# Mindful
## Continuing Education

# Measuring Sexual Orientation, Attraction, and Gender Identity Among Youth to Improve Outcomes

# Executive Summary

Understanding the experiences of lesbian, gay, bisexual, and transgender (LGBT) youth is critical to promoting their healthy development and creating safe and supportive environments. Research shows that these youth may be at higher risk for bullying victimization, drug and alcohol use, and sexual risk behaviors.[6]

In recent years, several surveys, both national large-scale collections as well as smaller research studies, have included items asking about adolescents' sexual orientations and gender identities. However, there are widespread concerns that the items included on these surveys do not accurately identify LGBT youth as such.[10] Data from previous surveys suggest that many respondents may skip answering items pertaining to their sexual orientation and/or gender identity, or may answer in unintended ways—for example, by mistakenly identifying as bisexual interpreting it to mean attraction to the opposite sex—due to their misunderstanding the items' content.[10,17]

Adolescence is a time when youth become more aware of their sexual orientation and gender identity, which may be still developing. Those still working to understand their sexual orientation may not yet have a solidified sexual identity (as gay, for example), but may report same-sex attraction and/or behaviors. Someone who identifies as a gender different from their biological sex may not self-identify as transgender, if, for instance, they associate transgender status with hormonal or surgical transition, and they have not pursued that transition. Thus, collecting accurate data on these complex personal characteristics is particularly challenging. However, such data are critical for the development of targeted policies, programs, and practices.

To develop more valid and reliable measures of adolescent sexual orientation and gender identity, Child Trends, with support from the Arcus Foundation, convened a panel of researchers and practitioners with extensive experience assessing and/or working with LGBT youth. We then conducted cognitive interviews with a diverse set of youth to ensure students would understand and feel comfortable responding to tested survey items. Finally, we performed a field test of items resulting from the cognitive interviews by including them in the U.S. Department of Education's School Climate survey in Washington, DC, administered during the 2016-17 school year with over 3,000 middle and high school students.

## Key findings

- Middle- and high-school-aged youth included in our cognitive interviews generally understood and were able to respond to our tested sexual orientation and gender identity items. However, these youth stressed the

importance of ensuring that survey respondents feel their answers are confidential and that they can respond in a private setting.

- Piloted items performed well in the field test. When placed at the beginning of the survey, and among students who reached the items when placed at the end of the survey, they had lower nonresponse rates than sexual identity items on the national Youth Risk Behavior Survey did.
- Providing response options of "I am not sure yet" and "something else" for sexual identity items (which is consistent with strategies employed with adults on the National Health Interview Survey) led to greater interpretability of resulting data (i.e., ability to distinguish between those who are questioning their identities and those who identify with other labels).
- Validly assessing sexual orientation among adolescents often requires measurement of multiple dimensions (i.e., identity, attraction, and/or behavior), particularly for middle-school-aged youth, whose understanding of their sexual identity may still be in development.
- Traditionally used binary gender items (i.e., "are you male or female") do not validly capture either current gender identity or gender at birth for transgender students and, according to expert panel members, may disengage transgender or other gender-expansive youth from participating in survey research.
- The two-step approach to identifying transgender youth—consisting of asking about gender at birth and current gender identity—is appropriate for middle- and high-school-aged respondents.

# Recommended Items

## Sexual identity

Which of the following best describes your sexual orientation? Mark one response.
- Straight, that is, not gay
- Gay or lesbian
- Bisexual
- I am not sure yet
- Something else

## Sexual attraction

Have you ever had a crush on a boy or a girl? Mark one response. (Middle school)
- A boy
- A girl
- Both
- Neither

Who are you sexually attracted to? Mark one response. (High school)
- Boys
- Girls
- Both
- Neither

## Gender at birth

What gender were you at birth, even if you are not that gender today? That is, what is the gender on your birth certificate? Mark one response.
- Male
- Female

## Current gender identity

What is your current gender identity, even if it is different than the gender you were born as? Mark one response.
- Male
- Female
- I do not identify as either male or female
- I'm not sure yet


This project is one of the first large-scale efforts to develop and test sexual orientation and gender identity items for use with middle- and high-school-aged adolescents. These items move the field closer to more consistent, valid measures and provide a foundation for better understanding the experiences of LGBT youth.

# Introduction

Accurate data can help researchers and others understand the experiences and outcomes of different groups. They can support the development of programs, practices, and policies that promote healthy development and safety for all youth. Although analyzing differences between race and ethnicity, binary gender (i.e., male/female), and socioeconomic status (e.g., free/reduced-priced lunch) is standard in most education- and youth-focused data collections, sexual orientation and gender identity (i.e., gender beyond the binary male/female, including those who do not identify with their gender assigned at birth) have largely not been assessed.

Understanding the experiences of lesbian, gay, bisexual, and transgender (LGBT) youth is critical to promoting their healthy development and creating safe and supportive environments. It is important that these youth are accurately identified, especially given findings that LGBT youth may be at higher risk for bullying victimization, drug and alcohol use, and sexual risk behaviors.[6]

In recent years, several surveys, both national large-scale collections as well as smaller research studies, have included items asking about adolescents' sexual orientations and gender identities. However, there are widespread concerns that the items included on these surveys do not accurately identify LGBT youth as such.[10] Data from previous surveys suggest that many respondents may skip answering items pertaining to their sexual orientation and/or gender identity, or may answer in unintended ways—for example, by mistakenly identifying as bisexual interpreting it to mean attraction to the opposite sex—due to their misunderstanding the items' content.[10,17]

This project was designed to develop more valid and reliable sexual orientation and gender identity (SOGI) items—that is, SOGI items that middle and high school youth feel comfortable responding to and that accurately capture this information. We aimed, specifically, to design items to be included on the U.S. Department of Education's School Climate Survey (ED-SCLS)[11] as part of a large school-climate evaluation in Washington, DC, as well as to inform other data collections.

## Defining sexual orientation and gender

Sexual orientation and gender are each multi-dimensional facets of an individual's identity. Sexual orientation is often defined in terms of three major components:

- *sexual identity*, or how an individual labels their sexual orientation;
- *sexual attraction*, or who an individual is and is not attracted to; and
- *sexual behavior*, or with whom an individual engages in sexual acts.[2]

Although these three components are aligned for many individuals, that is not always the case. For example, individuals still working to understand their sexual orientation may not yet have a solidified sexual identity, but may report same-sex attraction and/or behaviors. Such identity development is an important and expected part of adolescence, and many youth may not feel settled in an identity until adulthood. Many youth experience flux in their sexual identity over the course of adolescence.[16] In other cases, an individual may strongly identify with a given sexual identity, but may report attraction and/or behaviors that are inconsistent with how society would define that identity.

Each of these three aspects of sexual orientation may uniquely contribute to an individual's experience. For example, recent research has found that adolescents who identify as lesbian, gay, and bisexual are at increased risk for getting, or getting someone else, pregnant. In such cases, both the adolescents' identity as LGB—and the potential lack of support and targeted prevention services—as well as the adolescents' sexual behavior contribute to this relative risk. That is, identifying as LGB does not itself lead to pregnancy. Instead, this increased risk likely results from a combination of LGB youth not feeling represented in teen pregnancy prevention curricula and their engaging in sexual behavior that does not match societal expectations for their sexual identity.[8]

Gender, similarly, is not unidimensional. Gender functions as a combination of:
- *biological sex* at birth (also called "gender assigned at birth");[i]
- *gender identity*, or how an individual perceives their own gender, which may or may not be within the gender binary of male and female;
- *gender expression*, or how an individual presents their gender (i.e., "masculine" or "feminine"); and
- *gender label*, or how an individual labels the intersection of their biological sex, gender identity, and gender expression (i.e., identity as transgender, cisgender,[ii] or gender expansive). [iii,13]

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[i] Biological sex is used interchangeably in this report with "gender assigned at birth." Gender is a societal construct whereas biological sex is specifically based on genitalia and/or chromosomes. Biological sex and gender assigned at birth (i.e., gender appearing on birth certificate) are usually the same, however they are not always; for instance, in the case of intersex individuals, a gender marker of either male or female may be included on a birth certificate.
[ii] Cisgender refers to individuals whose gender identity aligns with the sex they were assigned at birth.
[iii] Gender expansive, also called "gender non-conforming," refers to individuals who do not identify on the gender binary of "male" and "female."

