

# Assessment of Suboptimal Effort

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# Objectives

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- Describe assessment of suboptimal effort.
- Describe several measures of symptom validity used to assess reported psychiatric symptoms and cognitive impairments.

# Importance of Assessing Suboptimal Performance

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- Psychologists routinely assess an individual's cognitive functioning to answer specific referral questions.
- For example,
  - Does the patient's present level of cognitive functioning represent a decline from previous levels of functioning?
  - Should the patient receive worker's compensation?
  - Is the test-taker competent to stand trial?

# Importance of Assessing Suboptimal Performance

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- The accuracy of the psychologist's decision depends on the accuracy of the test data.
- The accuracy of the test data depends on the cooperation and effort of the test-taker.
- What if test-takers do not perform to the best of their ability - what if effort is less than optimal for the tasks?

# Suboptimal Performance

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- Suboptimal performance encompasses any instance of less than maximal performance on testing, including those that may arise in the context of somatization, conversion, factitious disorder, or other forms of poor motivation and opposition that are not directly related to secondary gain.
- Malingering is only one of a number of explanations for suboptimal performance/effort and is not a synonym for it.

Strauss, Sherman, & Spreen, 2006

# Possible Reasons for Suboptimal Performance

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- Decreased interest and effort as a result of a genuine cognitive impairment;
- Decreased interest and effort as a result of a comorbid condition (e.g. depression secondary to head injury);
- Expectations of failure based on recent performance;
- Stress and preoccupation with potential consequences of the evaluation (e.g. loss of disability income);
- Reaction to inferences from the examiner's questions that the impairment is trivial; and
- Attempts to feign cognitive impairment.

# Feigned Cognitive Impairments

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At least two studies (Mittenberg, Patton, Canyock, & Condit, 2002; Larrabee, 2005) found that between 30-40 percent of examinees in forensic contexts may be feigning impairments.

# Clinical Model for Assessment

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- Background review
- Clinical and collateral interviews
- Behavioral observation (with collaterals, during interview, during testing)
- Screening for biased effort at beginning of exam
  - If indicative of suspicious performance, conduct comprehensive exam of level of effort and symptoms exaggeration
  - If not suspicious, conduct comprehensive exam of level of effort only if there is another reason for clinical suspicion
- Examine scores on standardized instruments for suspicious scores
- If suspicious scores are observed, conduct a comprehensive exam of level of effort and symptom exaggeration



# Malingering is . . .

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“the intentional production of false or grossly exaggerated physical or psychological symptoms, motivated by external incentives such as avoiding military duty, avoiding work, obtaining financial compensation, evading criminal prosecution, or obtaining drugs.”

(DSM-IV, American Psychiatric Association, 1994)

“the willful production of poor performance on measures of psychological function for the purpose of obtaining some externally recognized gain or benefit.”

(Franzen & Iverson, 1998)

# Criteria for Malingering

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Criteria for *definite* malingering, neuro-cognitive 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).

# Criteria for Malingering, cont.

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Criteria for *probable* malingering, neuro-cognitive deficit:

- Presence of substantial external incentive,
- Two or more types of evidence from neuropsychological testing, excluding definite negative response bias.

OR

- One type of evidence from neuropsychological testing, excluding definite negative response bias, and one or more types of evidence from Self-Report, and
- Behaviors meeting necessary criteria are not fully accounted for by psychiatric, neurological, or developmental factors.

# Criteria for Malingering, cont.

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Criteria for *possible* malingering, neuro-cognitive deficit:

- Presence of substantial external incentive,
- Evidence from Self-Report,
- Behaviors meeting necessary criteria are not fully accounted for by psychiatric, neurological, or developmental factors

OR

- Criteria for definite or probable are met but the behaviors meeting necessary criteria are not fully accounted for by psychiatric, neurological, or developmental factors.

# Criteria A

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Presence of a substantial external incentive.

- At least one clearly identifiable and substantial external incentive for exaggeration or fabrication of symptoms is present at the time of examination.

# Criteria B

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## Evidence from neuropsychological tests:

1. Definite response bias.
2. Probable response bias.
3. Discrepancy between test data and known patterns of brain functioning.
4. Discrepancy between test data and observed behavior.
5. Discrepancy between test data and reliable collateral reports.
6. Discrepancy between test data and documented background history.

