Another Ineffective Performance-Based Task of Executive Functioning: Where Do We Go From Here?

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Introduction

- Executive functioning (EF) is measured with rating inventories (RIs) or performance-based tasks (PBTs).
- Research consistently finds these methods lack convergence.
- A relation between EF and emotion/mental health has been found; PBTs may measure “cold” EF while RIs capture “hot” EF – EF related to affective stimuli.
- Some theorists argue current PBTs are ecologically invalid, insensitive to EF impairment, and limited in predicting everyday functioning.
- Developers of the Functional Assessment of Verbal Reasoning and Executive Strategies (FAVRES; MacDonald, 2005) attempted to address current PBT criticisms.
- The current study sought to investigate the utility of the FAVRES in predicting everyday EF.

Hypotheses

1. FAVRES performance will predict BRIEF-A scores
2. FAVRES performance will account for unique variance in the BRIEF-A, beyond that which can be explained by general intelligence

Participants & Methods

- Adults (N = 78, M_{age}= 22 years, 63% female) were recruited from a university in Southwestern Ontario and the surrounding community.

Measure	Description
Demographic Questionnaire	▪ Included questions about history of psychopathology, current stress level, developmental history
Functional Assessment of Verbal Reasoning and Executive Strategies (FAVRES)	▪ Performance-based battery of EF ▪ Composite score of four subtests
Behaviour Rating Inventory of Executive Function (BRIEF-A)	▪ Self-report index of everyday EF ▪ Global Executive Composite *T*-Score
Wechsler Test of Adult Reading (WTAR)	▪ Estimate of intelligence ▪ Predicted FSIQ score (age & education prediction-method)

Results

- Neither hypothesis was supported; hierarchical regression revealed neither WTAR or FAVRES scores predicted BRIEF-A scores.
- Post-hoc regression analysis revealed WTAR scores significantly predicted FAVRES scores.
- Post-hoc simultaneous forced entry regression including WTAR and FAVRES scores, as well as demographic variables, revealed that stress levels and history of psychopathology significantly predicted BRIEF-A scores.

†Predictor	$_{adj}R^2$	*t/F*	*p*	β*
Model	0.19	5.43	0.00	-
FSIQ$^{WTAR\text{-}Predicted}$	-	1.08	0.28	0.12
FAVRES$^{Composite\ Score}$	-	-1.17	0.25	-0.13
Stress Levels	-	2.30	0.03	0.25
≠Psychopathology	-	3.20	0.00	0.34

†Post-hoc simultaneous forced entry multiple regression in the prediction of BRIEF-GEC scores; *Standardized β Coefficients; ≠Participant history of psychopathology

Discussion & Conclusions

- Even after addressing criticisms of PBT, FAVRES was unsuccessful in predicting everyday EF.
- Shared methodological structure may explain why the WTAR predicted the FAVRES; both rely heavily on linguistic skills (i.e., language comprehension, reading, verbal expression).
- These findings support research that has found strong associations between socio-emotional processing and/or mental health and everyday EF.
- Greater effort to integrate influence of socio-emotional processing and mental health into PBTs of EF may improve task utility.

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