As with sexual orientation, these aspects of gender may not always align. For example, someone whose gender identity is aligned with their biological sex may still self-identify as transgender if they do not identify with the societal stereotypes associated with their gender. Someone who identifies as a gender different from their biological sex may not self-identify as transgender, if, for instance, they associate transgender status with hormonal or surgical transition, and they have not pursued that transition.[3,13] Another example: those who identify with a gender other than their biological sex may not identify as transgender if they feel the label is pejorative and discounts their identity as a man or woman.[13] In the case of gender expression, an individual may identify as their biological sex but may not conform to normative gendered stereotypes or behaviors. That is, someone who was born and identifies as female may identify their gender expression as "masculine" if they prefer dressing more like a stereotypical male.

# Previous strategies for asking adolescents about sexual orientation and gender identity

Given the complexities of defining both sexual orientation and gender, there are challenges to asking participants to endorse a sexual orientation or gender identity in survey research. As highlighted in a 2011 report from the Institute of Medicine on the health of LGBT people,[4] several studies have included measures of sexual orientation and, to a lesser extent, gender identity, but there exists no standard measurement across research protocols. Although efforts to include sexual orientation on large-scale surveys are growing (e.g., inclusion of sexual identity and behavior items on the core Youth Risk Behavior Survey for grades 9 to 12),[7] it is unclear whether such items are valid or reliable. It is critical to establish best practices for measuring sexual orientation and gender identity if researchers are to ensure comparability across studies and to better understand the experiences of individuals who are not heterosexual and/or cisgender. Moreover, to the extent measures have been used, few have been formally tested to ensure research participants understand the response options and can answer such items validly.[4,10,17]

## Sexual orientation

In 2003, a working group of researchers released the first analysis and recommendations for asking adolescents about their sexual orientation.[2] The report highlighted several issues that are relevant to the present work.

First, because adolescence is a developmental period during which individuals are figuring out who they are (i.e., identity formation), their sexual orientation is more likely to be defined differently according to each of the three dimensions of sexual identity, sexual attraction, and sexual behavior. In particular, many youth have not

yet engaged in sexual behavior. As such, the authors stress the importance of considering which dimensions of sexual orientation are most proximal to the outcomes being studied (e.g., if studying teen pregnancy, measuring sexual behavior), and, where possible, including measures of all three.

Second, the authors caution that many adolescents may not identify with predefined labels of sexual orientation (e.g., "gay" or "straight") and as such having an "other" option for sexual identity items is critical. At the same time, however, they highlight that such answer choices may be problematic, since the precise meaning behind an individual's selection of this other choice cannot be determined.

Third, it is critical to consider the cultural, regional, racial, and ethnic contexts in which sexual orientation items are being used. Although the authors do not provide specific recommendations, they suggest that labels and language may differ between groups of adolescents, and such differences need to be accounted for in developing and administering survey measures. The authors also identify a fourth dimension of sexual orientation—that of others' *perceptions* of sexual orientation— as another separate, difficult to measure aspect that may uniquely contribute to youths' experiences.

Despite this analysis, no standard set of sexual orientation items has been identified for use with adolescents. In an assessment of eight adolescent surveys conducted between 1986 and 1999 containing items on sexual orientation, Saewyc and colleagues found considerable variation in prevalence estimates as well as nonresponse  rates depending on item structure, wording, and placement in survey protocol.[17] Across all surveys examined, nonresponse rates were particularly high for sexual orientation items. The authors found that when response options were longer or included more than one construct, nonresponse rates were higher. Further, nonresponse rates increased when included later in the survey protocols. Though Saewyc and colleagues propose recommended item wording around each of the dimensions of sexual orientation (identity, attraction, behavior), they stress that "there has been almost no testing of adolescents' understanding of these measures or their response options."[17]

Only a small handful of studies have used qualitative methods to explore adolescents' understanding of sexual orientation and only one other has specifically used cognitive interviews to test potential items on sexual identity. That research, conducted by Austin and colleagues, highlights that many adolescents (ages 15 to 21) find it difficult to label themselves with concrete terms such as "gay" or "bisexual" since they are still exploring their sexual orientations.[1] Although the adolescents were generally able to answer items using these terms, they often preferred items which treated sexual orientation more as a spectrum, including

response options such as "mostly heterosexual" or "mostly homosexual" in addition to "completely heterosexual," "completely homosexual," and "bisexual." However, such responses pose difficulties for analysis. McCabe and colleagues highlight that to report meaningful results, researchers often must collapse the five-category item into the three more traditional categories (i.e., "straight," "gay," "bisexual") and, when undergraduate students are asked both versions, researchers may differently classify participants from the intermediary groups than how they would classify themselves on the three-category version.[9] Analyses of survey data by Russell and colleagues suggest that the vast majority of non-heterosexual high school students are able to endorse an identity within the "historically typical" options ("straight," "gay," "bisexual"), particularly when given an option of "questioning"; only around 9 percent of non-heterosexual youth opted to use an "other" category and adopt another label.[14] Still, as highlighted by Austin and colleagues' work, it is important to further test whether youth are comfortable answering these items.

Austin and colleagues work also found that youth were typically able to answer questions on attraction and often found them to be less threatening than items on identity (i.e., it is more acceptable to admit attraction to the same sex than to identify as gay or lesbian).[1] The authors suggest that including attraction items may be particularly useful for younger adolescents who may not yet identify with a particular sexual orientation.[1]

Although cognitive studies with adolescents are limited, considerably more work has been conducted with adults. In work conducted by Miller[10] as part of the Centers for Disease Control and Prevention's efforts to design a more valid and reliable sexual orientation item for adult respondents on the National Health Interview Survey (NHIS), she highlights that prevalence estimates for LGB populations vary considerably depending on the structure of the survey item. Such variability is particularly present in regards to non-response rates and selection of responses such as "I don't know" or "other." In cognitive interview work, Miller and her colleagues discovered that individuals who identify as heterosexual often did not know or understand the different sexual orientation labels, understanding themselves as "not gay" rather than as "heterosexual." Sometimes these individuals would select "don't know" or "other" from a lack of understanding of terminology, and sometimes would select "bisexual," misinterpreting the item as meaning one gender attracted to the other gender, rather than attracted to both genders.

Individuals identifying as something other than heterosexual sometimes endorsed "I don't know" or "other" to indicate some questioning or fluidity of their sexual identities, or identification with one of the many other sexual orientations not directly probed (e.g., "pansexual," "queer"). Further, transgender respondents may

also endorse "I don't know" or "other" to reflect the intersection between their gender identity and sexual orientation. Based on these findings, the sexual orientation item on the NHIS was modified in three important ways. First, the terminology for the items were changed from "heterosexual" and "homosexual" to the more common parlance of "straight" and "gay." Second, a qualifier was added to the "straight" category to reflect heterosexual individuals' identification as "not gay." And third, follow-up questions were added for those responding "something else" or "I don't know" to separate the different reasons for such endorsements. These modifications resulted in substantially less nonresponse and fewer ambiguous responses.

In contrast to measures of sexual orientation, the work to develop valid and reliable measures of gender and gender identity is only just beginning. In 2014, the Gender Identity in U.S. Surveillance Group, housed at the Williams Institute, released a set of recommendations for including gender identity measures on health surveys, including a dedicated chapter on such measures for adolescents.[21] Generally, the group recommends using a two-step approach for identifying transgender participants, first asking participants their gender assigned at birth and then their current gender identity.[iv] They also suggest including items asking respondents about whether they identify as transgender.[13] However, based on findings of cognitive interviews and surveys conducted by the Gay, Lesbian, and Straight Education Network (GLSEN), the group does not currently recommend the two-step version for adolescents. Specifically, GLSEN found some incongruence between self-reported transgender identity and transgender status identified through a two-step item. The group suggests that a two-step version may be appropriate but further testing may be necessary.

