1. Positive symptom distress.

Intensity of psychological symptoms, as measured by the brief symptom inventory.

Derogatis, L. R., & Melisaratos, N. (1983). The brief symptom inventory: an introductory report. *Psychological medicine*, *13*(03), 595-605

1. Frontal Systems Behavioral Scale

Provides a means to identify and quantify behavioral problems caused by frontal lobe damage so those problems may be targeted for treatment.

Grace, J. (2011). *Frontal systems behavior scale* (pp. 1090-1093). Springer New York.

1. Beck Depression Inventory

A self-report rating inventory the measures symptoms and facets of depression.

Beck, A. T., Steer, R. A., & Carbin, M. G. (1988). Psychometric properties of the Beck Depression Inventory: Twenty-five years of evaluation. *Clinical psychology review*, *8*(1), 77-100.

1. Global Severity Index

The overall psychological distress level, as measured by the brief symptom inventory. ,

Derogatis, L. R., & Melisaratos, N. (1983). The brief symptom inventory: an introductory report. *Psychological medicine*, *13*(03), 595-605

1. Positive Symptom Index

The number of self-reported psychological symptoms, as measured by the brief symptom inventory.

Derogatis, L. R., & Melisaratos, N. (1983). The brief symptom inventory: an introductory report. *Psychological medicine*, *13*(03), 595-605

1. Functional Assessment

A checklist of common daily tasks, as measured by UHDRS items 43-67.

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Total Functional Capacity

Summation of the checklist of common daily tasks and independence, as measured by UHDRS items 70-74.

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Chorea

Degree of rapid abnormal involuntary movements/contractions in face, trunk, and extremities

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Oculo-motor

Sum of ocular pursuit, saccade initiation, and saccade velocity

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Bradykinesia

Sum of dysarthria, tongue protrusion, finger taps, pronate/supinate hands, luria, bradykinesia, gait, tandem, retropulsion

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Rigidity

Degree of resistance in movement in both arms

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Dystonia

Degree of sustained abnormal posturing/movement in trunk and extremities

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Self-paced Tapping 2

Reciprocal of Self-paced tapping means for Block 5

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Self-paced Tapping 1

The reciprocal of the within-subject standard deviations of a set of Block 4 metronome-based tapping tasks (dominant hand)

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Speed Tapping 3

The mean speed of set of Block 3 tapping tasks (alternating thumbs)

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Speed Tapping 1

The mean speed of set of Block 1 tapping tasks (dominant hand)

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Speed Tapping 2

The mean speed of set of Block 2 tapping tasks (non-dominant hand)

Huntington Study Group (1996). Unified Huntington's Disease Rating Scale: Reliability and consistency. Huntington Study Group. *Movements Disorders*, *11*, 136–142.

1. Tower 3 Puzzle- Moves

Tower of Hanoi puzzle 3 average moves to complete (minimum 7).

Butters, N., Wolfe, J., Martone, M., Granholm, E., & Cermak, L. S. (1985). Memory disorders associated with huntington's disease: Verbal recall, verbal recognition and procedural memory. *Neuropsychologia*, *23*(6), 729-743.

1. Tower 4 Puzzle Moves

Tower of Hanoi puzzle 4 average moves to complete (minimum 15).

Butters, N., Wolfe, J., Martone, M., Granholm, E., & Cermak, L. S. (1985). Memory disorders associated with huntington's disease: Verbal recall, verbal recognition and procedural memory. *Neuropsychologia*, *23*(6), 729-743.

1. Stroop Interference

Stroop Interference Total score.

Stroop, J. R. (1935). Studies of interference in serial verbal reactions. *Journal of experimental psychology*, *18*(6), 643.

1. Stroop Color

Stroop Color Naming total score.

Stroop, J. R. (1935). Studies of interference in serial verbal reactions. *Journal of experimental psychology*, *18*(6), 643.

1. Stroop Word

Stroop Word Reading total score.

Stroop, J. R. (1935). Studies of interference in serial verbal reactions. *Journal of experimental psychology*, *18*(6), 643.

