



 Non-Imaging Domains > Gender Identity and Sexual Health

Gender Identity & Sexual Health

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General Information

An overview of the ABCD Study® can be found at abcdstudy.org and detailed descriptions of the assessment protocols are available at [ABCD Protocols](#). This page describes the contents of various instruments available for download. To understand the context of this information, refer to the release note [Start Page](#).

Detailed information about the instruments, the constructs they are intended to measure, and relevant citations for each measure are provided in the following:

Barch, D. M., Albaugh, M. D., Avenevoli, S., Chang, L., Clark, D. B., Glantz, M. D., Hudziak, J. J., Jernigan, T. L., Tapert, S. F., Yurgelun-Todd, D., Alia-Klein, N., Potter, A. S., Paulus, M. P., Prouty, D., Zucker, R. A., & Sher, K. J. (2018). Demographic, physical and mental health assessments in the adolescent brain and cognitive development study: Rationale and description. *Developmental cognitive neuroscience*, 32, 55–66. [Find here](#)

Potter, A. S., Dube, S. L., Barrios, L. C., Bookheimer, S., Espinoza, A., Feldstein Ewing, S. W., Freedman, E. G., Hoffman, E. A., Ivanova, M., Jefferys, H., McGlade, E. C., Tapert, S. F., & Johns, M. M. (2022). Measurement of gender and sexuality in the Adolescent Brain Cognitive Development (ABCD) study. *Developmental cognitive neuroscience*, 53, 101057. [Find here](#)

Updates and Notes

GISH items introduced at 3-year follow up were omitted from the NDA 4.0 Release in error. These items included 2 gender expression items (measured on a 7 point scale) from the Youth Gender Survey; attraction, current relationship, and partner demographics items from the Youth Sexual Behavior Survey; and the sex assigned at birth and current gender identity items from the Youth KSADS Background Survey. All data were collected at 3-year follow up and are included in the 5.0 Release.

Instrument Descriptions

Youth Instruments

Youth Gender Survey

Release 5.0 Data Table: gish_y_gi

Male or Female versions are administered based on the parent-report of the child's sex assigned at birth on the demographic survey.

Measure Description: Felt-gender is assessed using two items on a 5-point scale such that lower scores indicate more gender nonconformity or more incongruence with sex assigned at birth. We recommend using both items together. An example of cross-tab analyses can be found in Potter et al., 2021, 2022.

Gender discontentedness is assessed with 1 item, on a 5-point scale, that is analogous to a parent item found in the Parent Gender Identity Questionnaire, and later in the Parent Gender and Sexual Behavior Survey, for multi-informant analysis. Lower scores indicate more discontentedness with the gender congruent with the child's sex assigned at birth.

Gender expression during play is assessed with 1 item, on a 5-point scale, and is comparable to the expression items in the Parent Gender Identity Questionnaire, allowing for multi-informant analysis.

This item assesses gender nonconformity during play (dressing or acting like the sex not assigned at birth) with a lower score indicating more nonconformity.

ABCD Subdomain: Gender

Number of Variables: 19

Summary Score(s): Yes

Measurement Visit Timepoints Administered: Annually since the 1-year follow-up (see below for changes)

Modifications since initial administration: Part way through the 3-year follow-up, items about perceived and self-described appearance were introduced. Responses are on a 7-point scale from “very masculine/feminine” to “very feminine/masculine.” Response order is specific to sex assigned at birth such that lower scores indicate more conformity with expectation of the participant’s sex assigned at birth. These items should *not* be included in a sum or average score with the first 4 items of the Youth Gender Survey as the response scales differ. In January 2022, the original gender contentedness and gender expression during play items were removed from the Youth Gender Survey.

Notes and special considerations: Youth gender identity is not assessed in this measure. KSADS Background Items assessing gender identity are included in table gish_y_gi. Refer to Mental Health Release notes for descriptions of the youth KSADS background survey.