# Criteria C

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## Evidence from Self-Report

1. Self-reported history is discrepant with documented history.
2. Self-reported symptoms are discrepant with known patterns of brain functioning.
3. Self-reported symptoms are discrepant with behavioral observations.
4. Self-reported symptoms are discrepant with information obtained from collateral informants.
5. Evidence of exaggerated or fabricated psychological dysfunction.

# Criteria D

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Behaviors meeting necessary criteria from groups B or C are not fully accounted for by psychiatric, neurological, or developmental factors.



# Additional Considerations

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- Informed consent
- Differential diagnosis
- Ruling out malingering
- Reliability, validity, and standardized administration of diagnostic measures
- Individual differences
- Prior examinee behavior
- Clinical judgment
- Self-reported symptoms

# Malingering Checklist

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- A. Clear and substantial external incentive
- B1. Definite response bias
- B2. Probable response bias
- B3. Discrepancy between known patterns of brain function/dysfunction and test data
- B4. Discrepancy between observed behavior and test data
- B5. Discrepancy between reliable collateral reports and test data
- B6. Discrepancy between history and test data
- C1. Self-reported history is discrepant with documented history
- C2. Self-reported symptoms are discrepant with known patterns of brain functioning
- C3. Self-reported symptoms are discrepant with behavioral observations
- C4. Self-reported symptoms are discrepant with information obtained from collateral informants
- C5. Evidence of exaggerated or fabricated psychological dysfunction on standardized measures
- D. Behaviors satisfying Criteria B and/or C were volitional and directed at least in part toward acquiring or achieving external incentives as defined in Criteria A
- E. The patient adequately understood the purpose of the examination and the possible negative consequences of exaggerating or fabricating cognitive deficits
- F. Test results contributing to Criteria B are sufficiently reliable and valid

# Strategies to Detect Feigned Cognitive Impairment

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- Detection of excessive impairment, e.g.,
  - failures on very easy items
  - failures below chance on forced-choice formats
- Detection of unexpected patterns, e.g.,
  - similar performance on easy and difficult items
  - unexpected answers on forced-choice formats

# Methods to Detect Feigned Cognitive Impairment

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- Indices derived from conventional measures (Embedded Measures)
  - WCST (FMS)
  - TMT (time, errors)
  - WAIS-IV (Reliable Digit Span)
  - WMS-IV (Logical Memory Recognition, Verbal Paired Associates Recognition, Visual Reproduction Recognition)
- Specifically developed measures (External Measures)
  - Rey 15-item
  - TOMM
  - WMT
  - VIP
  - ACS (Word Choice)

