

Just to Confirm: Evaluating the Reliability and Validity of Survey Questions on Sex and Gender

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2023 FCSM Research and Policy Conference
October 25, 2023

This presentation is intended to promote ideas. The views expressed are part of ongoing research and do not necessarily reflect the position of the U.S. Department of Education.

Agenda for today's talk

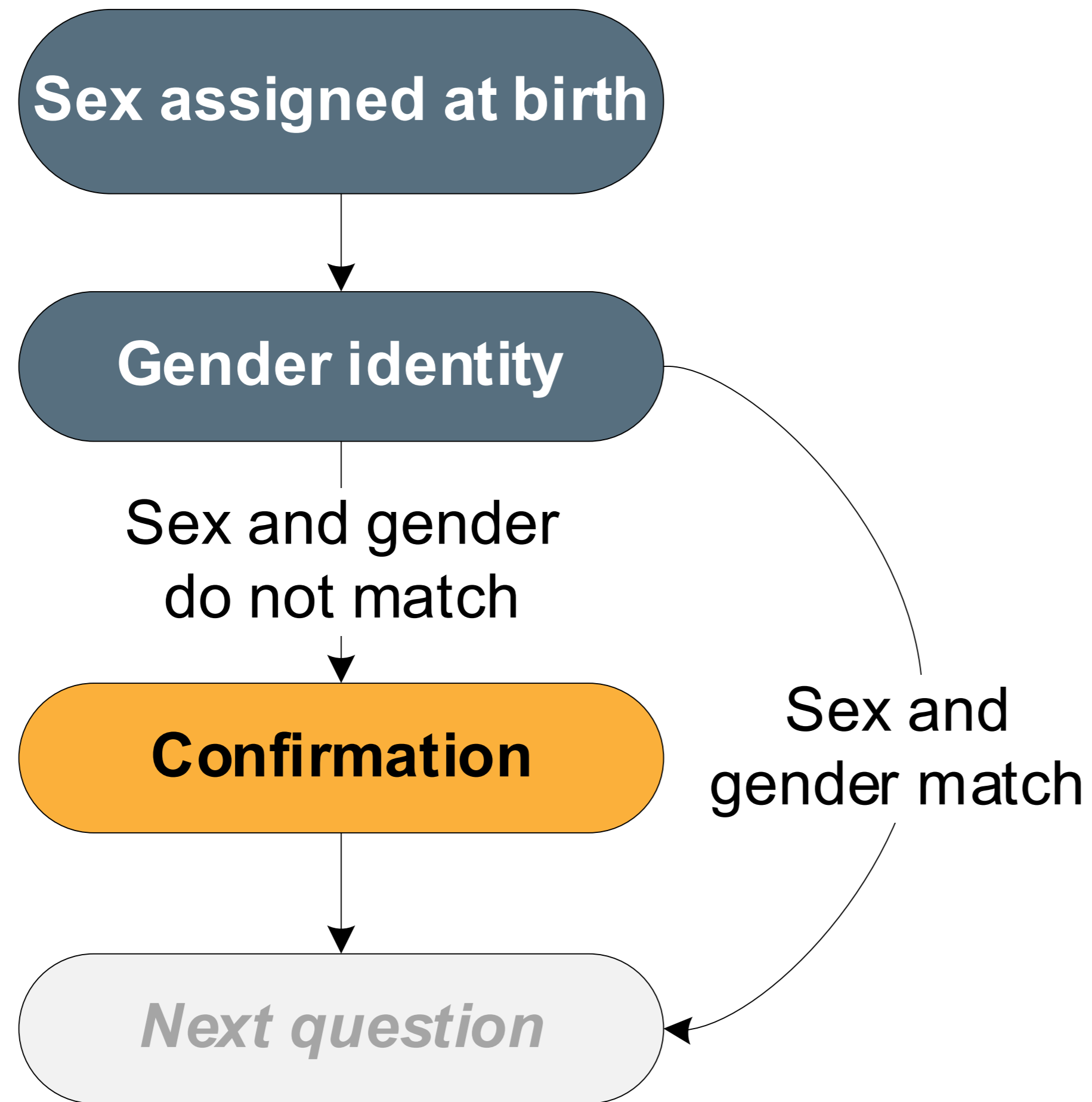
- Motivation for the research and overview of research questions
- SOGI data available from NCES, data used for this research, and item wording
- Research questions in detail
- Results
- Discussion
- Next steps

