

ABCD Human Subject Study

Adolescent Brain Cognitive Development – ABCDSTUDY.org

Release Notes: Adolescent Brain Cognitive Development Study® (ABCD) Data Release 3.0

Substance Use

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October 2020

Change Log

October 2020 – Data Release 3.0

- Initial release

List of Instruments

Name of Instrument	Short Name
ABCD Parental Rules on Substance Use	prq01
ABCD Parent Community Risk and Protective Factors (CRPF)	abcd_crpf01
ABCD Youth Community Risk and Protective Factors (CRPF)	abcd_ycrpf01
ABCD Youth Substance Use Interview	abcd_ysu01
ABCD Timeline Follow-back Survey Calendar Scores (TLFB)	abcd_tlfb01
ABCD Youth Participant Last Use Survey Day 1 2 3 4 (PLUS)	abcd_plus01
ABCD Parent Participant Last Use Survey Day 2 3 4 (PLUS)	plus01
ABCD Youth Alcohol Screen	yalcs01
ABCD Youth Toxicology Test	abcd_ytt01
ABCD Youth Hair Sample	abcd_hers01
ABCD Youth Hair Results	abcd_yhr01
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ABCD Mid-Year Phone Interview (MYPI) Substance Use	abcd_ymypisu01
ABCD Youth Substance Use Introduction and Patterns	abcd_ysuip01
ABCD Substance Use Attitudes	abcd_yusa01
ABCD Youth Alcohol Measures	abcd_yam01
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ABCD Youth Marijuana Illicit Drug Measures	abcd_ymidm01
ABCD Parent Substance Use Density, Storage, and Exposure	abcd_pssudse01
Summary Scores Substance Use	abcd_suss01

General Information

The following information refers to the Adolescent Brain Cognitive Development StudySM (ABCD) Data Release 3.0 available from <https://nda.nih.gov/abcd>. An overview of the ABCD Study[®] is at <https://abcdstudy.org> and detailed descriptions of elements of the study are listed in <https://abcdstudy.org/scientists/protocols>.

This document describes the contents of various instruments available for download. To understand the context of this information, see *Release Notes ABCD README FIRST* and *Release Notes ABCD Imaging Instruments*.

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://www.ncbi.nlm.nih.gov/pubmed/29559216>

ABCD Parental Rules on Substance Use: Parental substance use approval and rules.

ABCD Parent and Youth Community Risk and Protective Factors (CRPF): Questions regarding perceived availability (Arthur, Briney, Hawkins, Abbott, Brooke-Weiss, & Catalano, 2007; Trentacosta, Criss, Shaw, Lacourse, Hyde & Dishion, 2011). Parent and youth complete independent forms. Youth form first given in two-year follow-up.

ABCD Youth Participant Last Use Survey Day 1 2 3 4 (PLUS): Measures recent OTC, nicotine, caffeine use just prior to neurocognitive tasks or MRI. Will help control for withdrawal effects.

ABCD Parent Participant Last Use Survey Day 2 3 4 (PLUS): Measures recent OTC, nicotine, caffeine use just prior to neurocognitive tasks or MRI. Will help control for withdrawal effects.

ABCD Youth Substance Use Interview: Data from this module will provide information in the following domains: 1) lifetime and recent quantity/frequency and patterns of substance use (including maximum dose, first use, first regular use, days of combined drug use) of all major drug categories (alcohol, nicotine, marijuana, caffeine, stimulants, ecstasy, depressants/sedatives, opiates, hallucinogens, steroids, and inhalants) with a timeline follow back and first-use assessment (first sip, first puff nicotine/ marijuana); 2) peer group substance use; 3) substance use attitudes, including intentions to use, perceived harm (added at 1-year follow-up), peer tolerance (added at 1-year follow-up), and expectancies of substance use (added at 1-year follow-up); 4) subjective response to substance use (alcohol, nicotine, marijuana); and 5) consequences of substance use, including alcohol hangover symptoms, alcohol consequences (RAPI), nicotine consequences (PATH Nicotine Dependence), marijuana consequences (MAPI), and other drug consequences (DAPI).

Timeline Follow-back (Lifetime): At baseline, this will establish whether someone ever used alcohol or drugs (sip, puff, or full use). The TLFB method is used to obtain specific quantitative estimates of drug use over a period of time. (Sobell & Sobell, 1996). - See more at: http://www.nova.edu/gsc/online_files.html#time_followback

Alcohol Low Level Use (iSip): Nine questions assess participants' earliest sipping experience (including when, context, what type of alcohol) and whether or not a full drink was consumed (items adapted from a survey developed by Jackson, Barnett, Colby, & Rogers, 2015).

