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| **Assessment** | **Screening (V0)** | **Baseline (V1)** | **Post-Treatment (V4)** | **Follow-Up (V5)** |
| Informed Consent | **X** |  |  |  |
| Demographics | **X** |  |  |  |
| Medical History | **X** |  |  |  |
| Medications | **X** | **X** | **X** | **X** |
| Montreal Cognitive Assessment Task (MoCA) | **X** |  |  |  |
| Columbia Suicide Severity Rating Scale (CSSRS) -Baseline/Screening Version | **X** |  |  |  |
| Inclusion/Exclusion Criteria | **X** |  |  |  |
| Pattern comparison |  | **X** | **X** | **X** |
| Letter comparison |  | **X** | **X** | **X** |
| Digit Symbol Substitution |  | **X** | **X** | **X** |
| Visual working memory |  | **X** | **X** | **X** |
| N-back Task |  | **X** | **X** | **X** |
| Flanker Task |  | **X** | **X** | **X** |
| Face Name Matching Task |  | **X** | **X** | **X** |
| Selective Reminding Task (SRT) |  | **X** | **X** | **X** |
| Employment/School Status Update |  | **X** | **X** | **X** |
| Task Switching (fMRI task) |  | **X** | **X** | **X** |
| Timed Instrumental Activities of Daily Living (TIADLs) |  | **X** | **X** | **X** |
| Center for Epidemiologic Studies Depression Scale (CESD-20) |  | **X** | **X** | **X** |
| Columbia Suicide Severity Rating Scale (CSSRS) –Since Last Visit Version |  |  | **X** | **X** |
| Self Efficacy |  | **X** | **X** | **X** |
| Perceived Stress |  | **X** | **X** | **X** |
| General Life Satisfaction |  | **X** | **X** | **X** |
| COVID Questionnaire |  |  |  | **X** |
| Survey |  |  | **X** | **X** |

| Description of Assessments | | |
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| **Assessment Type** | **Assessment Name** | **Description** |
|  | Montreal Cognitive Assessment (MoCA) | Baseline cognitive ability. |
| **Neuropsychological Assessments** | Letter comparison, Pattern comparison, Digit Symbol substitution tasks. | PC, LC and DSST are measures of cognitive processing speed. |
| N-back task | N-back task is designed to assess working memory. |
| Visual Working memory | Visual working memory is designed to assess visual working memory |
| Face Name Matching Task | Measures episodic memory.  Participants are asked to reproduce a face name matching that is shown on the screen. |
| SRT | SRT is a measure of verbal learning and memory, involving reading a list of words and asking the participant to repeat the list. It has immediate and delayed recall components. |
| Flanker | Flanker is designed to assess cognitive control, and inhibition. |
| Task Switching | Respond to stimuli based on changing rules. |
| **Functional Assessments** | Timed Instrumental Activities of Daily Living (TIADLs) | The TIADL is a clinician-administered functional assessment that uses several real-world items including medicine bottles, phone books, and food items that measures how quickly a participant can complete everyday tasks related to independent living. |
| CESD-20 | CESD-20 is measuring depressive symptoms. |
| **Participant-Reported Outcome Measures** | General life satisfaction | One’s cognitive evaluation of life experiences and whether one likes his/her life or not. |
| Self Efficacy | A person’s belief in his/her capacity to manage functioning and have control over meaningful events. |
| Perceived Stress | Individual perceptions about the nature of events and their relationship to the values and coping resources of an individual. |
| COVID Questionnaire | This questionnaire evaluates the impact of the pandemic on their lifestyle. It will include questions about their current status, cognitive, physical and emotional health, social, eating/drinking, and sleeping habits, overall well-being, and anxiety |

**Processing Speed**

Tasks for the processing speed construct were taken from the Virginia Cognitive Aging Project (Salthouse, 2004, 2010; Salthouse & Ferrer-Caja, 2003). Alternative test forms were used for pre-, post-, and follow-up visits.

***Digit-symbol coding (paper and pencil).*** Participants wrote the corresponding symbol for each digit using a coding table for reference. Primary measure was total correct. Alternative test forms were used for pre-, post-, and follow-up visits.

***Letter comparison and Pattern comparison (paper and pencil).*** Participants determined whether a pair of patterns or letter combinations were the same or different. Primary measures were mean of total correct on each task. Alternative test forms were used for pre-, post-, and follow-up visits.

**Working Memory**

***Visual short-term memory (E-prime).*** An array of four objects briefly appeared on the screen. After a delay, an object appeared and participants had to decide whether this stimulus was in the original array. The experiment consisted of three blocks with targets varying in color, shape, (practice blocks) and conjunctions of color and shape (task block), respectively. Visual short-term memory was measured by the composite of RT and accuracy (i.e., average of normalized scores of RT and accuracy; RT was reverse coded to be consistent to accuracy, therefore higher score represents better performance) on the conjunction condition.

***N-back (E-prime).*** Participants viewed a sequence of centrally presented letters. For each letter, participants were instructed to determine if the letter was the same as the previous letter (practice block), or the same as the letter two back (task block). N-back memory was measured by the composite of RT and accuracy (i.e., average of normalized scores of RT and accuracy; RT was reverse coded to be consistent to accuracy, therefore higher score represents better performance) on the two-back condition.

***Selective Reminding Task (SRT, paper and pencil).*** Participants learned a list of 12 random words and their memory was tested immediately (6 times), 30-minute delayed recall, and cued recall. The SRT score was calculated by averaging normalized immediate recall, delayed recall, and cued recall scores.

***Face Name Task (E-prime)*** Participants remembered face and name pairs and their memory was tested. The Face Name score was calculated by the composite scores (i.e., average of normalized scores of reversed RT and accuracy).

**Executive Control**

***Flanker task (E-prime).*** Participants responded to the direction of a central arrow that pointed in the same (congruent) or opposite direction (incongruent) as four other adjacent arrows (two on each side). The Flanker score was calculated by the composite scores (i.e., average of normalized scores of reversed RT and accuracy) of incongruent condition.

***Task Switch task (fMRI task, E-prime)***. Participants responded to odd/even or higher/lower than 5 of a number presented at the center of the screen depending on the environment (i.e., background color). The Task Switch score was calculated by the composite scores (i.e., average of normalized scores of reversed RT and accuracy) of dual-task condition.

**Functional Ability**

**Timed Instrumental Activities of Daily Living (TIADL).** Participants completed five activates and the accuracy and time were measured. The five activities include reading ingredients on cans of food, reading instructions on medicine bottles, finding a phone number in a directory, locating items on a crowded shelf, and making changes using coins. The TIADL score was calculated by the mean time to complete tasks. If error was made, additional time was added based on the scoring rule.

**Psychological Well-Being**

***General life satisfaction.*** This self-report measure assessed global feelings and attitudes about one's life.

***Perceived stress.*** This self-report measure assessed how unpredictable, uncontrollable, and overloaded participants find their lives.

***Self-efficacy.*** This self-report measure assessed participants' sense of global self-efficacy.