦ *Trail Making* (Conditions 2, 3, & 4)
 - Number Sequencing, Letter Sequencing, Number-Letter Switching
- ♦ *Verbal Fluency*
 - Letter Fluency, Category Fluency, and Category Switching

Now correlated with WAIS-IV and WMS-IV


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DKEFS Trails (ACS)

Condition	Raw Score	Scaled Score
Number Sequencing	27	11
Letter Sequencing	30	10
Number-Letter Switching	90	09


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DKEFS Verbal Fluency (ACS)


Condition	Raw Score	Scaled Score
Letter Fluency	49	13
Category Fluency	44	12
Category Switching (Total Correct Responses)	16	12
Category Switching (Total Switching Accuracy)	7	05

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 **Report Excerpt**


On tasks, where X had to do things like name items from *alternating* categories, or switch in her trail from letters to numbers, she experienced significantly greater difficulty, taking more time to complete the task and making more errors. While this pattern is often seen in normally functioning adults, X experienced greater difficulty than most others in her age group, as indicated by her scores on the DKEFS items requiring this type of cognitive flexibility

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 **Report Excerpt**


It is likely that as the demands for flexibility and variation in performance increase, X will experience greater difficulty and frustration with her performance. She may also have the tendency to work quickly but make errors. Based on these evaluation results, X's ability to sustain attention, concentrate, exert mental control and cognitive flexibility are weaknesses relative to her verbal reasoning abilities. This pattern may make the processing of routine and complex information more time-consuming for her.

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 **Additional Key Components**

- ◆ Assessment of effort
- ◆ Assessment of emotion and behavior
- ◆ Premorbid functioning (before accident)
- ◆ Interview
 - Clients
 - Family/friends, work supervisor(s), as appropriate


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 **Suboptimal Effort**

Criteria for definite malingering, neurocognitive deficit:

- Presence of substantial external incentive,
- Definitive negative response bias, and
- The response bias is not accounted for by psychiatric, neurological, or developmental factors (Slick, Sherman, and Iverson, 1999).


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 **Assessing Suboptimal Effort - Choices**

- ♦ ACS Word Choice*
- ♦ WAIS-IV Reliable Digit Span*
- ♦ WMS-IV*
 - Logical Memory Delayed Recognition
 - Verbal Paired Associates Delayed Recognition
 - Visual Reproduction Delayed Recognition
- Validity Indicator Profile (VIP)

*[Available for ages 16-69]


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 **Suboptimal Effort**

- ♦ Use at least 3 indicators.
- ♦ Require at least 2 indicators at or below cut-off when using low cut-offs (e.g. 10%).


No indication of suboptimal effort with X.

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 **Mental Health Assessment**


- ◆ MMPI-RF and interview suggest Avoidant Personality features, but no diagnosis

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 **Drawing Conclusions**

- ◆ Must be done within the context of the all assessment procedures
 - Y
 - Children
 - Ultimately their best interests
- ◆ Data collected to this point suggest that support may be needed, but that X should be able to provide basic care for children
 - Notes, reminders, family support

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 **Sample Case Study**

**Clinical Applications
Death Penalty Case
Sam Sample19**

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Perspectives-

- ♦ "Courts should not operate under the illusion that the simple administration of any test will resolve all questions regarding...person's status in a criminal case. Systematic assessment requires the thoughtful selection and administration of valid examination instruments together with careful observation, interviewing, and analysis of all the data by a professional with proper training and experience." Ellis & Luckasson (1985), *pp.* 487-88.

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Case Background Information

- ♦ Sam is a 19-year old male.
- ♦ Dropped out of high school at age 17 (10th grade).
- ♦ At age 18, Sam and two friends killed a 17-year old female.
- ♦ The three defendants were convicted of first degree murder and sentenced to death.
- ♦ The attorney argued Sam could not be executed because he had an intellectual disability.

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Key Evaluation Points- AAID Definition of Intellectual Disability

Intellectual disability is a disability characterized by significant limitations both in intellectual functioning and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18.

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Clinical Considerations in Applying the AAID Definition of ID (in this case)

...in defining and assessing intellectual disability, the American Association on Intellectual and Developmental Disabilities (AAIDD) stresses that professionals must take additional factors into account, such as the community environment typical of the individual's peers and culture. Professionals should also consider linguistic diversity and cultural differences in the way people communicate, move, and behave.


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Assessment Methods

- Clinical Interview
- Record Review
- WAIS-IV
- WMS-IV + Additional Scores
- Texas Functional Living Scales
- D-KEFS: Trail Making, Verbal Fluency
- ACS: Social Perception
- ACS: Suboptimal Effort


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Record Review

- Classified with a Behavioral/Emotional Disability in Kindergarten.
- Score on measure of intellectual ability in extremely low range.
- Score on adaptive behavior in below average range.
- Received educational services in separate classroom from K-grade 10.