Nicotine Low Level Use: Ten questions assess first low-level experiences with nicotine products including (e.g., first puff of a combustible cigarette or e-cigarette, first dip of smokeless tobacco), type of nicotine product, where and when this occurred, and whether it led to further use (adapted from alcohol sipping measure).

Cannabis Low Level Use: Eight questions assess first low-level experiences with cannabis products including initial experiences with cannabis (first puff or taste of marijuana), where they obtained the substance, when these experiences occurred, whether it led to further use and subjective experience of feeling "high" (adapted from alcohol sipping measure).

Timeline Follow-back (Continued): At baseline, measures when they first used it, first regular (weekly) use, lifetime quantity (in standard doses), maximum dose (standard), last date of use, and past 6-month quantity/frequency of each drug category. This results

in data re: patterns (e.g., max recent use, days of combined use, average dose per occasion, # of binge drinking episodes, drinks/binge, etc.)

Caffeine Intake: Measures quantity/frequency of various caffeine beverage use in past 6 months.

Peer Tolerance of Use: Measure of how youth believes their close friends would feel about them engaging in substance use behaviors, including drinking, smoking, using e-cigarettes, marijuana use, nonmedical use of prescription drugs, and “other drug” use. Modified from Monitoring the Future form (University of Michigan, Institute for Social Research, Survey Research Center. United States Department of Health and Human Services. National Institutes of Health. National Institute on Drug Abuse. 2009. Monitoring the Future: A continuing study of American youth. Ann Arbor, MI). Added at one-year follow-up

Peer Group Deviance: Measures friends’ use of alcohol, nicotine, marijuana, inhalants, and “other” drugs (Freedman, Thornton, Camburn, Alwin & Young-demarco, 1988).

PATH Inventory, Intention to Use: Measures the youth’s intention to use alcohol, nicotine and marijuana (Pierce, Choi, Gilpin, Farkas, & Merritt, 1996; Strong, Hartman, Nodora, Messer, James, White, et al., 2015).

Perceived Harm of Substances: Measure of youth’s opinion regarding how much people risk harming themselves (physically or in other ways) if they engage in various substance use behaviors, including drinking, smoking, using e-cigarettes, marijuana use, nonmedical use of prescription drugs, and “other drug” use. Modified from Monitoring the Future form (University of Michigan, Institute for Social Research, Survey Research Center. United States Department of Health and Human Services. National Institutes of Health. National Institute on Drug Abuse. 2009. Monitoring the Future: A continuing study of American youth. Ann Arbor, MI). Added at one-year follow-up.

Alcohol Expectancies Questionnaire – Adolescent, Brief (AEQ-AB): Measures thoughts, feelings and beliefs about effects of alcohol use. Asked if “heard of” alcohol. The AEQ-AB was designed as a brief version of Alcohol Expectancy Questionnaire-Adolescent (Brown, Christiansen and Goldman, 1987; Greenbaum, Brown and Friedman, 1995). This 7-item instrument is intended for use among clinicians to assess and test alcohol expectancy effects (Stein, Katz, Colby, Barnett, Golembeske, Lebeau-Craven and Monti, 2006). Added at 1-year follow-up.

Adolescent Smoking Consequences Questionnaire (ASCQ) – Modified (added at 1-year follow-up): Measures thoughts, feelings and beliefs about the effects of cigarettes. Asked if “heard of” tobacco (Lewis-Esquerre, Rodrigue & Kahler, 2005)

Marijuana Effect Expectancy Questionnaire-Brief (MEEQ-B): Measures thoughts, feelings and beliefs about effects of marijuana. Asked if “heard of” marijuana (Torrealday, Stein, Barnett, Golembeske, Lebeau, Colby & Monti, 2008).

Acute Subjective Response to Alcohol: From the Self-Rating of the Effects of Alcohol (SRE): asks the respondent to think back about their drinking and to list the number of standard drinks required to experience the effects of alcohol; the first 5 times of drinking, the past 3 months of regular drinking, and the period of heaviest drinking are queried. (Schuckit, Smith, & Tipp, 1997). Added at 1-year follow-up.