1. Trails Making A

Trail Making Part A, seconds to completion

Armitage, S. G. (1946). An analysis of certain psychological tests used for the evaluation of brain injury. *Psychological Monographs*, *60*(1), i-48.

1. Symbol Digit Modalities Test

Symbol Digit Raw Score Total. Participants are asked to use a provided key to match numbers to symbols in a timed task.

Smith, A. (1982). *Symbol Digit Modalities Test*. Los Angeles: Western Psychological Services.

1. Trails Making B

Trail Making Part B, seconds to completion.

Armitage, S. G. (1946). An analysis of certain psychological tests used for the evaluation of brain injury. *Psychological Monographs*, *60*(1), i-48.

1. Emotion Recognition

Ability to identify “negative” facial expression of emotions, based on “static” (versus animated) pictures. Sum of anger, disgust, fear, and sadness totals.

Benton, A. L. (1980). The neuropsychology of facial recognition. *American Psychologist*, *35*(2), 176.

1. Smell Identification

Smell Identification Test: % correct.

Doty, R. L., Shaman, P., & Dann, M. (1984). Development of the University of Pennsylvania Smell Identification Test: a standardized microencapsulated test of olfactory function. *Physiology & behavior*, *32*(3), 489-502.

1. Hopkins Verbal Learning (HVLT)

Hopkins Verbal Learning Test Total for 3 trials. The test consists of free-recall of a 12-item, semantically catergorized list followed by yes/no recognition.

Brandt, J. (1991). The Hopkins Verbal Learning Test: Development of a new memory test with six equivalent forms. *The Clinical Neuropsychologist*, *5*(2), 125-142.

1. Hopkins Verbal Learning Delayed Recall

Same as item 28, but assessed after a period of time had elapsed from initial assessment.

Benedict, R. H., Schretlen, D., Groninger, L., & Brandt, J. (1998). Hopkins Verbal Learning Test–Revised: Normative data and analysis of inter-form and test-retest reliability. *The Clinical Neuropsychologist*, *12*(1), 43-55.

1. Dual Verbal Working Memory

Dual Verbal Working Memory (Numbers), total score

Hale S, Bronik MD, Fry AF. Verbal and spatial working memory in school-age children: developmental differences in susceptibility to interference. Dev Psychol. 1997;33:364–371

1. Letter Number Sequencing

A task that involves the reordering of an unordered set of numbers and letters, total raw score.

Wechsler, D. (2008). Wechsler Adult Intelligence Scale-Fourth Edition. San Antonio, TX: Pearson.

1. Negative emotion recognition test

Participants viewed photographs of faces expressing one of six emotions or a neutral expression (fear, disgust, happy, sad, surprise, anger, and neutral). They then selected the emotion label that identified the expression from a multiple choice response set. Scores are the total number correct using only the negative emotions: anger, disgust, fear, and sadness.

Ekman P, Friesen WV. Measuring facial movement. Environmental Psychology and Nonverbal Behavior. 1976;1:56–75.

Johnson SA, Stout JC, Solomon AC, Langbehn DR, Aylward EH, Cruce CB, Paulsen JS. Beyond disgust: Impaired recognition of negative emotions prior to diagnosis in Huntington's disease. Brain. 2007;130(7):1732–1744. doi:10.1093/brain/awm107.

1. ANART Reading Test Errors

Calculated from the National Adult Reading test, in which participants are given a list of words to read aloud. Correct pronunciation of words is assessed, and errors are recorded.

Blair, J. R., & Spreen, O. (1989). Predicting premorbid IQ: a revision of the National Adult Reading Test. *The Clinical Neuropsychologist*, *3*(2), 129-136.

1. Verbal Fluency

COWAT RawScore. Phonemic Verbal Fluency asked participants to say as many words as possible beginning with a specified letter within 60 seconds. Two forms of the task, randomly assigned by site, (B, W, R and L, D, T).

Benton AL, Hamsher K, Varney NR, Spreen O. Contributions to neuropsychological assessment. Oxford, England: Oxford University Press; 1983.