
ABCD Human Subject Study

Adolescent Brain Cognitive Development – ABCDSTUDY.org

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Neurocognition

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List of Instruments

Instrument	Short Name
ABCD Youth NIH TB Summary Scores	abcd_tbss01
ABCD TBX Demo	abctdemo01
ABCD Cash Choice Task	cct01
ABCD Little Man Task	lmt20
ABCD Pearson Scores	absd_ps01

General Information

To access additional detailed information about the instruments administered in this domain, the constructs they are intended to measure, and relevant citations for each measure, please see:

<https://doi.org/10.1016/j.dcn.2018.02.006>

ABCD Youth NIH TB Summary Scores

NIH Toolbox (NIH Tbx) Picture Vocabulary - Language vocabulary knowledge, estimated verbal IQ; from the NIH Toolbox Cognition battery; uncorrected and age corrected scores are presented; see <http://www.nihtoolbox.org>

NIH Tbx Flanker Inhibitory Control & Attention - Attention, cognitive control, executive function, inhibition of automatic response, from the NIH Toolbox Cognition battery; uncorrected and age corrected scores are presented; see <http://www.nihtoolbox.org>

NIH Tbx Picture Sequence Memory - Episodic memory; sequencing; from the NIH Toolbox Cognition battery; uncorrected and age corrected scores are presented; see <http://www.nihtoolbox.org>

NIH Tbx Dimensional Change Card Sort - Executive function: set shifting, flexible thinking, concept formation; from the NIH Toolbox Cognition battery; uncorrected and age corrected scores are presented; see <http://www.nihtoolbox.org>

NIH Tbx Pattern Comparison Processing Speed - Information processing, processing speed; from the NIH Toolbox Cognition battery; uncorrected and age corrected scores are presented; see <http://www.nihtoolbox.org>

NIH Tbx Oral Reading Recognition - Language, oral reading (decoding) skills, academic achievement; from the NIH Toolbox Cognition battery; uncorrected and age corrected scores are presented; see <http://www.nihtoolbox.org>

NIH Tbx List Sorting Working Memory - Working memory, information processing; from the NIH Toolbox Cognition battery; uncorrected and age corrected scores are presented; see <http://www.nihtoolbox.org>

ABCD TBX Demo - Demographics (Age only)

ABCD Cash Choice Task - Impulsivity, delayed gratification; this single-item task asked the child “Let’s pretend a kind person wanted to give you some money. Would you rather have \$75 in three days or \$115 in 3 months?”. The child indicates one of these two options or a third “can’t decide” option. See Wulfert, E., Block, J.A., Santa Ana, E., Rodriguez, M.L., & Colman, M., 2002; Anokhin, A.P., Golosheykin, S., Grant, J.D. & Heath, A.C., 2011.

ABCD Little Man Task - Visuospatial processing flexibility, attention; participants view pictures of a figure (little man) presented in different orientations and holding a suitcase and must use mental rotation skills to assess which hand (left or right) is holding the suitcase. Accuracy and latency scores are provided for each trial. Details can be found in Acker, W., & Acker, W., 1982; Nixon, S. J., Prather, R. A., & Lewis, B., 2014.

ABCD Pearson Scores

Rey Auditory Verbal Learning Test – Verbal learning and memory; the task is administered according to standard instructions using a 15-item word list; there are five learning trials (Trials I-V), a distractor trial (Listb), measures of immediate recall (Trial VI) and 30-minute delayed recall (Trial VII); for all trials, the total correct is recorded together with the number of perseverations and intrusions. Details can be found in Strauss, E., Sherman, E.M.S., & Spreen, O., 2006; Lezak, M.D., Howieson, D.B., Bigler, E.D., & Tranel, D., 2012.

Matrix Reasoning Task – Measures fluid intelligence, visuospatial reasoning; the task is from the Wechsler Intelligence Scale for Children-V and administered using Pearson Clinical Assessment-s Q-interactive platform. Total raw scores, scaled scores (ranging from 0-19) and

scores for each item are available. See Wechsler, D., 2014; Daniel, M.H., Wahlstrom, D. & Zhang, O., 2014.

References

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