Motivation for the research and overview of research questions

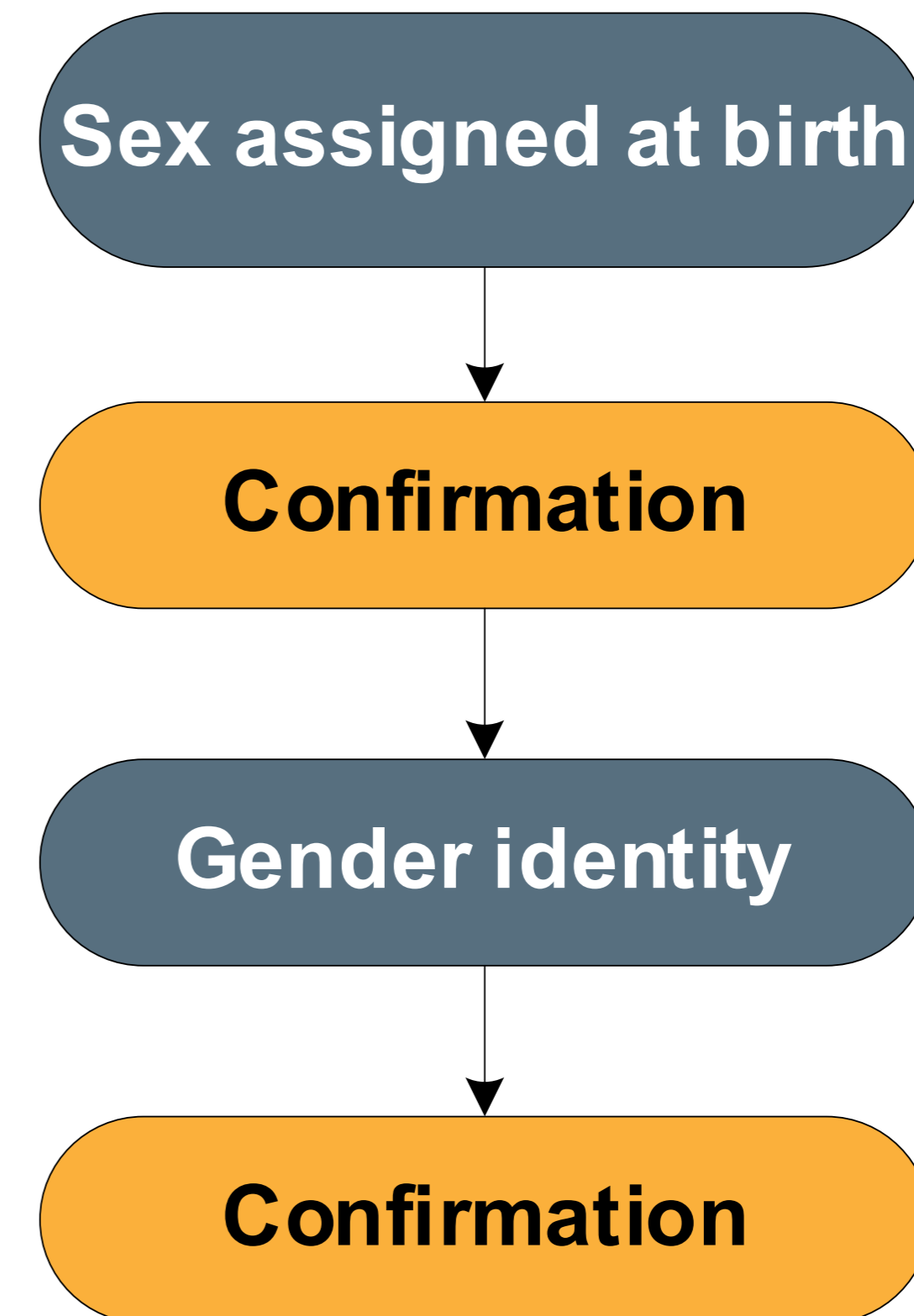
Sex and Gender: Confirmation questions

- False positive rates are a concern for sexual and gender minority populations
 - A relatively small amount of measurement error can have a large impact on population estimates for relatively small subgroups within populations (for example, if cisgender respondents are mistakenly categorized as transgender)
 - Response errors on sex-assigned-at-birth and gender items lead cisgender respondents to be falsely categorized as gender minorities, potentially inflating population estimates or yielding inaccurate conclusions about transgender individuals (Miller et al. 2022)
- Transgender respondents may feel singled out or “othered” by a follow-up question asking them to confirm their sex if different from their gender
 - Asking the same confirmation of all respondents, including those who report the same answer for their sex and gender, does not necessarily reduce that stigma for transgender individuals, since they would not know that all respondents were asked to confirm their answers.