# Assessment of Suboptimal Effort Validity Indicator Profile (1997, 2003)

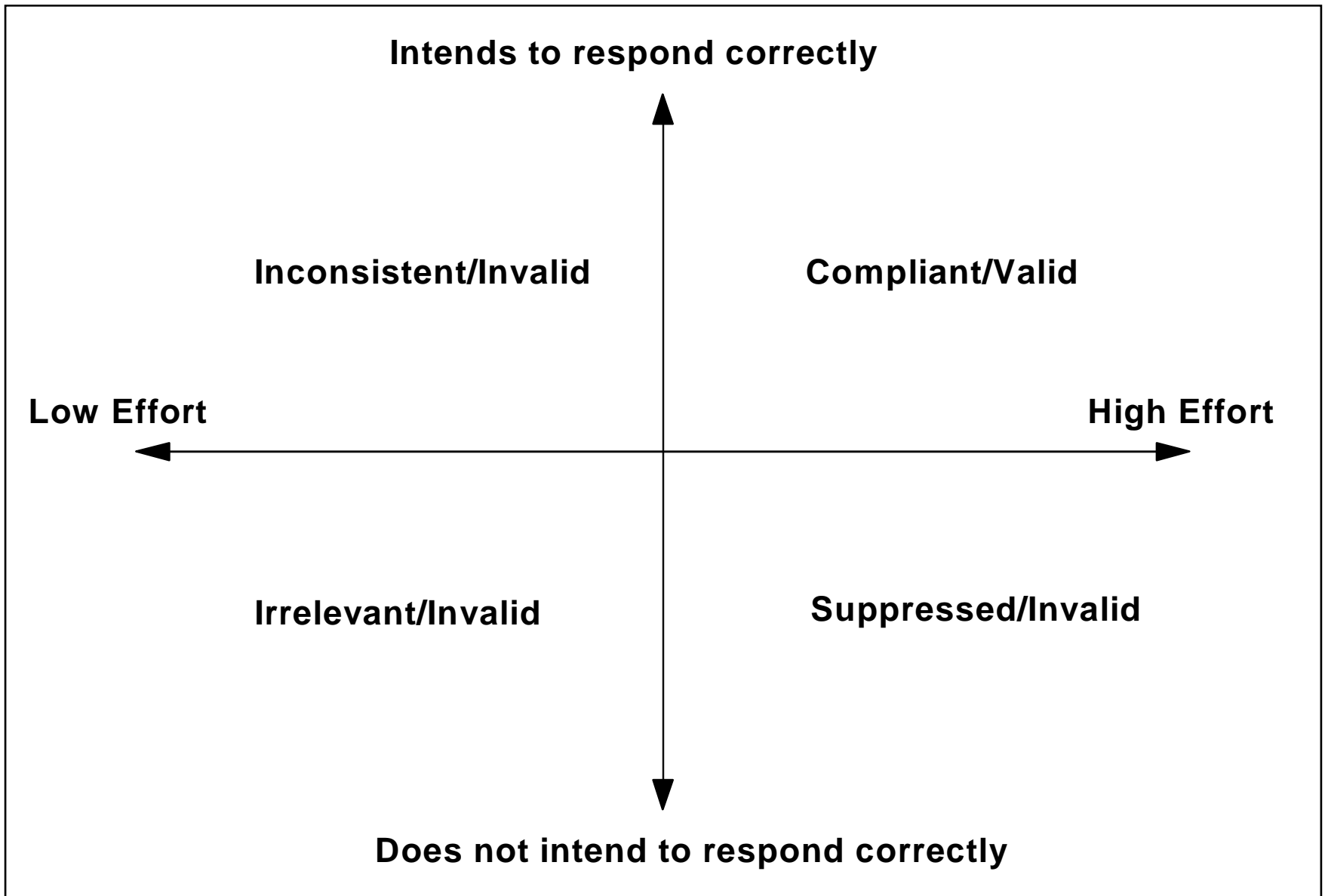


# Validity Indicator Profile

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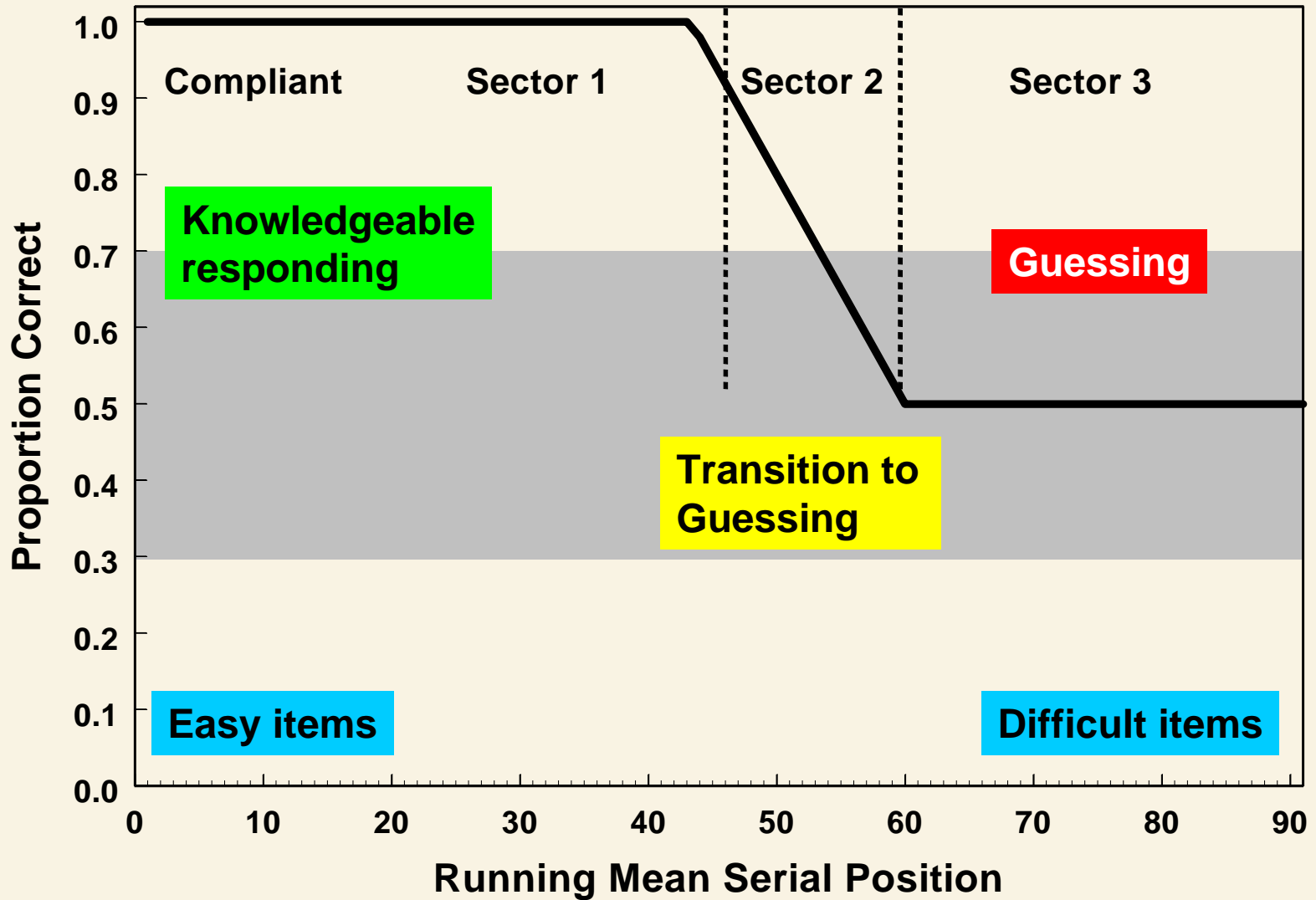
## Two subtests

- Nonverbal (picture matrices; 100 items)
- Verbal (word matching; 78 items)
- Verbal subtest requires 10-20 minutes
- Nonverbal subtest requires about 30 minutes