Multi-Informant analysis - some items in the Youth Gender Survey have direct parent-reported counterparts. See table below:

Youth Gender Survey	Parent GIQ and GSBS
gish_m3_y	gish_m12_p; p_gish_he_wish
gish_f3_y	gish_f12_p; p_gish_she_wish
y_gish2_desc_male	p_gish_desc_male
y_gish2_desc_male_self	p_gish_desc_male_self
y_gish2_desc_fem	p_gish_desc_fem
y_gish2_desc_fem_self	p_gish_desc_fem_self

References: Potter, A., Dube, S., Allgaier, N., Loso, H., Ivanova, M., Barrios, L. C., Bookheimer, S., Chaarani, B., Dumas, J., Feldstein-Ewing, S., Freedman, E. G., Garavan, H., Hoffman, E., McGlade, E., Robin, L., & Johns, M. M. (2021). Early adolescent gender diversity and mental health in the Adolescent Brain Cognitive Development study. *Journal of child psychology and psychiatry, and allied disciplines*, 62(2), 171–179. [Find here](#)

Potter, A. S., Dube, S. L., Barrios, L. C., Bookheimer, S., Espinoza, A., Feldstein Ewing, S. W., Freedman, E. G., Hoffman, E. A., Ivanova, M., Jefferys, H., McGlade, E. C., Tapert, S. F., & Johns, M. M. (2022). Measurement of gender and sexuality in the Adolescent Brain Cognitive Development (ABCD) study. *Developmental cognitive neuroscience*, 53, 101057. [Find here](#)

Windle, M., Grunbaum, J. A., Elliott, M., Tortolero, S. R., Berry, S., Gilliland, J., Kanouse, D. E., Parcel, G. S., Wallander, J., Kelder, S., Collins, J., Kolbe, L., & Schuster, M. (2004). Healthy passages. A multilevel, multimethod longitudinal study of adolescent health. *American journal of preventive medicine*, 27(2), 164–172. [Find here](#)

Wylie, S. A., Corliss, H. L., Boulanger, V., Prokop, L. A., & Austin, S. B. (2010). Socially assigned gender nonconformity: A brief measure for use in surveillance and investigation of health disparities. *Sex roles*, 63(3-4), 264–276. [Find here](#)

Reed, E., Salazar, M., Behar, A. I., Agah, N., Silverman, J. G., Minnis, A. M., Rusch, M., & Raj, A. (2019). Cyber Sexual Harassment: Prevalence and association with substance use, poor mental health, and STI history among sexually active adolescent girls. *Journal of adolescence*, 75, 53–62. [Find here](#)

Youth Sexual Behavior Survey

Release 5.0 Data Table: gish_y_sex

Measure Description: The youth Sexual Behavior Survey originally consisted of 13 items assessing early dating behaviors and perceptions of peer attitudes and peer behaviors (see Potter et al., 2022), however the survey grows and changes over time as the cohort matures.

ABCD Subdomain: Sexuality

Number of Variables: 48

Summary Score(s): No

Measurement Visit Timepoints Administered: Annually since the 2-year follow-up (see below for changes)

Modifications since initial administration: The 3-year follow-up expanded some constructs and added attraction and partner demographics. At the 4-year follow-up, conversations about sex were added with 3 items covering abstinence/waiting to have sex, safe sex practices, or other sex topics adapted from the approach validated by Sales et al. (2008).

All measures in the ABCD protocol were revised to eliminate the use of binary gender classifications in the fall of 2020 (see Potter et al., 2022). This revision significantly impacted the Sexual Behavior Survey, primarily by changing "boyfriend or girlfriend" to "romantic relationship (like a boyfriend or girlfriend)"; "his/her" to "their"; and "boy/girl" to "someone". Additionally, the response options to attraction and partner demographics were changed from "multiple choice" to "check all that apply", which significantly changed the nature of the data collected at 3-Year follow-up. Careful

consideration should be given to when and/or how to collapse data across the versions of these items in the 3-year follow-up dataset. Detailed information on these changes can be found below.

Attraction was originally assessed with a single item (gish2_sexual_attract) but was then split into 3 items in the fall of 2020 (*gish2_girls*, *gish2_boys*, and *gish2_nonbinary_1*). See table below for the original (shaded row) and current items and responses.

Variable Name	Item	Data label, Response option
gish2_sexual_attract	I am...	0 = I am attracted only to girls; 1 = I am attracted mostly to girls and a little to boys; 2 = I am attracted equally to girls and boys; 3 = I am attracted mostly to boys and a little to girls; 4 = I am attracted only to boys; 5 = I am not attracted to either boys or girls; 999 = I don't know; 777 = Decline to answer
gish2_girls	I am attracted to girls	1 = Not at all; 2 = A little; 3 = A lot; 999 = I don't know; 777 = Decline to answer
gish2_boys	I am attracted to boys:	1 = Not at all; 2 = A little; 3 = A lot; 999 = I don't know; 777 = Decline to answer
gish2_nonbinary_1	I am attracted to people who are another gender (e.g. nonbinary)	1 = Not at all; 2 = A little; 3 = A lot; 999 = I don't know; 4 = I don't understand this question; 777 = Decline to answer