Single confirmation method



Double confirmation method



Research questions

1. How do respondents answer two separate confirmation questions, one for sex assigned at birth, and one for gender? Do they confirm or change their responses?
2. Do respondents find the two-step gender questions difficult to answer?
3. How do respondents answer sex and gender questions upon reinterview?

SOGI data available from NCES, data used for this research,
and item wording

Background

- Since 2016, several NCES studies have included sexual orientation and gender identity (SOGI) items on surveys of adults
 - High School Longitudinal Study of 2009 (HSL:09) Second Follow-up (2016)
 - Baccalaureate and Beyond (B&B:08/18, B&B:16/17, B&B:16/20)
 - Beginning Postsecondary Students Longitudinal Study (BPS:20/22, *BPS:20/25 - planned*)
 - National Postsecondary Student Aid Study (NPSAS:20, *NPSAS:24 - planned*)
 - Cross-sectional study of students at all levels of postsecondary education
 - Conducted every 3–4 years since 1987
 - Data collected primarily through web surveys with phone interviews as a secondary method
 - Main study preceded by field test

Study members included in this analysis

Study name	Eligibility	Collection year	Cases
NPSAS:20 Full-scale	Postsecondary student in 2019-20 school year	2020	<i>n</i> =96,510
NPSAS:24 Field Test	Postsecondary student in 2022-23 school year	2023	<i>n</i> =3,230

Gender Identity questions in NPSAS:20 Full Scale Collection

Sex assigned at birth

What sex were you assigned at birth (what the doctor put on your birth certificate)?

1=Male

2=Female

Gender Identity

What is your gender? Your gender is how you feel inside and can be the same or different than your biological or birth sex.

- Male
- Female
- Transgender, male-to-female
- Transgender, female-to-male
- Genderqueer or gender nonconforming (please describe)
- You are not sure (please describe)

Gender Identity questions in NPSAS:24 Field Test Reinterview

Sex assigned at birth

What sex were you assigned at birth, on your original birth certificate?

1=Male

2=Female

Just to confirm, you were assigned [{if sex = 1 } male {else if sex = 2} female] at birth, on your original birth certificate. Is this correct?

1 = Yes

0 = No

Gender Identity

What is your gender? Your gender is how you feel inside and can be the same or different than your biological or birth sex.*

- Man
- Woman
- Transgender
- [{If race = American Indian or Alaska Native} Two-Spirit]
- Nonbinary
- A gender identity not listed. (Please describe)

Just to confirm, you identify as the following:

[list genders selected]

Is this correct?