Acute Subjective Response to Tobacco: Assesses early response to tobacco smoking, and it may also be used for marijuana smoking. Seven items inquire about pleasant and unpleasant experiences and ask respondents if they encountered various effects while smoking a tobacco cigarette for the first time (Pomerleau, Pomerleau, & Namenek, 1998).

Acute Subjective Response to Marijuana: Assesses early response to marijuana smoking. Eleven items inquire about pleasant and unpleasant experiences and ask respondents if they encountered various effects while using marijuana for the first time (Agrawal, Madden, Martin & Lynskey, 2013; Agrawal, Madden, Martin & Lynskey, 2013).

Hangover Symptom Scale: Measures frequency of hangover symptoms over the last 6 months. HSS queries 13 hangover symptoms that are manifestations of toxic neurologic effects, measured on a scale ranging from never to 100% of drinking occasions (Slutske, Piasecki, & Hunt-Carter, 2003).

Rutgers Alcohol Problem Index (RAPI): Symptom frequency checklist of alcohol-related problems over past 6 months. RAPI queries how many times in the last year the participant has felt certain consequences for drinking alcohol (White, H.R. & Labouvie, E.W. 1989). See more at:

<http://research.alcoholstudies.rutgers.edu/rapi#sthash.DSOTYpnd.dpuf>.

PATH Nicotine Dependence: Symptom frequency checklist of nicotine-related problems over past 6 months (Pomerleau, O. F., Pomerleau, C. S., Namenek, R. J., 1998; Prokhorov, A.V., Pallonen, U.E., Fava, J.L., Ding, L., & Niaura, R. 1996).

Marijuana Dependence Index (MAPI): Symptom frequency checklist of marijuana-related problems over past 6 months. MAPI (adapted from the RAPI) queries the frequency of physiological and psychological consequences of marijuana use (Johnson & White, 1989; Simons, Coreia, Carey & Bursar, 1998).

Drug Problem Index (DAPI): Symptom frequency checklist of “other” drug-related problems over past 6 months (Adapted from MAPI).

Vaping Motives: This inventory was created by a subgroup on the ABCD Substance Use workgroup, including Drs. Krista Lisdahl, Mary Heitzeg, Marsha Lopez, Susan Tapert, and Gaya Dowling. The instructions were modified from the MTF 2020 interview and Tobacco Motive Inventory and items were modified from the Reasons for ENDS Use, PATH Study, Tobacco Motive Inventory with additional items created by the subgroup.

ABCD Youth Alcohol Screen: Past day alcohol use - Breathalyzer

ABCD Youth Toxicology Test: Past day drug use - Oral Fluid Draeger

ABCD Youth NicAlert Test: Recent tobacco use – Urine NicAlert

ABCD Youth Hair Sample: Information collected by RAs at the time of collecting ~100 strands of hair for metabolites indicating substance use in past month or longer.

ABCD Youth Hair Results: Toxicology results of hair for metabolites indicating substance use in past month or longer.

ABCD Mid-Year Phone Interview (MYPI) – Substance Use: At 6-month and 18-month follow-up, youth are asked a series of Yes/No questions over the phone about their substance use over the past 6 months.

ABCD Parent Substance Use Density, Storage, and Exposure: This inventory measures three household substance use issues: household density, second-hand exposure, and storage. Household density was developed by the ABCD Substance Use workgroup subgroup consisting of Drs. Krista Lisdahl, Mary Heitzeg, Kenneth Sher, Susan Tapert, Christina Lessov-Schlaggar, and Andrew Health. The survey is based on semi-structured household substance use interviews. It measures household substance use density (i.e., number of adults or youth who use each substance) in up to three households where the youth spends regular time. Second-hand cigarette, ENDS or smoked cannabis exposure in these households is also measured (modified from PhenX “Current Environmental Tobacco Exposure 060701”; assessing total days and hours per day in a typical week for each substance). It also asks parents how each household stores alcohol and drugs (visible/unlocked, hidden/unlocked, or locked) (Bartels et al, 2016; Frieze, Grube & Moore, 2012).

Summary Scores – Caffeine summary scores can be found in the **ABCD Summary Scores Substance Use** Instrument.

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White, H.R. & Labouvie, E.W. (1989) Toward the assessment of adolescent problem drinking. *Journal of Studies on Alcohol* 50, 30-37. - See more at: <http://research.alcoholstudies.rutgers.edu/rapi#sthash.DSOTYpnd.dpuf>

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