Frontal Systems Behavior Scale (FrSBe)

<table>
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<th>Availability:</th>
<th>Please visit this website for more information about the instrument: <a href="#">Frontal Systems Behavior Scale</a>.</th>
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</table>
| Classification: | **Supplemental:** ALS, Huntington’s Disease (HD), and Traumatic Brain Injury (TBI)  
**Exploratory:** Unruptured Cerebral Aneurysms and Subarachnoid Hemorrhage (SAH) and Sports-Related Concussion (SRC)  
Persistent/Chronic (3 months and greater post concussion) |
| Short Description of Instrument: | Summary/ Overview of Instrument: Formerly the Frontal Lobe Personality Scale (FLOPS), the FrSBe was designed to identify and quantify behavioral problems associated with frontal lobe dysfunction. This scale assesses behavior related to frontal systems damage. It also quantifies behavioral changes over time by including both baseline (retrospective) and current assessments of behavior. Forms are available for both patient and family member to complete, with separate norms for each informant. There is potential for discrepancy between the information collected from the informant and the participant.  
Construct measured: Assesses behavior  
Generic vs. disease specific: Generic  
Intended use of instrument/ purpose of tool: Cross-sectional or longitudinal assessment of symptoms commonly seen in patients with ‘frontal’ disorders  
Means of administration (paper and pencil, computerized): Paper and pencil  
Location of administration: Clinic or home (self-report)  
Intended respondent: Patient and/or caregiver  
# of items: Apathy (14 items), Disinhibition (15 items), Executive Dysfunction (17 items)  
# of subscales and names of sub-scales: 3 – Apathy, Disinhibition, Executive Dysfunction |
Rationale / Justification:

Psychometric Properties:

Reliability: Acceptable based on normative sample data (Grace & Malloy, 2001).

Validity: Construct validity: Reviewed in manual and acceptable. Convergent validity with other behavioral measures was high (NPI, r=.64). Discriminant validity also good (Grace & Malloy, 2001).

Feasibility: Informants completing the Family Rating Form should have at least weekly contact with the patient to ensure accurate behavioral observation. Patients must have cognitive capacity to read and complete the form.

Factor structure: An exploratory principal component factor analysis using the family version with 324 neurological outpatients (mainly HD, PD and Alzheimer’s disease patients) confirmed a factor structure consistent with the subscales originally proposed on theoretical grounds (Stout et al., 2003).

Sensitivity to Change/ Ability to Detect Change (over time or in response to an intervention): This measure was designed in part to assess change over time.

Known Relationships to Other Variables: There have been no published reports of patients with manifest HD using the FrSBe, other than the factor analysis referred to above (Stout et al., 2003). In the PREDICT-HD study, 745 mutation-positive subjects, 163 mutation-negative control subjects and their companions completed subject and family versions respectively of the FrSBE (Duff et al., 2010). Mutation-positive subjects reported more frontal behaviors than mutation-negative controls, even though most subjects were more than 10 years from predicted motor onset. However, discrepancies between self-report and companion scores suggested impaired insight in those closest to predicted disease onset. In non HD studies, Apathy and Executive Dysfunction subscale scores are correlated with IADL’s (Grace & Malloy, 2001), and the Disinhibition scale score is strongly related to caregiver burden (Grace & Malloy, 2001). Diagnostic Sensitivity and Specificity, if applicable: N/A
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| **Rationale / Justification:** | Strengths: Assesses multiple domains of frontal lobe functioning and allows for comparison of premorbid behavior with current status. Also allows for comparison between patient and caregiver reports.  
Weaknesses: Large number of items may be a problem for more cognitively impaired subjects. Scoring requires normative database and understanding of T scores.  
Special Requirements for administration: None  
Administration Time: The scale takes 10 minutes to administer and 10-15 minutes to score. |
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<td><strong>Scoring:</strong></td>
<td>Each item is rated on a 5-point Likert scale. Totals are generated for each subscale and normative data is referenced (based on patient gender, age and education) and standardized T scores are determined (mean: 50, SD:10). Interpretation of results requires training and coursework in psychological assessment. Standardization of scores to a reference population (z scores, T scores, etc): Previously validated in patients with a variety of neuropsychiatric disorders. If scores have been standardized to a reference population, indicate frame of reference for scoring (general population, HD subjects, other disease groups, etc). Not available</td>
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| **References:** | **Key Reference:**  
**Additional References:**  