

MIDUS 2 PROJECT 5 NEUROSCIENCE DATA README

December, 2019

A. What Data Files Are Available?

The MIDUS 2 (M2) Project 5 (P5) Neuroscience dataset contains 331 cases and 339 variables, including self-report measures of emotion and anxiety, psychophysiology measures of emotional reactivity and recovery in response to presentation of negative, neutral, and positive IAPS pictures, RT and accuracy measures obtained during the psychophysiology paradigm, and measures of resting baseline EEG asymmetry obtained prior to the start of the psychophysiology paradigm:

- *M2_P5_DATA_N331_20191118.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, and psychophysiological data for 331 cases from the Main (including city oversample), Twin, Sibling and Milwaukee samples. Variables have been named according to the Short Variable Name (SVN) conventions. All variables include labels to aide interpretation. Value labels have been applied where appropriate. Discrete missing values have also been defined and a "REFUSED/MISSING" label applied.

Variable naming conventions are described in:

- *M2_P5_VariableNames_20170503.doc*

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:

- E = EEG Baseline Laterality
- S = Self-Administered Questionnaires (self-reports)
- B = Startle Eyeblick Reflex
- C = Corrugator Supercilii EMG
- R = Reaction Times
- A = Accuracy

Remaining characters differ for each measure (i.e., are nested within preceding 3 characters).

C. Changes to the Dataset

In February of 2018, interview date variables were added for EEG (B5PEEGDATE_MO, B5PEEGDATE_YR) and MRI (B5PMRIDATE_MO, B5PMRIDATE_YR) visits.

In August of 2019, variable labels were edited to remove special characters (see 'updates' tab of *M2_P5_ExtraMetadata_20191126.xlsx* for further details).

D. What Additional Files Are Available?

1. Information regarding instruments used to collect data and data processing procedures is available:
 - *M2_P5_Instruments_201006.doc*
2. Detailed documentation of the self-report/questionnaire measures collected in P5 is available:
 - *M2_P5_Documentation_of_Scales_201006.doc*
3. An overview of the psychophysiology paradigm and data is available:
 - *M2_P5_Documentation_of_psychophysiology_201908.docx*
4. An overview of the procedures and timing of the fMRI task, as well as information regarding the processing and analysis of this data is available:
 - *M2_P5_fMRI_methods_description_201111.doc*
5. A description of procedures and findings for manually segmented hippocampal data is available:
 - *M2_P5_hippocampal_VOI_segmentation_description.pdf*
6. A list of the International Affective Picture System (IAPS) pictures used as stimuli in the psychophysiology and fMRI paradigms is available:
 - *M2_P5_IAPS_picture_sets_201111.xlsx*
7. A character-by-character explanation of variable names is available:
 - *M2_P5_VariableNames_20170503.doc*
8. A sample acknowledgment text to be included in publications utilizing this data is available:
 - *P5_Acknowledgment_text_20091118.doc*

Because participation in P5 (Neuroscience) was contingent upon first participation in the P4 (Biomarkers) component of MIDUS 2, see the *MIDUS2 Biomarkers* documentation for basic information about the sample and recruitment.

E. Where Can I Access the Raw Imaging Files?

Access to the MIDUS 2 raw MRI data is subject to restricted access conditions. Interested researchers may request access to these materials by sending an email to both Stacey Schaefer (stacey.schaefer@wisc.edu) and midus_help@aging.wisc.edu.

F. Publications from this MIDUS 2 dataset using this instrumentation:

van Reekum, C. M., Schaefer, S. M., Lapate, R. C., Norris, C. J., Greischar, L. L., & Davidson, R. J. (2010). Aging is associated with positive responding to neutral information but reduced recovery from negative information. *Social Cognitive and Affective Neuroscience*, 6(2), 177-185.

G. References

Blumenthal, T. D., Cuthbert, B. N., Fillion, D. L., Hackley, S., Lipp, O. V., & Van Boxtel, A. (2005). Committee report: Guidelines for human startle eyeblink electromyographic studies. *Psychophysiology*, 42(1), 1-15.

Cacioppo, J. T., Petty, R. E., Losch, M. E., & Kim, H. S. (1986). Electromyographic activity over facial muscle regions can differentiate the valence and intensity of affective reactions. *Journal of Personality and Social Psychology*, 50(2), 260-268.

Cacioppo, J. T., Tassinary, L. G., & Berntson, G. G. (2000). *Handbook of Psychophysiology*. New York, NY: Cambridge University Press, 2nd edition.

Cacioppo, J. T., Tassinary, L. G., & Berntson, G. G. (2007). *Handbook of Psychophysiology*. New York, NY: Cambridge University Press, 3rd edition.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85(2), 348-362.

Lang, P. J., Bradley, M. M., & Cuthbert, B. N. (1990). Emotion, attention, and the startle reflex. *Psychological Review*, 97(3), 377-395.

Lang, P. J., Bradley, M. M., & Cuthbert, B. N. (2005). *International Affective Picture System (IAPS): Digitized Photographs, Instruction Manual and Affective Ratings*. Gainesville, FL: University of Florida.

Larson, C. L., Irwin, W., Navin, S. D., Nitschke, J. B., Ruffalo, D., Shackman, A. J., & Davidson, R. J. (2000). Self-report correlates of reactivity to visual affective stimuli indexed with affect-modulated startle: Specificity of a new measure. *Psychophysiology*, 37, S62.

- Pivik, R. T., Broughton, R. J., Coppola, R., Davidson, R. J., Fox, N., & Nuwer, M. R. (1993). Guidelines for the recording and quantitative analysis of electroencephalographic activity in research contexts. *Psychophysiology*, 30(6), 547-558.
- Shiota, M. N., Keltner, D., & John O. P. (2006). Positive emotion dispositions differentially associated with Big Five personality and attachment style. *Journal of Positive Psychology*, 1(2), 61-71.
- Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983): *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Watson, D., & Clark, L.A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063-1070.