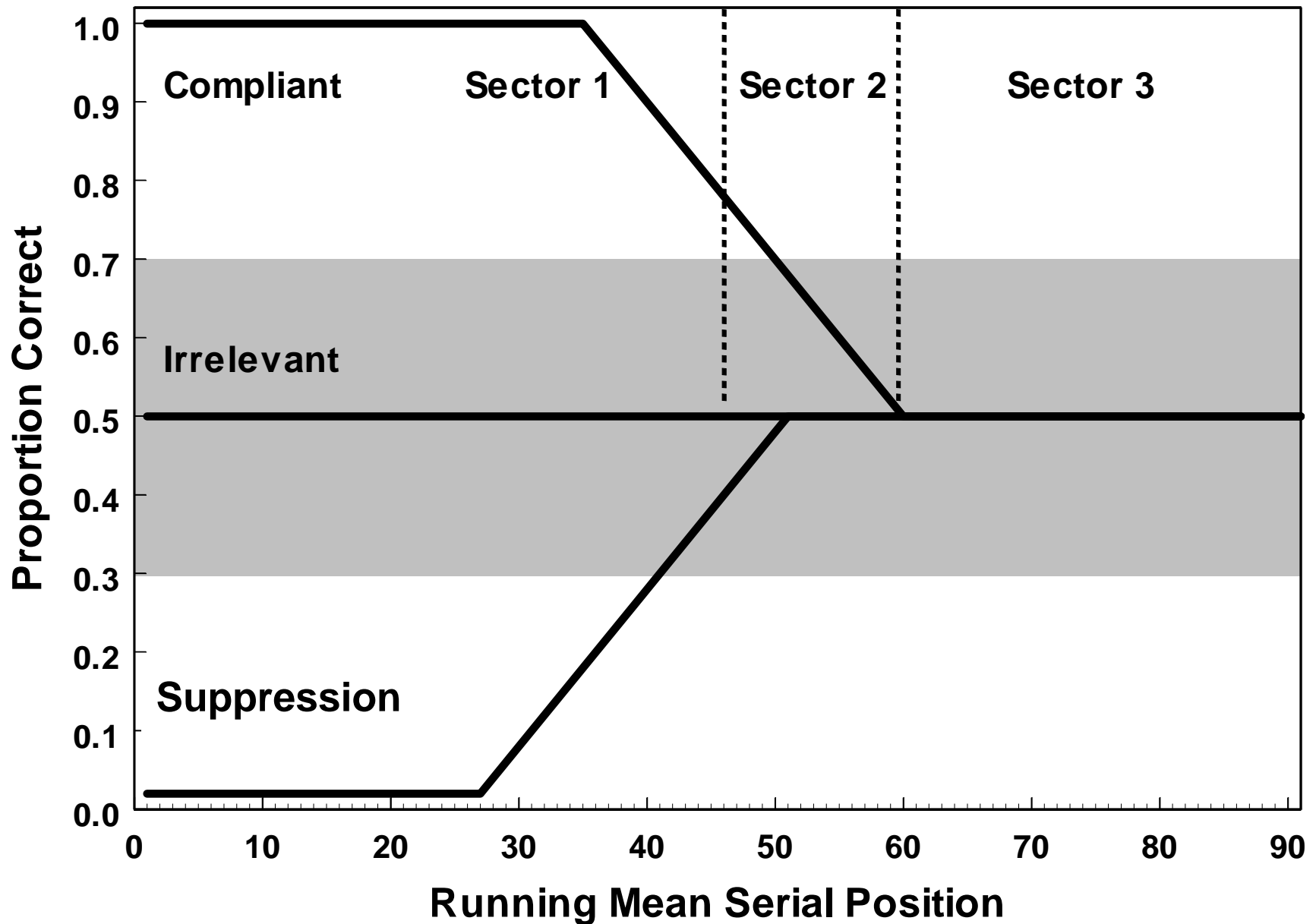
**Categorization of Response Style in Terms of Intention and Effort**

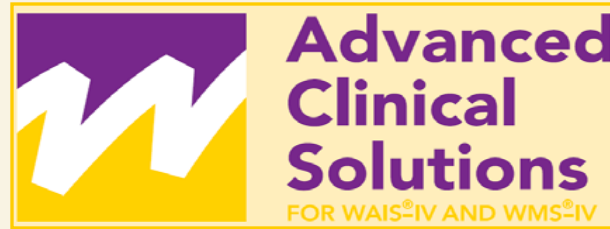
# Performance Curve





# Performance Curve





# Assessment of Suboptimal Effort

## Advanced Clinical Solutions for WAIS-IV and WMS-IV (2009)

# Assessing Suboptimal Effort: ACS for WAIS-IV and WMS-IV

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## External Measures

- ACS Word Choice

## Embedded Measures

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



**Advanced  
Clinical  
Solutions**  
FOR WAIS-IV AND WMS-IV

# Word Choice/Effort Record Form

WAIS-IV Test Age	WMS-IV Test Age
27:6	27:6

Education Level (Circle one)	Race/Ethnicity (Circle one)
<b>A</b> ≤8 years	<b>B</b> White
9-11 years	African American
12 years	Hispanic
13-15 years	Asian
≥16 years	Other

Examinee Name: Client H

Examiner Name: Examiner L

**F**

## Effort Score Summary

			Overall Clinical Sample Base Rate (Check all that apply) <b>H</b>					
Score	Total Raw Score	Table <b>G</b>	≤2%	≤5%	≤10%	≤15%	≤25%	>25%
Word Choice (Maximum = 50)	46	3.1					✓	✓
LM II Recognition (Maximum = 30)	15	3.2		✓	✓	✓	✓	✓ <b>I</b>
VPA II Recognition (Maximum = 40)	32	3.3				✓	✓	✓
VR II Recognition (Maximum = 7)	4	3.4					✓	✓
Reliable Digit Span (Maximum = 17)	9	3.5						✓
<b>Totals <b>J</b></b>			(Max = 5)	1 (Max = 5)	1 (Max = 5)	2 (Max = 5)	4 (Max = 5)	<b>K</b>