## Current project

It is clear, then, that more work is needed to identify valid and reliable measures of both sexual orientation and gender identity for adolescents. The existing work is limited in several ways. First, despite the increased use of sexual orientation measures in research surveys, including in the core Youth Risk Behavior Surveillance Survey since 2015, such items have rarely been cognitively tested with adolescents. Existing cognitive testing has largely been conducted with adults and older adolescents (over the age of 15). Further, the current most-used items generally have high nonresponse rates, raising questions about whether they accurately capture young people's sexual identity, attraction, and/or behavior.

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[iv] We use the term "transgender" here to capture those who do not identify as the gender they were assigned at birth. Per reasons discussed above, not all individuals who identify as a different gender from their birth gender label themselves as transgender.

Although there has been some investigation and recommendations as to the preferred measure of sexual orientation among adolescents, there remains no consensus in the field, limiting comparability between studies. Previous work surrounding the measurement of gender identity among adolescents is much more limited. At present, gender identity is not included on most large-scale surveys of adolescents, and there is only limited research on which to develop recommended items.

The present project aims to address these gaps in order to identify valid and reliable sexual orientation and gender identity items for inclusion on school climate surveys for middle and high school students. In 2015, Child Trends, in partnership with the DC Office of the State Superintendent of Education (OSSE) and the DC Office of Human Rights (OHR) was awarded a grant by the National Institute of Justice to evaluate the impact of a school climate framework, Safe School Certification, in middle and high schools in Washington, DC. To inform schools about their climate and evaluate progress, Child Trends and OSSE planned to collect data through the newly released U.S. Department of Education School Climate Survey (ED-SCLS). As planning for grant implementation was underway, the Council of the District of Columbia moved forward with legislation requiring all DC public and public charter schools to collect school climate data starting in school year 2020-21. During markup of the bill, Councilmember David Grosso, Chairman of the committee on Education made the following statement:

> While the Committee supports school climate surveys, I do want to say for the record that we are concerned that the survey designed by the U.S. Department of Education's National Center for Education Statistics, which will be used by OSSE, OHR, and Child Trends, does not currently include questions on sexual orientation or gender identity. Failure to include these demographic questions may lead to inaccurate conclusions on how students view their school climate.
>
> We recognize that researchers have not yet come to a consensus on best practices on asking these questions on surveys, especially surveys directed toward middle- and high-school-aged students. However, research is getting better with time; therefore, we strongly urge OSSE and OHR to later add these questions at some point during the 4-year pilot program. The Committee expects that by the time school climate surveys are expanded to all schools beginning in school year 2020-2021 that questions on sexual orientation and gender identity will be seamlessly incorporated into the surveys being used by our public schools and public charter schools.[5]

In response to this request, Child Trends sought funding from the Arcus Foundation to develop items for inclusion on the ED-SCLS following three subsequent steps: (1)

convening an expert panel, (2) conducting cognitive interviews with a diverse set of youth, and (3) analyzing data patterns from the baseline ED-SCLS data collection in Washington, DC. The overarching goal of this project is to develop a set of items that can reliably and validly document youth's sexual orientations and gender identities to be used as demographic measures on a wide range of survey assessments.

We examined reliability and validity by: (1) assessing whether youth interpret the items and response choices as intended ("face validity"); (2) examining whether the newly developed items are less frequently left blank by survey participants ("missing data") compared to previously used SOGI items with youth; (3) examining whether identification as LGBT and/or leaving items blank varies by other demographics ("item bias"), and (4) assessing whether those identifying as LGBT have data patterns that suggest accurate endorsement ("internal validity"). The results from each of these steps are reported in the remainder of this report.

# Expert Panel Recommendations

To explore the challenges of asking SOGI among adolescents, and to develop culturally responsive and statistically reliable SOGI measures, Child Trends convened a panel of experts to review, discuss, and challenge the current body of literature and to examine it against the backdrop of DC's LGBT youth population. The panelists represented research institutions, national advocacy groups, and local and federal government. All were familiar with the research on and the experiences of LGBTQ children and adolescents. (See Appendix B for a list a participants.) Together panelists raised questions, voiced caution and developed recommendations for valid SOGI items.

## Sexual orientation measures

After considering a summary of existing measures (see Appendix A) and a description of the current content of the ED-SCLS, panelists were asked to consider several critical questions to determine a set of measures for cognitive testing:

1) Which dimensions of sexual orientation are appropriate to include on the ED-SCLS?
2) What item wording should we consider, given our inclusion of younger adolescents and the cultural, racial, and ethnic diversity of DC?
3) What other issues do we need to consider?

## Expert panel recommends assessing sexual identity, attraction, and perceived sexual orientation.

The panel strongly agreed that including multi-dimensional measures of sexual orientation was critical. Noting that the ED-SCLS does not typically ask students about personal behavior or experiences—instead focusing on perceptions of school climate—the panel agreed that including sexual behavior would be out of place on the ED-SCLS. However, the panel did suggest that respondents' perceptions of their school climate may vary differently as a function of perceived sexual orientation compared to sexual identity and/or attraction.[2] Being perceived as something other than heterosexual, regardless of actual sexual orientation, may lead to different experiences of support, bullying, relationships, etc. While understanding the challenges of accurately knowing how others perceive oneself, the panel suggested testing items on perceived sexual orientation during cognitive interviews. Thus, the panel suggested including items pertaining to identity, attraction, and perception as part of cognitive testing.

## Expert panel recommends testing sexual identity item from the National Health Interview Survey.

Given the adoption of the National Health Interview Survey *sexual identity* item on surveys conducted by the U.S. Department of Health and Human Services and their strong cognitive testing with adults in both English and Spanish, the panel strongly endorsed using these items with adolescents. However, the panel acknowledged that adolescents are more likely to be unsure of their sexual identity and suggested that including a "questioning" category may reduce endorsement of the "something else" category. The panel felt that doing so provides more clarity about the meaning of this category.[14]

At the same time, panel members with experience working with LGBT youth in DC suggested that "historically typical" labels were "going out of fashion" and youth may be resistant to endorse those identities on the survey. Still, the panel agreed that testing the established language would help ensure alignment between the DC ED-SCLS survey and other national studies and help limit the number of categories for disaggregation. As one panel member expressed, most non-heterosexual youth, regardless of how they self-identify, will understand the purpose of what we're asking: "Our task is to be respectful, but parsimonious."

## Panel recommends sexual attraction items be straightforward and use age-appropriate terms for younger and older youth.

For sexual attraction, the panel suggested that such items should be asked as straightforwardly as possible, given previous findings regarding confusion with

wordings such as "romantic attraction."[18] However, the panel suggested that younger adolescents may require slightly different items related to sexual attraction, and acknowledged that sexual attraction may not be developmentally appropriate. The panel suggested testing "sexual attraction" with older adolescents and "crush" with younger youth and testing separate items related to attraction to males ("boys") versus attraction to females ("girls").

## Panel recommends asking respondents to report on how others perceive their sexual orientation.

For perceived sexual orientation, existing measures tend to focus on the experience of violence, harassment, or bullying based on perceived sexual orientation.[2] The ED-SCLS does include one item pertaining to bullying based on sexual orientation, administered only to high school students ("Students at this school are teased or picked on about their real or perceived sexual orientation"), however as the ED-SCLS does not ask participants about their personal experience, this item likely does not capture this dimension of sexual orientation. The panel did not suggest specific language, but strongly endorsed testing of items capturing this construct.

## Panel cautions about effects of item placement on survey.

As with the existing literature (see Chapter 1), the panel raised important considerations regarding the order of items placed on the survey. Specifically, the panel suggested separating the sexual identity and sexual attraction items if possible, and placing items closer to beginning of the survey to limit nonresponse. Unfortunately, the ED-SCLS places all user-created items together at the end of the survey.

# Gender and gender identity measures

Given the dearth of existing research on gender identity items for adolescents, expert panel members spent considerable time debating the nuances of item purpose, wording, and structure. Expert panel members were specifically asked to consider the following questions:

1) What dimensions of gender are key to measure? Gender identity? Gender expression? Transgender status?
2) How should gender identity be assessed?
3) What other issues do we need to consider?