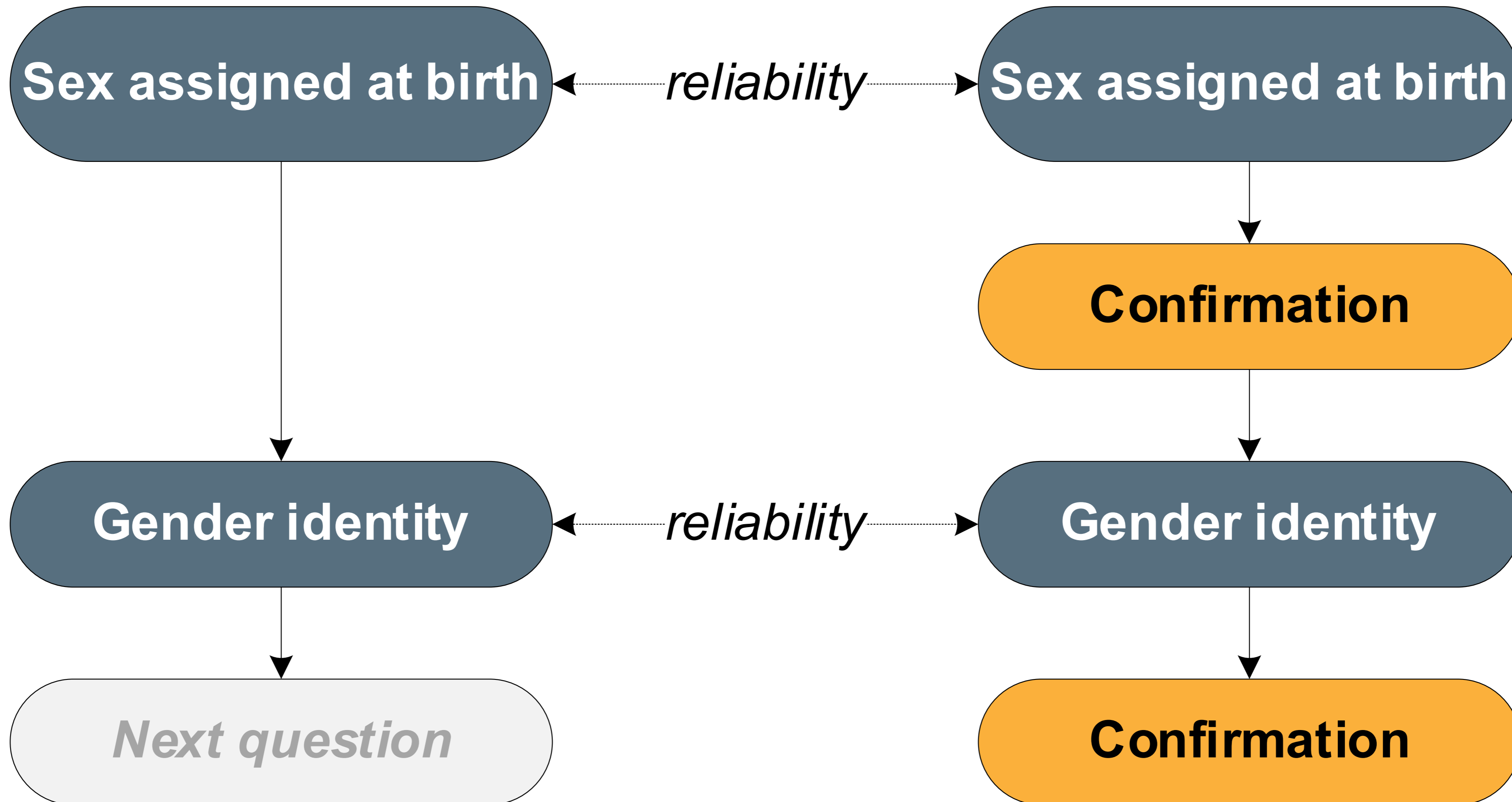
1 = Yes

0 = No

Research questions in detail

**NPSAS:24 field test
Survey (n = 3,230)**

**NPSAS:24 field test
reinterview (n = 870)**



Research Question 1:

How do respondents answer two separate confirmation questions, one for sex assigned at birth, and one for gender? Do they confirm or change their responses?

- How often do respondents confirm their answers to the Sex at Birth and Gender Identity items?

Research Question 1:

How do respondents answer two separate confirmation questions, one for sex assigned at birth, and one for gender? Do they confirm or change their responses?

- OK, but what about burden?

Research Question 2:

Do respondents find the two-step gender questions difficult to answer?

- Probe with questions at the end of the survey about how difficult it was to answer

Research Question 3:

How do respondents answer sex and gender questions upon re-interview?

- How often do respondents answer exactly the same in the field test survey and in the re-interview?

Results

Question 1: Confirmation questions

Confirmation question asked after each question in the reinterview for the two-step gender measure:

- **99.9%** confirmed their sex at birth
- **100%** confirmed their gender identity
- One respondent left the Sex at Birth confirmation question missing, leading to a 99.9% confirmation rate. Otherwise, all respondents confirmed their previous selection.

Question 1: Confirmation questions

- Low response time for SOGI items

	Study	
	NPSAS:20	NPSAS:24 FT main survey
	Mean response time (sec)	Mean response time (sec)
Sex assigned at birth	6.5	5.6
Gender identity	6.9	5.7
Sexual orientation	7.4	5.9
Income	21.3	20.1
Disability	6.9	3.3

Question 1: Confirmation questions

- Generally, reduction in item nonresponse for new item format vs. old format

	Study	
	NPSAS:20	NPSAS:24 FT main survey
	Item nonresponse (%)	Item nonresponse (%)
Sex assigned at birth	0.29	0.34
Gender identity	0.29	0.00
Sexual orientation	2.22	1.00
Income	0.35	0.28
Disability	0.29	0.28

