**MIDUS 3 PROJECT 5**
**NEUROSCIENCE DATA README**

**April, 2023**

## A. What Data Files Are Available?

The MIDUS 3 (M3) Project 5 (P5) Neuroscience dataset contains 231 cases, including (1) self-report measures of emotion, emotion regulation, anxiety, and empathy, (2) psychophysiological measures including corrugator and zygomatic facial electromyography and eyeblink startle magnitude of emotional reactivity and recovery in response to the presentation of negative, neutral, and positive pictures, (3) reaction time and accuracy measures obtained during the psychophysiology paradigm's task, (4) cognitive data obtained via pen-and-paper and CANTAB (http://www.cambridgecognition.com/) cognitive research software, and (5) measures derived from BRAVO T1-weighted magnetic resonance imaging (MRI) scans, including measures of brain structure (volume, cortical thickness, cortical curvature, and cortical surface area) calculated using FreeSurfer software (v. 6.0.0) and brain-predicted age calculated using an algorithm from Cole and colleagues (2017, PMID: 28765056), as well as (6) diffusion weighted imaging measures of white-matter microstructure derived from diffusion-weighted imaging (DWI) scans:

- *M3_P5_DATA_N231_20230407.sav*

## B. What Is the Structure of the P5 Dataset?

This file is an SPSS dataset comprised of self-report data (self-administered questionnaires), behavioral responses to the task during the psychophysiology paradigm, summary measures of psychophysiological data, and measures of brain structure and brain-predicted age derived from MRI scans for 231 cases from the Main and Milwaukee samples. Variables have been named according to MIDUS variable naming and coding conventions. All variables include labels to aide interpretation. Value labels have been applied where appropriate.

Variable naming conventions are described in:

- *M3_P5_VARIABLE_NAMES_20230407*

The third character of the variable name is a letter that identifies the type, or name, of the instrument used to collect the data. The P5 Instruments are designated by the indicated letters:

- S = Self-reports
- B = Startle Eyeblink
- C = Corrugator EMG
- L = Zygomaticus EMG
- R = Response Times
- A = Response Accuracy
- N = CANTAB Cognitive measures
- D = Cube & Paper Test
- F = Free Recall
- T = Picture Ratings

- P = Participant Characteristics
- H = Handedness
- O = Hearing Test
- I = Filter for participated in MRI
- E = Extracted Structural Brain Measurements
- W = Extracted Diffusion Weighted Imaging Measurements

**C. What Additional Files Are Available?**

1. Information regarding instruments used to collect data, including changes in data collection due to COVID-19, and data processing procedures is available:
   - *M3_P5_INSTRUMENTS_20230407*

2. Detailed documentation of the self-report/questionnaire measures collected in P5 is available:
   - *M3_P5_DOCUMENTATION_OF_SCALES_20230407*

*3.* An overview of the procedures, including procedure changes for COVID-19, and timing of tasks during the psychophysiology session is available:
   - *M3_P5_DOCUMENTATION_OF_PSYCHOPHYSIOLOGY_20230407*

4. An overview of the CANTAB cognitive assessments is available:
   - *M3_P5_DOCUMENTATION_OF_CANTAB_20230407*

5. A character-by-character explanation of variable names is available:
   - *M3_P5_VARIABLE_NAMES_20230407*

6. Information regarding scanning procedures and the processing of T1-weighted and diffusion-weighted scans is available:
   - *M3_P5_DOCUMENTATION_OF_BRAIN_MEASURES_20230407*

7. A sample acknowledgment text to be included in publications utilizing this data is available:
   - *M3_P5_ACKNOWLEDGEMENT_TEXT_20230403*

Because participation in the Neuroscience Project was contingent upon participating in the Biomarker Project component of MIDUS 3, see the *MIDUS 3 Biomarkers* documentation for basic information about the sample and recruitment.

**D. Where Can I Access the Raw Imaging Files?**

Access to the MIDUS 3 raw MRI data (structural, task functional, resting state functional, diffusion-weighted imaging, and resting perfusion) is subject to restricted conditions. Please see https://midus.wisc.edu/midus_neuro_data.php for instructions on how to access.