## Panel recommends using gender at birth and gender identity to identify transgender youth.

Although the panel saw value in asking about *gender expression,* they ultimately agreed that given the purpose of such items to assess differences in perceptions of school climate across groups of students, items should be focused on defining

distinct populations of students. Thus, the panel agreed that the focus of the item(s) should be on identifying transgender students. The panel agreed, however, that self-identification as transgender may not be salient for adolescents, particularly for younger adolescents. Further, some panel members raised the issue of "mischievous responders," or those likely to misreport their identities in order to confound researchers,[18] and suggested that this would be more likely to occur on items specifically calling out transgender identity. As such, the panel agreed that items should focus on *gender identity* in comparison to *biological sex*, or gender assigned at birth, using a two-step set of items, consistent with recommendations of the Gender Identity in U.S. Surveillance Group.[21]

## Panel did not come to consensus on wording of gender items.

Although the panel generally agreed that items should ask about biological sex and gender identity, the panel had concerns about how each component was to be asked. For biological sex, or gender at birth, some panel members raised concerns about using "gender on birth certificate" as a proxy for biological sex, fearing that adolescents may not be able to respond if they had not seen their birth certificates. Some questioned how intersex individuals would be able to respond to the biological sex item. Others raised concerns about the ability for those who do not identify on the gender binary to be able to respond to current gender identity items. The panel agreed that some language acknowledging that individuals may be gender expansive should be included in the current gender identity item.

## Panel concerned about current ED-SCLS gender item.

Of critical concern to the expert panel members was the current gender item contained on the ED-SCLS. This item, which is the first item on the survey, reads, "Are you male or female?" Expert panel members expressed concern that transgender or gender-expansive youth may immediately disengage from the ED-SCLS when presented with this item because it may be perceived as forcing them to conform to a concept of gender that does not align with their identity. The current version of the ED-SCLS does not allow users to modify or remove existing items.

# Next steps for testing SOGI items

Based on the suggestions of the expert panel, the Child Trends team devised a set of initial items for cognitive testing centered on sexual identity, perceived sexual orientation, sexual attraction for middle school students, sexual attraction for high school students, biological sex including references to birth certificates, biological sex without references to birth certificates, and current gender identity. The specific items, and findings from cognitive interviews, are described in the next chapter.

# Cognitive Interview Findings

Cognitive interviews are a valuable tool for assessing whether respondents of survey items understand the questions being asked and are able to answer them. The validity of survey instruments requires respondents to answer questions accurately. For instance, student answers to SOGI items may not represent their actual sexual orientation or gender identity, either because the question is unclear, respondents do not understand certain terms, or respondents are not comfortable with answering the question truthfully. Conducting cognitive interviews of items prior to administering a survey allows researchers to understand if any of these scenarios are occurring. Items can then be adjusted as necessary prior to administering the survey, which will help ensure that responses are accurate.[12]

Based on recommendations from the expert panel and findings from a literature review of past surveys that included SOGI items for adolescents and adults, seven items were designed for student cognitive interviews: one for sexual identity, separate middle school and high school sexual attraction items, one for perceived sexual orientation, two for biological sex, and one for gender identity. Students were not asked to answer the items directly, but rather the items were read to students and several follow-up probes were asked to assess the interviewee's understanding of the items and ability to answer them. Students were also asked if they believed that their peers would be able to answer these items and feel comfortable doing so. Additionally, students were asked if they could think of a better way to ask these items.

Middle and high school students between the ages of 13 and 17 from public and public charter schools in DC were eligible to participate in the cognitive interviews. Students received $20 in Amazon.com electronic gift card codes as a thank-you for participation in the interviews. Students were recruited for the cognitive interviews using three methods: flyers, in-person sign-ups, and parent meetings. Flyers that advertised cognitive interviews to students were distributed to local community centers, with an emphasis on centers that serve LGBT youth. These flyers were also posted at businesses in the neighborhoods surrounding middle and high school campuses, with neighborhood selection based on ensuring variation by city ward. The flyers included the purpose of the interviews, incentives for participating, and a Child Trends phone number that students could call to learn more about the interviews.

Child Trends staff also recruited students in person by visiting DC neighborhoods after school and explaining the purpose and format of the interviews to students, distributing flyers to give to their parents, and asking for contact information for both them and their parents. These neighborhoods were also selected to ensure variation by city ward. Finally, parents were approached by representatives from

the DC Office of Human Rights at events such as back-to-school activities outside of school hours, where they were asked whether their children would want to participate in the interviews.

Twenty interviews were conducted over the phone between August and October of 2016. Prior to the interviews, parents needed to complete a consent form and eligibility screener either online or over the phone. Using information from the screener, efforts were made to interview students with a variety of different demographic characteristics by grade-level, gender, race/ethnicity, and city ward, the last of which was used to ensure that the sample included students from various socioeconomic backgrounds. Parents were also asked, "Where did you or your child hear about this opportunity?" to assess whether they heard about the interviews from an LGBTQ youth center. A list of interviewees by certain demographic characteristics is included in Table 1.

| Table 1. Cognitive interview respondent demographics | | |
|---|---|---|
| **Demographic group** | **N** | **Percent** |
| **Total** | 20 | 100% |
| **Grade level** | | |
| **Middle school** | 3 | 15% |
| **High school** | 17 | 85% |
| **Gender** | | |
| **Female** | 13 | 65% |
| **Male** | 7 | 35% |
| **Race/ethnicity** | | |
| **White** | 2 | 10% |
| **Black/African American** | 10 | 50% |
| **Hispanic/Latino** | 3 | 15% |
| **Asian** | 1 | 5% |
| **Two or more races** | 2 | 10% |
| **Other** | 2 | 10% |

The cognitive interview sample does have limitations in terms of student demographics. Due to restrictions on the ages of students who could be interviewed, it was difficult to recruit middle school students. Generally, only students in 8th grade would be older than 13 and eligible to be interviewed. This resulted in a small sample size of middle school students. Additionally, there was a low response rate from parents to the question, "Where did you or your child hear about this opportunity?" and the answers provided did not indicate whether students were being referred through LGBTQ-based community centers. Therefore, there is no indication of the sexual orientation or transgender status of

respondents. The proportions of interviewees by race/ethnicity were representative of the demographics of children in DC.[22]

# Cognitive interview items and responses

The items tested in the cognitive interviews, as well as the follow-up probes asked to student interviewees, are included below. These are followed by summaries of how students responded to the various probes.

## Sexual identity

### Question

Which of the following best describes you? Mark one response.

- Straight, that is, not gay
- Gay or lesbian
- Bisexual
- I am not sure yet
- Something else

### Probes

- In your own words, what is this question asking?
  - What, to you, do you think is meant by "Straight, that is, not gay"?
  - What, to you, do you think is meant by "Gay or lesbian"?
  - What, to you, do you think is meant by "Bisexual"?
  - What, to you, do you think is meant by "I am not sure yet"?
  - What, to you, do you think is meant by "Something else"
- Would you be able to answer this question? Why or why not? You do not have to tell me what answer you would choose.
- Do you think most students your age would be able to answer this question? Why do you think that?
- Do you think most students your age would feel comfortable answering this question? Why do you think that?
- Can you think of a better way to ask students about this?

### Responses

More than half of the interviewees believed this question was asking about "sexual orientation" or "sexual preference", and only one student showed any confusion as to the meaning of the question. Nearly all students interpreted "straight" to mean attraction to the opposite gender or sex, "gay or lesbian" to mean attraction to the same gender or sex, and "bisexual" to mean attraction to both genders or sexes. Three students used the term "like" to describe attraction. Interpretations of two answer options, "I am not sure yet" and "something else," varied among students. All but one student understood "I am not sure yet" to mean that someone is questioning or confused about their sexual orientation or still figuring it out.