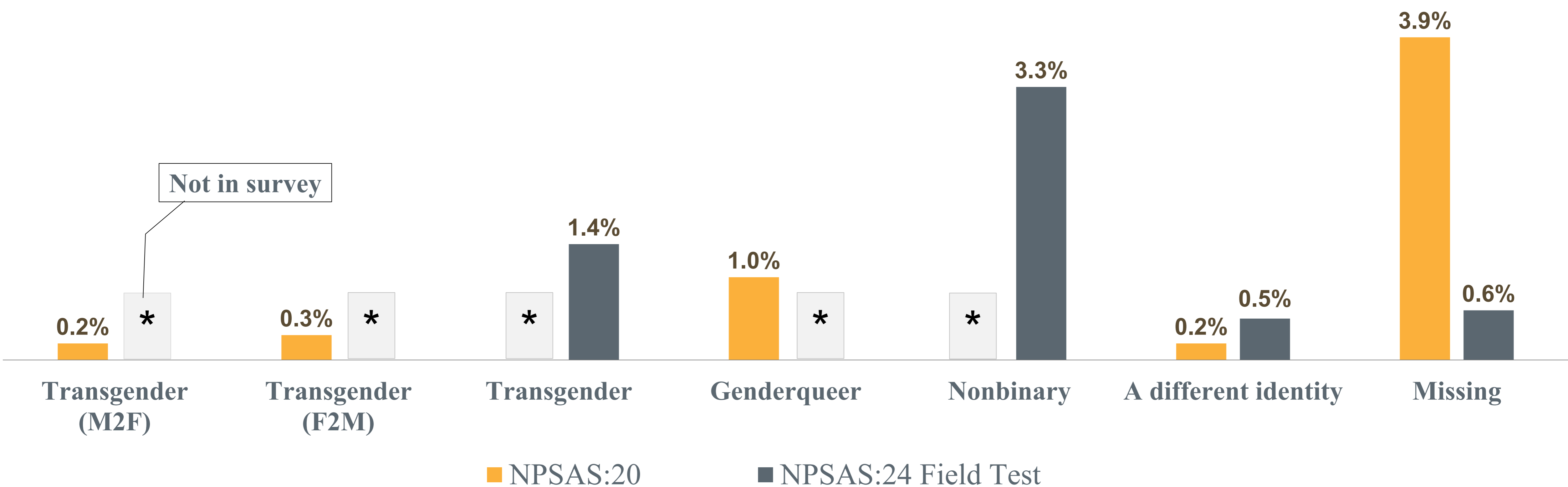
Question 1: Confirmation questions

- Low breakoff rates

	Study	
	NPSAS:20	NPSAS:24 FT main survey
	Breakoff rate (%)	Breakoff rate (%)
Sex assigned at birth	0.06	0.09
Gender identity	0.00	0.09
Sexual orientation	0.06	0.03
Income	0.79	1.09
Disability	0.07	0.00

Gender Identity

What is your gender? Your gender is how you feel inside and can be the same or different from your biological or birth sex.



Question 1: Confirmation questions

- Low rate of changing initial responses in the field test and the reinterview

	Survey	
	NPSAS:24 Field Test	NPSAS:24 Reinterview
	Backup rate (%)	Backup rate (%)
Sex assigned at birth	1.7	0.6
Gender identity	2.3	0.3
Sexual orientation	2.9	0.6
Income	4.1	1.9
Disability	1.9	1.6

