

The Complexities of the Issues

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Overall Responses to Dr. Gervais and Dr. Kaufmann

--Excellent presentations with true insights on issues of relevance and importance

--Will not attempt to deal with small points

Instead, I want to address one aspect of the measurement of “effort”: “Do these tests actually show the expected relationships with other tests and with external variables?”

Basis of question—Clinical practice

An Example: Finding Expected Relationships

Areas of testing:

- Intelligence—WAIS-III FSIQ
- Neuropsych performance--% of scores outside normal limits, expanded HRB
- Emotional adjustment—MMPI-2

Variables of interest:

- Educational level (years of education)
- Focal neurological exam (pos. or neg.)
- Psychiatric history (positive or neg.)

Years of Education

Testing area/ variable	<i>Pearson r</i>	<i>Signifi- cance</i>
Test variable A	.40	.001
Test variable B	.21	.05
Test variable C	.08	n.s.

NOTE: Correlations are expressed as absolute values

Psychiatric History

Testing area/ variable	<i>Student t</i>	<i>Signifi- cance</i>
Test variable A	0.88	0.38
Test variable B	0.03	0.97
Test variable C	3.19	0.002

NOTE: Student *t* scores are expressed as absolute values

Focal Neurological Exam

Testing area/ variable	<i>Student t</i>	<i>Signifi- cance</i>
Test variable A	1.55	n.s.
Test variable B	2.58	0.01
Test variable C	1.47	n.s.

NOTE: Student *t* scores are expressed as absolute values

New Study: Selection of Patients

- Patient selection—from a 42 consecutive month period at the UW Regional Epilepsy Center at Harborview
- Diagnosis of epilepsy or psychogenic non-epileptic seizures ONLY; diagnosis confirmed by video-EEG monitoring
- Exclusions: 1) not given the Word Memory Test; 2) in prior study (Drane, et al., *Epilepsia* 2006;47:1879-1886)

Patient Groups and Tests

- Epilepsy only—65 adults (34 f, 31 m), 35.22 yrs old, 12.05 yrs educ, 16.34 onset age, 1.98 AEDs, 25% + neurol exam, 44% + neurol hist, 32% + psych hist
- PNES only—32 adults (19 f, 13 m), 42.25 yrs old, 12.70 yrs of educ, 35.00 onset age, 1.52 AEDs, 19% + neurol exam, 41% + neurol history, 72% + psych hist

Tests: WAIS-III, MMPI-2, Word Memory Test, tests from an expanded HRB

The Six Test Variables Under Study

- WMT pass vs. fail (Green criteria) + average of IR, DR, and CS
- WMS-III, Aud. Mem. Immediate, pass (90+) vs. fail (less than 90) + standard score
- WMS-III Vis. Mem., Immediate, pass (90+) vs. fail (less than 90) + standard score
- Name Writing Total pass (0.85 letters/sec) vs. fail (less than 0.85) + R+L summary score
- Finger Tapping Total, pass (92+ f or 101+ m) vs. fail (slower scores) + R+L summary score
- Trail Making, Part B, pass (81 sec or quicker) vs. fail (82+) + usual score in seconds

Variables for Test Evaluation

- Patient group classification—ES vs PNES
- Emotional factors—MMPI-2
- Psychiatric history

- Neurological history (other than epilepsy)
- Intelligence—WAIS-III FSIQ
- Brain damage—presence of left MTS
- Overall neuropsych performance--% tests outside normal limits on total battery less the test being studied

Test A

Outcome variable Pass vs. fail on Test A

- ES vs. PNES n.s.
- MMPI-2
 - L .001 f > p
 - Mf .043 f > p
 - Pt .021 p > f
- Psychiatric history n.s.
- Neurological hist. .001 f assoc. w + hist
- FSIQ .002 f assoc. w - IQ
- Left MTS n.s.
- DDI .001 f assoc. w + imp

Test B

Outcome variable

Pass vs. fail on Test B

- ES vs. PNES n.s.
- MMPI-2 D .041 $f < p$
- Psychiatric history n.s.
- Neurological hist. n.s.
- FSIQ .001 f assoc. w - IQ
- Left MTS n.s.
- DDI .001 f assoc. w + imp

Test C

Outcome variable Pass vs. fail on Test C

- ES vs. PNES n.s.
- MMPI-2 L .018 $f > p$
- Psychiatric history n.s.
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- Neurological hist. .021 f assoc. w + hist
- FSIQ .001
- Left MTS n.s.
- DDI .001

Test D

Outcome variable

Pass vs. fail on Test D

- ES vs. PNES n.s.
- MMPI-2 n.s. (all scales)
- Psychiatric history .001 f assoc w – hist
- Neurological hist. .016 f assoc w + hist
- FSIQ .001
- Left MTS n.s.
- DDI .001

Test E

Outcome variable

Pass vs. fail on Test E

- ES vs. PNES n.s.
- MMPI-2 F .044 $f > p$
- Psychiatric history n.s.

- Neurological hist. n.s.
- FSIQ n.s.
- Left MTS n.s.
- DDI n.s.

Test F

Outcome variable

Pass vs. fail on Test F

- ES vs. PNES n.s.
- MMPI-2 F .028, Pa .021, Pt .041, Sc .01, Ma .049 All $f > p$
- Psychiatric history n.s.
- Neurological hist. .039 f assoc. w + hist
- FSIQ .001
- Left MTS .05 $f < p$
- DDI .006

The Question

Which of these tests (A, B, C, D, E, or F) is the Word Memory Test?

Areas Deserving Review

- Transition *from* an assessment of random responding *to* an evaluation of “effort”
- Methodological factors in test validation studies (e.g., item inclusion criteria; subject exclusion criteria; applicability of findings to other than “effort” tests)
- Assumptions nearly universally held
- Caution in the use of these tests is recommended