More than half of students understood "something else" to mean that someone had a preference not given as an answer option, although over a quarter of students were unable to define this answer choice. Other students thought that this meant that someone was still developing their sexual orientation, that they love everyone, or that they were attracted to another species. All students interviewed stated that they would be able to answer this question. When asked why they would be able to answer, students cited confidence, comfort, and lack of shame in their sexual orientations. More than three quarters of students interviewed said that most of their peers would be able to answer the question. Those who were unsure expressed that their peers may not know the answer, and that some may not be able to be honest about their sexual identity due to shame or fear of other students seeing their answers. When asked whether most of their peers would feel comfortable answering the question, fewer than half of students answered with a definitive "yes." However, the same proportion of students answered "some" or "maybe," and one out of five answered "no." Students thought that major obstructions to answering the question would be shame and fear of judgement from peers. One student offered the following explanation:

> I think they would feel comfortable answering it in solitary, but because we'll be in a school environment, they might feel uncomfortable if another student saw their answer.

More than half of students could not think of a better way to ask the question. However, some students offered ideas, such as, "What do you think you are?" and "What do you identify yourself as?"

## Sexual attraction for middle-school-aged students

### Question
Have you ever had a crush on a boy?
- Yes
- No

Have you ever had a crush on a girl?
- Yes
- No

### Probes
- In your own words, what is this question asking?
  - What, to you, do you think is meant by the word "crush"?
  - Are there other words that students your age use instead of "crush" but you think mean the same thing?
- Would you be able to answer these questions? Why or why not? You do not have to tell me what answers you would choose.

- Do you think most students your age would be able to answer these questions? Why do you think that?
- Do you think most students your age would feel comfortable answering these questions? Why do you think that?
  - If a student your age wanted to answer "yes" or "no" to both of these questions, do you think that they would be comfortable in doing so? Why do you think that?
- Can you think of a better way to ask students about this?

## Responses

Since only three middle-school-aged students were interviewed, caution is recommended when drawing conclusions around this item. All the respondents interpreted the questions to mean, "Have you ever liked a boy or girl?" Respondents used words such as "like" and "romantic interest" to describe the term "crush," and one student stated that their peers would also use language such as "bae" to describe someone that they have a crush on. All students stated that they would be able to answer the questions, based on the questions' direct and self-explanatory nature. One student responded:

> Yes, because I think at our age we have developed these feelings.

One student was hesitant about whether most of their peers would be able to answer the questions, stating that some might prefer to keep who they had a crush on a secret. Two students stated that most of their peers would not be comfortable answering this question due to its personal nature, as well as the possibility that their classmates may see their answers. One student noted:

> I feel like it would feel a little bit uncomfortable, I think a lot would lie, especially boys, because if one of their buddies sees over their shoulder, they would be nervous. They wouldn't take the chance.

All students were unsure as to whether a student their age would be comfortable answering "yes" or "no" to both questions. One stated that if a student were alone, perhaps they would feel comfortable. When asked if they could think of a better way to ask the question, students answered "Have you ever had feelings for a boy or girl?" and "What gender do you have a crush on, or both?"

## Sexual attraction for high-school-aged students

### Question

Are you sexually attracted to boys?
- Yes
- No

Are you sexually attracted to girls?

- Yes
- No

## Probes

- In your own words, what is this question asking?
  - What, to you, do you think is meant by "sexually attracted"?
  - Are there other words that students your age use instead of "sexually attracted," but which mean the same thing?
- Would you be able to answer these questions? Why or why not? You do not have to tell me what answers you would choose.
- Do you think most students your age would be able to answer these questions? Why do you think that?
- Do you think most students your age would feel comfortable answering these questions? Why do you think that?
  - If a student your age wanted to answer "yes" or "no" to both of these questions, do you think that they would be comfortable in doing so? Why do you think that?
- Can you think of a better way to ask students about this?

## Responses

High school students stated that this item is referring to sexual orientation, sexual preference, or which gender they were attracted to. Students understood "sexually attracted" as "wanting sex with someone," "wanting a relationship," "wanting more than friendship," and "arousal." Students stated that their peers would use terms and phrases such as "trying to smack at," "who someone likes/loves," "preference," "straight or gay," and "would have sex with" to describe sexual attraction. All students stated that they would be able to answer these questions, mostly due to their comfort and knowledge around sexual attraction and who they are attracted to, as well as the straightforward nature of the questions. One student explained:

> I would be able to answer these questions, because I learned about it before, and I've talked with my parents about it, so it's pretty clear.

More than three quarters of the participants stated that most students their age would be able to answer the questions. However, two interviewees indicated that students who were questioning who they are sexually attracted to may have difficulty answering. More than half of high school students stated that most of their peers would feel comfortable answering the questions, although students provided many reasons that this might not be the case, including: the information may be secret or personal, fear of judgement from peers, maturity of other students regarding SOGI, and the choice between only boys and girls. Two students indicated that if the survey was taken alone, students may feel more comfortable answering the questions. Student opinions were mixed as to whether someone

would feel comfortable answering "yes" or "no" to both questions. More than half of the participating students felt that most of their peers would be comfortable answering the question, while the other respondents were unsure. Students who expressed doubts stated that fear of judgement from peers, shyness, or the possibility of others seeing answers might deter students from feeling comfortable enough to answer. When asked if someone would feel comfortable answering no to both questions, one student mentioned:

> No, because I think that on the sexuality spectrum that asexuality is so far out there and a lot of people don't know what it is, and don't think it's okay.

When asked whether they could think of a better way to ask the question, three students responded, "What is your preference, male or female?" and two students felt that a single, open-ended question may be preferable.

## Perceived sexual orientation

### Question
I think students at my school think that I am:
- Straight, that is, not gay
- Gay or lesbian
- Bisexual
- Something else

### Probes
- In your own words, what is this question asking?
- Would you be able to answer this question? Why or why not? You do not have to tell me the answer you would choose.
- Do you think that most students your age would be able to answer this question? Why do you think that?
- Do you think that most students your age would feel comfortable answering this question? Why do you think that?
- Can you think of a better way to ask students about this?

### Responses
All of the participating students understood that this question was asking what other people perceived or judged their sexual orientation to be. However, only 2 in 5 students stated that they would be able to answer this item. The main reason for not being able to answer the item was that interviewees did not know what other students think about them. One student explained:

> I mean I couldn't be able to answer it because I don't really know what people in my school think about me. I know what I think about myself, but not what others think about me.

About half of students believed that most students would be able to answer the item. Interviewees said that students may not be able to answer because they would not know what others thought about them or because they may not want to reveal their sexual orientation and therefore would not admit how they think others perceive them. However, around two thirds of interviewees thought that most students would feel comfortable answering this question. The most popular reason was that the question asks for other students' opinions, rather than asking about someone's own sexual orientation directly. About one third of students thought that there was a better way to ask this question, including, "Are you out of the closet?" or, "What do you think people may think about your sexual orientation?" They also recommended asking how friends and other students perceived their sexual orientation in two separate questions.

# Gender at birth

## Questions

1. What gender were you at birth? That is, what is the gender on your birth certificate? Mark one response.
- Male
- Female

2. When you were born, were you told that you were male or female? Mark one response.
- Male
- Female

## Probes

- In your own words, what is this question asking?
- Would you be able to answer this question? Why or why not? You do not have to tell me what answer you would choose.
- Do you think that most students your age would be able to answer this question? Why do you think that?
- Do you think most students your age would feel comfortable answering this question? Why do you think that?
- Can you think of a better way to ask students about this?

## Responses

For the gender at birth item, two questions were tested to see which one students would be better able to respond to and more comfortable with answering. Interviewees were generally asked about one of the two gender at birth questions, although two students were asked about both. For four students, interviewers did not note the specific question asked during the interview.

The six respondents to the first item all interpreted its meaning as either "what gender you were born as" or "what gender you were assigned at birth." All students said that they would be able to answer this question because they knew what gender they were born as, mainly because people told them what gender they were or because this gender is listed on their birth certificate. Additionally, all interviewees thought that most students would be able to answer this item for the same reasons, and because most students do not change genders. While two thirds of interviewees believed that most students would be comfortable answering this question, about half noted that transgender students may not feel comfortable answering this question because it is not asking them about their current gender. However, some interviewees responded that transgender students would be more comfortable if a current gender identity item was also asked. Interviewees thought that adding an "other" option and asking, "Were you physically born male or female?" or, "What is the chromosome you were born with?" would be a better way to present this item.