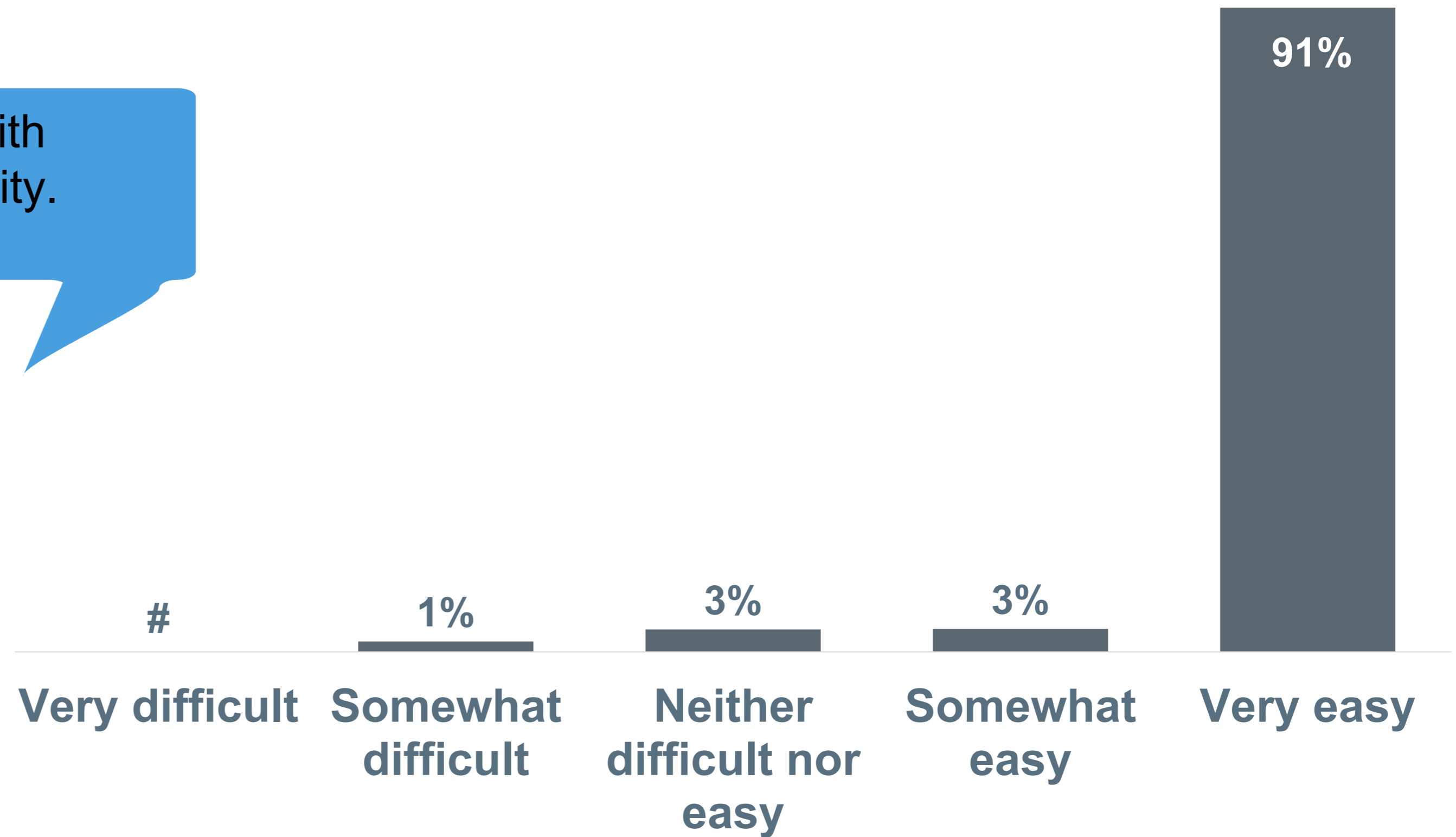
Question 2: Debriefing

On a scale from 1 to 5, with 1 being “Very difficult” and 5 being “Very easy”, how difficult or easy was it to answer the previous question about your gender?

Discomfort with revealing personal information.

Struggling with gender identity.

Because you guys are fussy about asking about gender. There’s only two...



Question 3: Re-interview results

- High agreement between field test survey and re-interview

	Percent Agreement	Cramer's V
Sex assigned at birth	100.0	1.00
Gender identity: Male	99.4	0.98
Gender identity: Female	99.3	0.98
Gender identity: Transgender	99.8	0.92
Gender identity: Two-spirit	100.0	1.00
Gender identity: Nonbinary	98.7	0.83
Gender identity: A different identity	99.5	0.33

Discussion

Discussion

- Do we need confirmation questions?
 - No – reinterview rates convincingly argue that most people do not change their answer between original survey and re-interview, indicating low risk of false positives
 - A reinterview may be a better option
- If you are still concerned about false positives for your population...
 - Double-confirmation does not single out those who endorse non-aligning sex and gender categories as responding potentially in error
- Examine write-ins and missingness rates over time
 - Generally accepted that terminology and identities may fluctuate over time within a population, so continually evaluating item performance may help keep missingness rates low

Next steps

- What analyses do we have planned next?
- NPSAS:24 full-scale collection planned to occur spring 2024

Thank you!!!

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<https://nces.ed.gov/surveys/hsls09>

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Special thanks to Dr. Tracy Hunt-White, Study Director for NPSAS