Partner gender was originally collected with a multiple-choice response (0 = "Only boy[friend]s"; 1 = "Only girl[friend]s"; 2 = "Both boy[friend]s and girl[friend]s") but was changed to "check all that apply" (type_3 "boys", type_4 "girls", type_5 "people who are another gender (e.g. nonbinary)"). The data look somewhat like the table below (variable names are just dummies), with the first 4 participants/rows having seen the old version (radio question with being able to select one out of 4 options) and the last 4 participants having seen the new version (checkbox question, with multiple selections possible).

radio_type	checkbox_type_3	checkbox_type_4	checkbox_type_5	checkbox_type_777
0				

radio_type	checkbox_type_3	checkbox_type_4	checkbox_type_5	checkbox_type_777
1				
2				
777				
	0	1	1	0
	0	0	0	1
	1	0	0	0
	1	1	1	0

Notes and special considerations: Youth sexual orientation is not assessed in this measure; refer to KSADS Background Items in table gish_y_sex.

Some GISH2 items were not collected at 2-year follow-up visits in the fall and winter of 2020 in error.

Between November 2021- March 2022 some of the behavior items were inadvertently not administered at site05. The entire survey was temporarily not administered at site04 due to administrative issues - data is missing in these cases.

In March 2022 some changes were made to the instructions and ordering of some sections of the Youth Sexual Behavior Survey to reduce ambiguity. No item content was changed. The changes included:

- Expanding the preamble to better describe the domains covered by the survey and to note that some of the questions are very personal.
- Shortening the introduction to the behavior questions to just "The next questions are about your behavior. They are only about people who are not related to you."
- Moving behavior items to immediately follow attraction and precede relationship items.

Multi-Informant analysis - some items in the Youth Sexual Behavior Survey have parent-reported counterparts. See table below:

Youth SBS	Parent GSBS
gish2_abstinences	p_gish2_abstinences
gish2_safe_practices	p_gish2_safe_practices
gish2_convo	p_gish2_convo

Youth sexual orientation (identity) is not assessed in this measure. Youth KSADS background items assessing sexual orientation (identity) are duplicated in table gish_y_sex. Variables from other instruments/tables (KBI) were added to these tables (duplicated from their original tables) to aid GISH-focused analyses. The specific items that were added can be determined in the data dictionaries by their prefixes (kbi_ for items from the KSADS Background Items). Refer to Mental Health Release notes for descriptions of the youth KSADS background survey.

References: Potter, A. S., Dube, S. L., Barrios, L. C., Bookheimer, S., Espinoza, A., Feldstein Ewing, S. W., Freedman, E. G., Hoffman, E. A., Ivanova, M., Jefferys, H., McGlade, E. C., Tapert, S. F., & Johns, M. M. (2022). Measurement of gender and sexuality in the Adolescent Brain Cognitive Development (ABCD) study. *Developmental cognitive neuroscience*, 53, 101057. [Find here](#)

Sales, J. M., Milhausen, R. R., Wingood, G. M., Diclemente, R. J., Salazar, L. F., & Crosby, R. A. (2008). Validation of a Parent-Adolescent Communication Scale for use in STD/HIV prevention interventions. *Health education & behavior : the official publication of the Society for Public Health Education*, 35(3), 332–345. [Find here](#)

Windle, M., Grunbaum, J. A., Elliott, M., Tortolero, S. R., Berry, S., Gilliland, J., Kanouse, D. E., Parcel, G. S., Wallander, J., Kelder, S., Collins, J., Kolbe, L., & Schuster, M. (2004). Healthy passages. A multilevel, multimethod longitudinal study of adolescent health. *American journal of preventive medicine*, 27(2), 164–172. [Find here](#)

Parent Instruments

Parent Gender Identity Questionnaire

Release 5.0 Data Table: gish_p_gi

Measure Description: The parent-report Gender Identity Questionnaire was adapted from Johnson et al. (2004; GIQ; 2 items omitted). There are male and female versions of the questions based on parent-reported child's sex at birth. The GIQ measures cross-sex behavior (gender expression during play) and feelings of gender dysphoria/discontentedness.

ABCD Subdomain: Gender

Number of Variables: 48

Summary Score(s): Yes

Measurement Visit Timepoints Administered: Annually from the 1-year follow-up through the 3-year follow-up visit (see below for changes).

Modifications since initial administration: The GIQ was discontinued after the 3-year follow-up to decrease parent burden and is replaced by a more developmentally appropriate parent report of gender expression, the Parent Gender and Sexual Behavior Survey ([Found here](#)).