The eight respondents to the second question also mainly interpreted it as "what gender you were born as" or "what gender you were assigned at birth." One interviewee interpreted the question as "what your parents told you," and another as "what genitals you were born with." All interviewees said they would be able answer the question, and when asked why, responded that the question was straightforward or they knew what gender they were born as either because it was on their birth certificate or people told them. Almost all interviewees noted that most students would be able to answer this question for those same reasons, though one thought the question might be confusing for students questioning their gender identity. While interviewees thought that most students would feel comfortable answering this question, about half mentioned that transgender students may not feel comfortable doing so. One interviewee mentioned that students wouldn't answer the question because they may not know the answer. Three interviewees thought that the question should be asked differently, and gave the following examples: "What is your biological sex?" or, "Has your gender ever changed? If so, what was your gender before the change?"

When asked whether students would feel comfortable responding to either gender at birth item, one student noted:

> Most would, there might be a few transgender students who wouldn't feel comfortable, but they would understand why it's being asked.

## Current gender identity

### Question
What is your current gender identity? Mark one response.
- Male

- Female
- I am not sure yet
- I feel male sometimes and female at other times

## Probes

- In your own words, what is this question asking?
- Would you be able to answer this question? Why or why not? You do not have to tell me what answer you would choose.
- What do you think the purpose of this question is?
  - (If needed) Why do you think we ask this question in addition to the previous question?
- Do you think that most students your age would be able to answer this question? Why do you think that?
- Do you think that most students your age would feel comfortable answering this question? Why do you think that?
- Can you think of a better way to ask students about this?

## Responses

Most interviewees understood this item as asking what their current gender identity is, what gender they perceive themselves to be, or if they feel they are the same gender they were born as. One interviewee believed that the item was asking if they were transgender. All students said they would be able to answer this item, because the question was "straightforward" and they "know [their] gender." Interviewees generally understood that the purpose of the question was to see if their gender had changed since birth in order to identify transgender students, though about one quarter of students did not know why this item was being asked in addition to the gender at birth item. One student gave the following insight about being able to answer the item:

> I would, but because the way I understand gender is subjective… [but] it can be a confusing question to some people.

About three quarters of students said that most students would be able to answer this question because most people know their current gender, most are cisgender, and the answer options were inclusive of all genders. However, one quarter of interviewees believed that most students may not be able to answer this item because students could feel pressure to answer a certain way or students may be uncomfortable about their gender identity. When asked if most students would feel comfortable answering this question, two thirds replied yes because most students know their gender, most students are cisgender, and the question is inclusive. However, one third of students believed that only some students would feel comfortable answering this question because students may not want to conform to a gender identity, it is difficult to be asked about gender, or students may feel

nervous that others will see their answers. Only 10 percent of interviewees thought that an open-ended question would be better, and two suggested rephrasing the question to ask, "What gender do you prefer to be called?" or "What is your gender so far?"

# Cognitive interviews summary

Generally, student responses indicated the tested items for sexual identity, sexual attraction, gender identity, and gender at birth had a high degree of face validity—that is, students understood the items to be measuring the constructs as designed. Participating students understood the meaning of items, and indicated that they and their peers would be able to answer the items. However, interviewees raised concerns about whether LGBTQ students would feel comfortable answering many of these items. This was mainly due to privacy considerations, such as students potentially seeing other students' answers during the survey or the results being shared beyond the research team, rather than the content of the questions or the way that they were asked.

Cognitive testing indicated that the tested item concerning perceived sexual orientation would not solicit valid responses. Almost half of interviewed students indicated that most students would not be able to answer this question or would feel uncomfortable doing so. The interviewed students responded that they did not know what other students thought about their sexual orientation, and believed that most of their peers would have the same issue. These responses indicated that this item may not reliably capture the perceived sexual orientation of students.

Based on feedback from the cognitive testing, the final set of items, described below, were modified slightly to promote clarity and streamline the number of items piloted.

# Final items for pilot testing

## Sexual identity

The sexual identity item was changed to "Which of the following best describes your sexual orientation?" rather than "Which of the following best describes you?" to be more specific about what the question is asking. Additionally, examples for the "Something else" answer option were included in parentheses next to it for clarification given that some interviewees did not understand the answer option. The final sexual identity question is as follows:

Which of the following best describes your sexual orientation? Mark one response.
- Straight, that is, not gay
- Gay or lesbian

- Bisexual
- I am not sure yet
- Something else (e.g., asexual, aromantic, pansexual, etc.)

## Sexual attraction

The sexual attraction items were changed to only ask one question: "Have you ever had a crush on a boy or a girl?" for middle school and "Who are you sexually attracted to?" for high school. The answer options "Both" and "Neither" were added so that the item could be asked as one question. This simplifies these questions for the EDSCLS survey. The final sexual attraction items are as follows:

### Middle school

Have you ever had a crush on a boy or a girl? Mark one response.
- A boy
- A girl
- Both
- Neither

### High school

Who are you sexually attracted to? Mark one response.
- Boys
- Girls
- Both
- Neither

## Current gender identity

The gender identity item was amended to add "even if it is different than the gender you were born as" to the end of the question to clarify that the item is referring to current gender identity and to recognize that it may have changed from birth. This was added in part because two students did not understand the difference between this item and the gender at birth item. The final gender identity item is as follows:

What is your current gender identity, even if it is different than the gender you were born as? Mark one response.
- Male
- Female
- I'm not sure yet
- I feel male sometimes and female at other times

## Gender at birth

For the item regarding gender at birth, the first option was chosen, which asked, "What gender were you at birth? That is, what is the gender on your birth certificate?" However, "even if you are not that gender today" was added onto the first part of the question to recognize that gender identity may have changed after birth. This was designed to make the question more inclusive for transgender students.

This option was chosen over "When you were born, were you told that you were male or female?" because having the follow-up question regarding a student's birth certificate clarifies that the question is referring to one's gender at birth. Additionally, students may have been told that they were a different gender than is listed on their birth certificate. While there were concerns at the expert panel about students not knowing the gender listed on their birth certificate, this did not seem to be an issue in the cognitive interviews.

The final gender at birth item is as follows:

> What gender were you at birth, even if you are not that gender today? That is, what is the gender on your birth certificate? Mark one response.
> - Male
> - Female

# SOGI Item Pilot Test Results

Findings from cognitive interviews suggested strong face validity of our selected items. In order to determine whether the items function as intended, the items were fielded as part of the baseline data collection of a school climate survey and analyzed on four dimensions: (1) whether the estimated prevalence of students identifying as LGBT is comparable to previous data collections ("prevalence"); (2) whether item nonresponse rates are comparable or better than previous data collections ("item nonresponse"); (3) whether identification as LGBT and/or item nonresponse varies by other demographics ("item bias"); and (4) whether those identifying as LGBT have data patterns that suggest valid endorsement ("internal validity").

In the fall of 2016 and winter of 2017, students at 20 middle schools and six high schools in Washington, DC responded to the U.S. Department of Education's School Climate Survey (ED-SCLS). These surveys were administered by the DC Office of the State Superintendent of Education as part of the *Improving School Climate in DC* project (ISC-DC). All surveys were administered through web-based platforms in a classroom setting. Students accessed the surveys via laptop, tablet, and/or mobile phone depending on the available technology at a given school. Proctors

were available to supervise the survey and address student questions. However, proctors did not answer student questions regarding the meaning of survey items.

The ED-SCLS survey for students contains five demographic questions and 68 school climate items that are broken up into 12 topic areas across three domains: *engagement*, *safety*, and *environment*. In addition to the standard ED-SCLS items, the five SOGI items resulting from the expert panel and cognitive interviews were added to the ED-SCLS. All user-added items appear following the standard items at the end of the survey. The standard ED-SCLS survey also asks high school students an item about bullying and sexual orientation, and one middle school was also asked this item.