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Record Review

- Between Kindergarten and Grade 10, Sam was re-evaluated three times.
 - Scores on measures of intellectual ability, generally, were within the range of intellectual disability-mild severity.
 - Exception: a score within the Low Average range on the Test of Nonverbal Intelligence when Sam was in 9th grade
- Concerns were that Sam's inappropriate behaviors were secondary to intellectual deficits.

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What do we know about Intellectual Disability-Mild Severity and WAIS-IV?

Composite	Clinical Mean	Control Mean	Mean Diff.	p value	Effect Size
VCI	65.9	96.6	30.68	<.01	2.83
PRI	65.4	100.1	34.66	<.01	3.07
WMI	61.5	97.4	35.85	<.01	3.32
PSI	63.8	100.2	36.45	<.01	2.69
FSIQ	58.5	98.1	39.59	<.01	4.01

n = 73

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Sam's WAIS-IV Scores

Index/Subtest	Composite Score/ Scaled Score	Index/Subtest	Composite Score/ Scaled Score
Verbal Comprehension	63	Perceptual Reasoning	67
Similarities	3	Block Design	4
Vocabulary	4	Matrix Reasoning	4
Information	4	Visual Puzzles	5
Working Memory	63	Processing Speed	71
Digit Span	3	Coding	4
Arithmetic	4	Symbol Search	5
Full Scale IQ = 60		General Ability Index = 61	

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Index-Level Discrepancy Comparisons

Comparison	Score 1	Score 2	Difference	Critical Value .05	Significant Difference Y / N	Base Rate Overall Sample
VCI - PRI	63	67	-4	9.29	N	--
VCI - WMI	63	63	0	9.29	N	--
VCI - PSI	63	71	8	10.99	N	--
PRI - WMI	67	63	4	10.17	N	--
PRI - PSI	67	71	-4	11.75	N	--
WMI - PSI	63	71	-8	11.75	N	--
FSIQ - GAI	60	61	-1	3.41	N	--

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Ability


- ♦ Sam's general cognitive ability is within the extremely low range of intellectual functioning, as measured by the FSIQ (= 60).
- ♦ His score on the PSI is in the Borderline range. His scores on other indices are within the Extremely Low range.

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FSIQ: Functional Implication

Sam may experience great difficulty in keeping up with his peers in a wide variety of situations that require thinking and reasoning abilities.

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Adaptive Behavior



Texas Functional
TFLS
Living Scale

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Introduction to TFLS

- ◆ Brief assessment of functional competence
 - 15 minutes to administer
 - Assesses Instrumental Activities of Daily Living (IADL)
- ◆ Performance-based measure
 - Direct assessment of skills
- ◆ Designed for Ages 16-90

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What do we know about TFLS and Intellectual Disability-Mild?

- ◆ Mean TFLS T-Score for Mild ID group was 28.6.
- ◆ Mean of 28.6 was significantly lower than mean of matched control group (52.6).
- ◆ Effect size was 3.13.

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Instrumental Activities of Daily Living

Texas Functional Living Scale

Score	Time Total	Money and Calculation Total	Communication Total	Memory Total	TFLS Total
Raw Score	5	4	19	3	31
Subscale Cumulative Percentage	3-9	3-9	3-9	3-9	
TFLS T-Score					30

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Executive Function

Assessing Executive Function with selected tests from Delis-Kaplan Executive Function System (D-KEFS)

- ♦ *Trail Making* (Conditions 2, 3, & 4)
 - Number Sequencing, Letter Sequencing, Number-Letter Switching
- ♦ *Verbal Fluency*
 - Letter Fluency, Category Fluency, and Category Switching

Now correlated with WAIS-IV and WMS-IV

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Verbal Fluency

Note-this is a language test in which deficits in executive functioning may be inferred if no significant language impairments are present.

* Not administered to Sam.

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Trail Making

D-KEFS Trail Making

- Number Sequencing SS = 6
- Letter Sequencing SS = 5
- Number-Letter Switching SS = 4

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Social Perception

Social Perception has 3 tasks

- Affect Naming (Happy, Sad, Angry, Surprise, Disgust, Fear, and Neutral)
- Prosody-Face Matching (includes Sarcasm)
- Prosody-Pairs Matching (does tone of voice change meaning of verbal expression?)

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What do we know about Intellectual Disability and Social Perception?

Total 3.6
Affect Naming 4.9
Prosody 4.2
Pairs 3.9

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Suboptimal Effort

Criteria for definite malingering,
neurocognitive deficit:

- Presence of substantial external incentive,
- Definitive negative response bias, and
- The response bias is not accounted for by psychiatric, neurological, or developmental factors (Slick, Sherman, and Iverson, 1999).

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Assessing Suboptimal Effort

- ♦ ACS Word Choice
- ♦ WAIS-IV Reliable Digit Span
- ♦ WMS-IV
 - Logical Memory Delayed Recognition
 - Verbal Paired Associates Delayed Recognition
 - Visual Reproduction Delayed Recognition

[Available for ages 16-69]

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Word Choice

1. Examinee sees and hears 50 words in succession.
2. Examinee identifies each word as either man-made or natural.
3. Examinee sees card with 50 pairs of words and selects word that was previously presented from each pair.