Notes and special considerations: Parent-report of youth's gender identity is not assessed in this measure; refer to Demographics and KSADS Background Items in table gish_p_gi.

While a summary score is given for the 12-item measure, for this community sample we recommend using an average of the first 9 behavior items that measure sex-typed behavior during play to describe gender expression, and a separate average of the last 3 items measuring gender dysphoria/gender discontentedness (Potter et al., 2021). Higher scores reflect more conformity with gendered expectations of the participant's sex and less dysphoria/discontentedness.

Multi-Informant analysis - some items in the Parent Gender Identity Questionnaire have direct youth-reported counterparts. See table below:

Youth Gender Survey	Parent GIQ
gish_m3_y; gish_f3_y	gish_m12_p; gish_f12_p

References: Potter, A., Dube, S., Allgaier, N., Loso, H., Ivanova, M., Barrios, L. C., Bookheimer, S., Chaarani, B., Dumas, J., Feldstein-Ewing, S., Freedman, E. G., Garavan, H., Hoffman, E., McGlade, E., Robin, L., & Johns, M. M. (2021). Early adolescent gender diversity and mental health in the Adolescent Brain Cognitive Development study. *Journal of child psychology and psychiatry, and allied disciplines*, 62(2), 171–179. [Find here](#)

Johnson, L. L., Bradley, S. J., Birkenfeld-Adams, A. S., Kuksis, M. A., Maing, D. M., Mitchell, J. N., & Zucker, K. J. (2004). A parent-report gender identity questionnaire for children. *Archives of sexual behavior*, 33(2), 105–116. [Find here](#)

Elizabeth, P. H., & Green, R. (1984). Childhood sex-role behaviors: similarities and differences in twins. *Acta geneticae medicae et gemellologiae*, 33(2), 173–179. [Find here](#)

Parent Gender and Sexual Behavior Survey

Release 5.0 Data Table: gish_p_gi and gish_p_sex

Measure Description:

The parent-report Gender and Sexual Behavior Survey has male and female versions based on parent-report of child's sex at birth. It originally consisted of 3 items assessing youth gender expression and gender contentedness. Three items about parent-youth discussions about sex were added at 4-year follow up.

ABCD Subdomain: Gender & Sexuality

Number of variables: gish_p_gi- 48, gish_p_sex- 7

Summary Score(s): No

Measurement Visit Timepoints Administered: Annually, starting part way through the 3-year follow-up

Modifications since initial administration: At the 4-year visit, 3 items assessing conversations about sex were added. In January 2022, the gender contentedness item was removed for all time points.

Notes and special considerations: Please note that the gender contentedness item in this survey is from the parent Gender Identity Questionnaire that was discounted after the 3-year follow-up. Parent-report of youth's gender identity and sexual orientation are not assessed in this measure; refer to Demographics and KSADS Background Items included in tables gish_p_gi and gish_p_sex. All items in the Parent Gender and Sexual Behavior Survey have direct youth-reported counterparts for multi-informant analysis. Variables from other instruments/tables (demographics and KBI) were added to these tables (duplicated from their original tables) to aid GISH-focussed analyses. The specific items that were added can be determined in the data dictionaries by their prefixes (demo_ for demographic variables, kbi_ for items from the KSADS Background Items).

Reference: Potter, A., Dube, S., Allgaier, N., Loso, H., Ivanova, M., Barrios, L. C., Bookheimer, S., Chaarani, B., Dumas, J., Feldstein-Ewing, S., Freedman, E. G., Garavan, H., Hoffman, E., McGlade, E., Robin, L., & Johns, M. M. (2021). Early adolescent gender diversity and mental health in the Adolescent Brain Cognitive Development study. *Journal of child psychology and psychiatry, and allied disciplines*, 62(2), 171–179. [Find here](#)

Wylie, S. A., Corliss, H. L., Boulanger, V., Prokop, L. A., & Austin, S. B. (2010). Socially assigned gender nonconformity: A brief measure for use in surveillance and investigation of health disparities. *Sex roles*, 63(3-4), 264–276. [Find here](#)

Sales, J. M., Milhausen, R. R., Wingood, G. M., Diclemente, R. J., Salazar, L. F., & Crosby, R. A. (2008). Validation of a Parent-Adolescent Communication Scale for use in STD/HIV prevention interventions. *Health education & behavior : the official publication of the Society for Public Health Education*, 35(3), 332–345. [Find here](#)

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