Data was cleaned prior to analysis. Responses were removed if participants responded to some of the five demographic questions at the beginning of the survey (grade, gender, and race/ethnicity) but no school climate or SOGI items. These 97 respondents would not provide useful information for this analysis. Additionally, 12 respondents were removed because they filled out the same answer for over 90 percent of the school climate items, meaning that they were likely selecting answers without reading or fully understanding the questions. Finally, 18 respondents were removed for selecting a grade that was not supposed to participate in the class being surveyed or was not available at the student's school. Selecting the wrong grade could be a sign that the student was a "mischievous responder" and selecting answer options that were not accurate. Full demographic information for the field test sample is reported in Table 2.

| Table 2. ED-SCLS respondent demographics | | |
|---|---|---|
| **Demographic group** | **N** | **Percent** |
| **Total** | 3,783 | 100% |
| **Grade level** | | |
| **6** | 174 | 4.6% |
| **7** | 1,492 | 39.4% |
| **8** | 1,507 | 39.8% |
| **9** | 304 | 8.0% |
| **10** | 299 | 7.9% |
| **11** | ‡ | - |
| **12** | ‡ | - |
| **Race/ethnicity** | | |
| **White, non-Hispanic** | 480 | 12.7% |
| **Black/African American, non-Hispanic** | 2,163 | 57.2% |
| **Hispanic** | 632 | 16.7% |
| **Native Hawaiian or Pacific Islander, non-Hispanic** | ‡ | - |
| **American Indian or Alaska Native, non-Hispanic** | ‡ | - |

| Table 2. ED–SCLS respondent demographics | | |
|---|---|---|
| Demographic group | N | Percent |
| Asian American, non-Hispanic | 72 | 1.9% |
| Two or More Races, non-Hispanic | 368 | 9.7% |
| At-risk status[1] | | |
| Low risk | 1,031 | 27.3% |
| Moderately low risk | 925 | 24.5% |
| Moderately high risk | 964 | 25.5% |
| High risk | 863 | 22.8% |

‡ Results are not reported to protect subgroups with less than 10 respondents in accordance with NCES data reporting standards.

[1] The "at-risk" designation "includes students who are either homeless, in the District's foster care system, qualify for Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP), or high school students that are one year older, or more, than the expected age for the grade in which the students are enrolled." The proportions of at-risk students by school are sorted into quartiles to form the at-risk subgroups.

# Prevalence of students identifying as LGBT

## Sexual orientation

### Sexual identity

Which of the following best describes your sexual orientation? Mark one response.
- Straight, that is, not gay
- Gay or lesbian
- Bisexual
- I am not sure yet
- Something else (e.g., asexual, aromantic, pansexual, etc.)

There were 3,054 students that answered the sexual identity item. Overall, 82 percent of students answered that they were "straight," followed by 7 percent answering either that they are "bisexual" or "I am not sure yet" for each option, and 2 percent answering either "gay or lesbian" or "something else" for each option. Complete results, overall and by subgroup, are included in Appendix C.

## Figure 1. Percentage of students by sexual identity
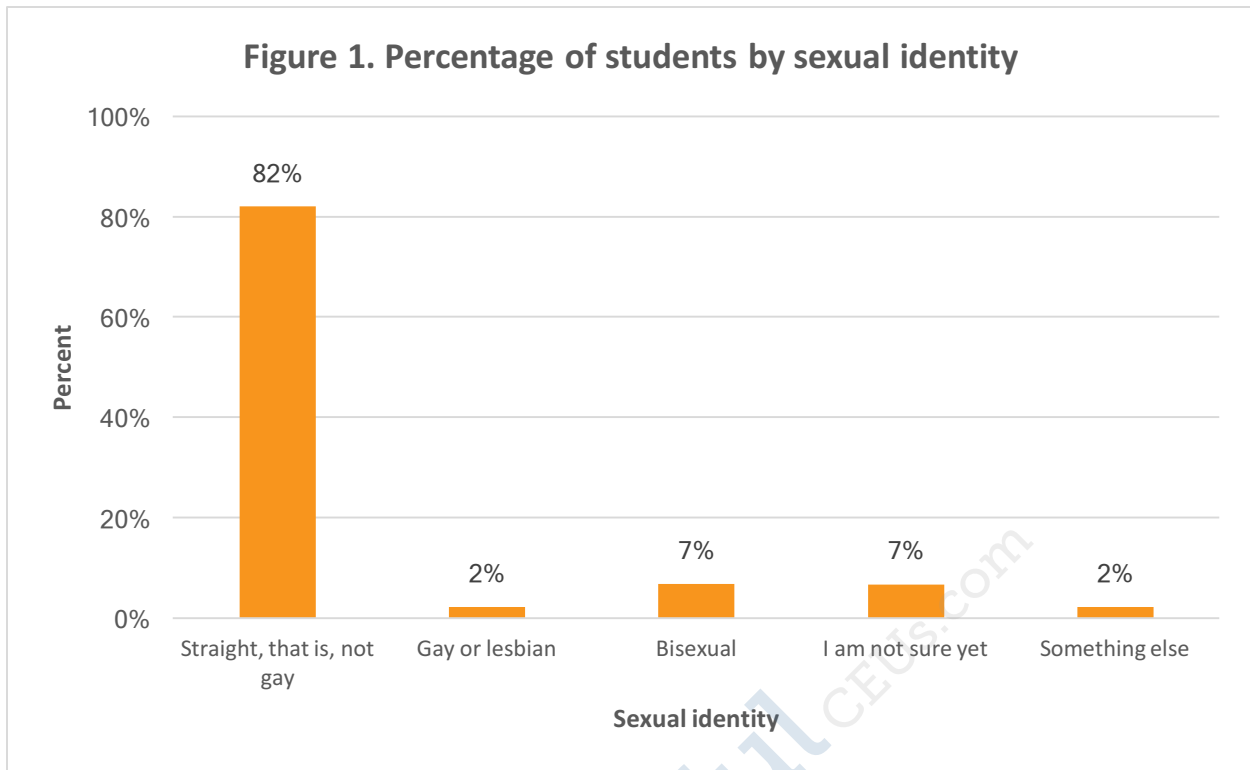


Students in grades 6-8 were more likely to report being straight than students in grades 9-12 (83 and 78 percent, respectively). Additionally, students in grades 9-12 were more likely to report being gay or lesbian than those in grades 6-8 (6 and 2 percent, respectively). There were no significant differences by grade level for the "Bisexual," "I am not sure yet," and "Something else" answer options.

### Sexual attraction

Have you ever had a crush on a boy or a girl? Mark one response. (Middle school)
- A boy
- A girl
- Both
- Neither

Who are you sexually attracted to? Mark one response. (High school)
- Boys
- Girls
- Both
- Neither

Approximately 78 percent of middle school students reported having had crushes on the opposite gender only, 2 percent reported having had crushes on the same gender only, 8 percent reported having crushes on both genders and 11 percent reported not having had a crush on either gender. For high school students,

approximately 81 percent reported being sexually attracted to opposite gender only, 6 percent reported sexual attraction to the same gender, 11 percent reported sexual attraction to both males and females, and 3 percent reported no sexual attraction.

### *Comparisons between sexual identity and sexual attraction*
In order to compare how the sexual identity and sexual attraction items measure sexual orientation, we examined how closely student answers to the two items conform to the societal expectation that one's sexual identity will be in concordance with their sexual attraction. That is, we compared whether those who identify as straight indicate that are attracted only to the opposite gender, those who identify as lesbian or gay are attracted only to the same gender, and those who identify as bisexual are attracted to both males and females. In doing so, we are able to examine whether the attraction items differently capture sexual orientation than identity, which is particularly important given that awareness of sexual identity develops during adolescence.[16]

Tables 3 and 4 provide the percentage of students by sexual identity reporting other-gender, same-gender, and both-gender attraction, as well as attraction to neither gender, broken down by middle and high school samples. Note that, because of small sample sizes, cells are suppressed if they represent fewer than 10 respondents. In comparing just students reporting other-gender, same-gender, and both-gender attraction with those identifying as straight, gay, or bisexual, the correlation is 0.81 for middle school students and 0.85 for high school students. This indicates that attraction and identity are strongly, but not perfectly, correlated.[v] While the majority of respondents show concordance between their reported sexual identity and their sexual attraction, a small handful of respondents do not. For middle school students who identify as straight, discordance from societal expectation is primarily a function of not having experienced attraction to either gender (11 percent). For middle school students who identify as bisexual, 15 percent report only having attraction to the opposite gender.