>25% = ≤50% and ≤75%



**Advanced  
Clinical  
Solutions**  
FOR WAIS-IV AND WMS-IV

# Word Choice/Effort Record Form

WAIS-IV Test Age	WMS-IV Test Age
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9-11 years	African American
12 years	Hispanic
13-15 years	Asian
≥16 years	Other

Examinee Name: Client H

Examiner Name: Examiner L

### Effort Score Analysis

Cutoff Criterion (Circle one) <b>L</b>	Percentage With Matching Number of Cut Scores at Cutoff				
	2%	5%	10%	15%	25%
	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10
No Stimulus Group				100	
Simulators			<b>Minimizes false pos</b>	36	
Overall Clinical Sample				7	<b>M</b>
Traumatic Brain Injury				9	
Other Special Group: <u>Anxiety</u>				2	
Nonclinical Sample				1	
<b>N</b> Education Level				1	
Race/Ethnicity				1	
GAI				1	

**Figure 3.2** Example of a Completed Word Choice/Effort Record Form Summary Page

# Suboptimal Effort

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

# Client A

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- 35-year old White male with Master's degree in business.
- Sustained mild TBI as a result of a motor vehicle accident.
- Experienced persistent neck pains and headaches after the accident.
- Had difficulty concentrating and remembering.
- Family physician prescribed mild pain medication and told Client A to monitor his symptoms.

# Client A

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- Client A's work performance suffered and he requested to go on short-term disability, having used all of his allotted time off.
- He attempted to return to work after several weeks off.
- He reported an increase in symptoms, including fatigue, chronic headaches and neck pain, poor attention, and an inability to remember things.
- He missed many days of work, and when he was at work, he could not perform his job to the level required.
- Client A requested to go on long-term disability, due to the injuries he had suffered.



# Sample Data

## Effort Assessment Score Report

Examinee Name	Client A	Date of Report	12-13-09
Examinee ID	44555	Education	≥ 16 years
Date of Birth	07-26-1974	Home Language	English
Gender	Male	Handedness	Right
Race/Ethnicity	White	Examiner Name	Examiner T

## WAIS-IV/WMS-IV Performance Summary

Score	Index Score	Qualitative Description	Classification Level
WAIS-IV General Ability Index	90	Average	—
WMS-IV Delayed Memory Index	76	Borderline	—
WMS-IV Brief Cognitive Status Exam	—	—	Average

# Sample Data

## Effort Score Summary

Score	Raw Score	Overall Clinical Sample Base Rates					
		≤2%	≤5%	≤10%	≤15%	≤25%	>25%
Word Choice	39		✓	✓	✓	✓	✓
LM II Recognition	14	✓	✓	✓	✓	✓	✓
VPA II Recognition	24	✓	✓	✓	✓	✓	✓
VR II Recognition	3			✓	✓	✓	✓
Reliable Digit Span	3	✓	✓	✓	✓	✓	✓
<b>Totals</b>		3	4	5	5	5	—

## Effort Score Analysis

Group of Interest	Percentages With Matching Number of Cut Scores at Cutoff				
	2%	5%	10%	15%	25%
No Stimulus	50	38	—		
Simulators	8	10	8		
Overall Clinical Sample	0	0	0		
Traumatic Brain Injury	0	0	0		
Temporal Lobectomy					
Schizophrenia					
Major Depressive Disorder					
Intellectual Disability-Mild Severity	3	3	0		
Nonclinical Sample					
Education Level	0	0	0		
Race/Ethnicity	0	0	0		
GAI	0	0	0		

# Evidence for Malingering?

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- Presence of substantial external incentive?
- Definitive negative response bias?
- Is response bias accounted for by psychiatric, neurological, or developmental factors?

# References

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## **CUSTOMER SERVICE**

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## **COMMENTS OR QUESTIONS**

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