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Clinical Applications of the Wechsler Memory Scale-Fourth Edition and
Advanced Clinical Solutions for WAIS-IV, WMS-IV
Amy Dilworth Gabel, Ph.D., NCSP

3. Digit Span

Best Ages 16-90
Forward: Item 1
Backward: Sample Item, Item 1
Sequencing: Sample Item, Item 1

Discontinue:
Forward: After scores of 8 on both trials of an item.
Backward: After scores of 8 on both trials of an item.
Sequencing: After scores of 8 on both trials of an item.

Score:
 Score 0 or 1 point for each trial.
DSE, DSB, and DSS:
 Total raw score for Forward, Backward, and Sequencing, respectively.
LSDF, LSDB, and LSSE:
 Number of digits recalled on best trial across 1 point on Forward, Backward, and Sequencing, respectively.

Item	Total	Response	Total Score	Item Score
1	9-7	9-7	0	0
2	6-3	6-3	0	0
3	5-8-2	5-8-2	0	0
4	4-2-7-3-1	4-2-7-3-9	0	0
5	3-9-2-4-8-7	7-5-3-8-6	0	0
6	2-1-3-6-7-3	3-9-2-4-8-7	0	0
7	4-1-7-9-3-8-6	6-1-9-4-7-3	0	0
8	6-9-1-7-4-2-8	4-9-7-9-3-8-6	0	0
9	3-8-2-9-6-1-7-4	6-9-1-7-4-2-8	0	0
10	5-8-1-3-2-6-4-7	3-8-2-9-6-1-7-4	0	0
11	2-7-5-8-6-3-1-9-4	5-8-1-3-DK	0	0
12	7-1-3-9-4-2-5-6-8		0	0

LSDF (Max = 8) **7** Digit Span Forward (DSF) Total Raw Score (Maximum = 16) **9**

Backward


Item	Total	Correct Response	Response	Total Score	Item Score
1	7-1	1-7	1-7	0	0
2	3-4	4-3	4-3	0	0
3	3-1	1-3	1-3	0	0
4	2-4	4-2	4-2	0	0
5	4-6	6-4	6-4	0	0
6	5-7	7-5	7-5	0	0
7	6-2-9	9-2-6	9-2-6	0	0
8	4-7-5	5-7-4	5-7-4	0	0
9	8-1-2-6-7-3-4-9	8-1-2-6-7-3-4-9	8-1-2-6-7-3-4-9	0	0
10	7-2-8-1-5-6-4-3	3-4-6-5-1-8-2-7	3-4-6-DK	0	0

LSDB (Max = 8) **8** Digit Span Backward (DSB) Total Raw Score (Maximum = 16) **11**

WAIS-IV Reliable Digit Span Calculation

Reliable Digit Span Forward (Maximum = 9)	Reliable Digit Span Backward (Maximum = 8)	Reliable Digit Span Total Raw Score (Maximum = 17)
6	3	9

WAIS-IV Record Form 3




Suboptimal Effort

- Use at least 3 indicators.
- Require at least 2 indicators at or below cut-off when using low cut-offs (e.g. 10%).

See Effort Assessment Score Report Sam Sample19.


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Ability-Memory Analysis

Ability Score Type: GAI (= 61): Simple Difference Method						
Index	GAI	WMS-IV Index Score	Difference	Critical Value	Significant Difference Y / N	Base Rate
Auditory Memory	61	65	-4	10.95	N	--
Visual Memory	61	67	-6	9.48	N	--
Visual Working Memory	61	63	-2	12.84	N	--
Immediate Memory	61	63	-2	10.95	N	--
Delayed Memory	61	62	-1	10.95	N	--


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What do we know about Intellectual Disability-Mild Severity and WMS-IV?

Index	Clinical Mean	Control Mean	Mean Diff.	p value	Effect Size
AMI	64.4	98.3	33.84	<.01	2.47
VMI	68.9	97.6	28.66	<.01	2.40
VWMI	63.0	96.6	33.53	<.01	2.96
IMI	63.1	97.2	34.13	<.01	3.27
DMI	63.1	97.9	34.83	<.01	3.13
GAI	64.8	100.2	35.39	<.01	3.06

n = 32 (ages 16-58)
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Diagnosis-Mild Intellectual Disability?

- ◆ Based on assessment data, Sam exhibited significant limitations in intellectual functioning and adaptive behavior.
- ◆ Did these limitations originate before the age of 18 years?

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 **Readings**

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- ◆ M. Boccaccini, et al., (2010). "Jury Pool Members' Beliefs About the Relation Between Potential Impairments in Functioning and Mental Retardation," *Law and Psychology Review* 1, 21.
- ◆ <http://www.apls.org/aboutpsychlaw/currentforensicguidelines.pdf>

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