

# The Barkley Deficits in Executive Functioning Scale (BDEFS): Personality index or a measure of executive functioning?

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## Background

- The Barkley Deficits in Executive Functioning Scale- Long Form (BDEFS-LF; Barkley, 2011) is an 89-item self-report measure used to assess current deficits in executive functioning (EF).
- There is limited research that explores the consistency of performance between EF self-report measures and EF objective measures.
- Prior studies have demonstrated that personality factors affect the subjective appraisal of behaviors (Paulhus & Vazire, 2007; Larsen, 1992; Miller & Pilkonis, 2006), which may alter the relation between perceived score and actual performance.

## Objective

The BDEFS self-report was compared to objective measures of executive functioning (EF) as well as five-factor model (FFM) personality traits.

- Do personality traits account for performance on objective and/or subjective EF measures?

## Methods

- Participants:**
  - 165 college students
    - M age*=19 years old, *SD age*=1.3
    - 72.7% female, 55.2% White, 35.2% African American, 4.8% Asian
- Measures:**
  - Subjective/Self-Report**
    - BDEFS-Long Form
    - IPIP-NEO Personality Inventory-120
  - Objective EF**
    - Neuropsychological Assessment Battery (NAB) EF module
    - Trail-Making Test (TMT) A & B

**BDEFS** total score was **not** related to **performance-based** EF measures.

**Personality traits** are strongly related to an individual's **appraisal** of **executive dysfunction**.

Table 1.

Multiple Regression Model of the FFM Traits in the Prediction of BDEFS Total Score

Predictor Variable	$\beta$	<i>t</i>	<i>p</i>
Neuroticism*	.39	5.97	<.001
Extraversion*	.24	3.95	<.001
Conscientiousness*	-.57	-7.87	<.001
Openness	.03	0.03	.635
Agreeableness	.09	0.09	.134

Note. Outcome variable = BDEFS Total Score



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## Results

- EF measures were reduced to a single-factor score using EFA, which accounted for 34% of the variance.
  - EF-Factor 1**
    - TMT A and B
    - NAB Mazes, Categories, & Word Generation subtests
- Regression predicting BDEFS total score from the EF factor score was **not** significant.
  - $[F(1,163)=.182; p=.67, r^2=.001]$
- Stepwise multiple regression predicting BDEFS total score from FFM traits identified three significant predictors that accounted for 54% of the variance  $[F(5,159)=36.78; p<.001, r^2=.54]$ .
  - Neuroticism:  $\beta=.39$
  - Extraversion:  $\beta=.24$
  - Conscientiousness:  $\beta=-.57$
- Stepwise regression predicting the EF factor score from FFM traits was **not** significant  $[F(5,159)=.57; p=.721, r^2=.018]$ .

## Conclusions

- Objective EF measures were not related to BDEFS total score, which supports that different constructs are being measured.
- Personality traits accounted for a majority of variance in BDEFS performance, which suggest that they are strongly related to an individual's appraisal of executive dysfunction.
  - The higher level in conscientiousness, the less executive dysfunction you tend to report.
  - The higher level in neuroticism, the more executive issues are perceived.