Of particular note are the 50 percent of middle school students identifying as gay or lesbian reporting attraction other than same-gender attraction. It is also important to note that for students identifying as "not sure" or "something else," reported attraction varies considerably; for middle school students, approximately half of those identifying as "not sure" report opposite-gender attraction (46 percent) and around one quarter each report either both gender attraction or no attraction (23 percent and 30 percent, respectively). However, caution should be used in

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[v] Pearson's correlation coefficient, also known as Pearson's r, measures the strength of a linear correlation between two variables on a scale from -1 to 1, in which -1 represents a perfect negative correlation, 0 represents no correlation, and 1 represents a perfect positive correlation.

interpreting these findings, due to the small sample size. Additionally, due to low sample size, we were not able to assess high school students' discordance from the societal expectation that sexual identity and sexual attraction will align.

These results suggest that it is more difficult to assess sexual orientation solely by measuring sexual identity for middle school students. The sexual identity that middle school students endorse often does not align with their sexual attraction, and therefore societal expectations, as much as it does for high school students. This is developmentally appropriate since middle school students are earlier in the identity formation process.[16]

| Table 3. Middle school sexual identity and sexual attraction convergence | | | | | |
|---|---|---|---|---|---|
| | Sexual attraction | | | | |
| Sexual identity | Opposite-gender | Same-gender | Both genders | No attraction | N |
| Straight | 86.8% | 1.2% | 1.3% | 10.8% | 1,404 |
| Gay or lesbian | ‡ | 50.0% | ‡ | ‡ | 26 |
| Bisexual | 14.5% | ‡ | 76.6% | ‡ | 124 |
| Not sure yet | 46.0% | ‡ | ‡ | 28.8% | 111 |
| Something else | 37.1% | ‡ | 45.7% | ‡ | 35 |
| ‡ Results are not reported to protect subgroups with less than 10 respondents in accordance with NCES data reporting standards. | | | | | |

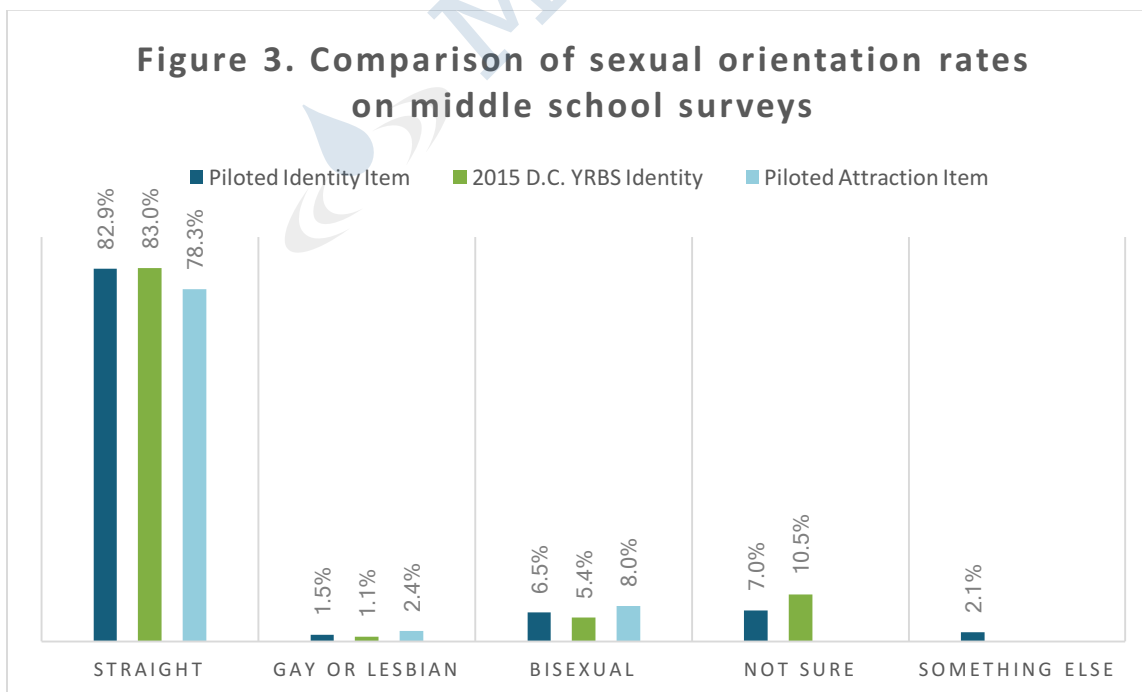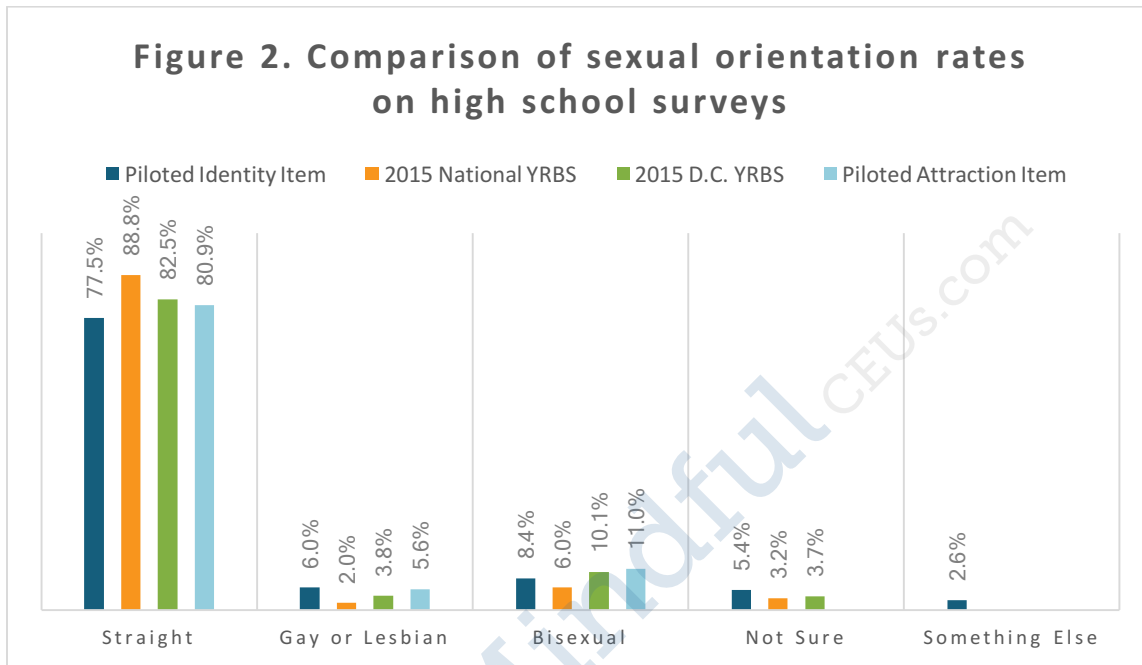| Table 4. High school sexual identity and sexual attraction convergence | | | | | |
|---|---|---|---|---|---|
| | Sexual attraction | | | | |
| Sexual identity | Opposite-gender | Same-gender | Both genders | No attraction | N |
| Straight | 95.3% | ‡ | ‡ | ‡ | 362 |
| Gay or lesbian | ‡ | 80.0% | ‡ | ‡ | 25 |
| Bisexual | ‡ | ‡ | 81.0% | ‡ | 42 |
| Not sure yet | 57.1% | ‡ | ‡ | ‡ | 21 |
| Something else | ‡ | ‡ | ‡ | ‡ | 13 |
| ‡ Results are not reported to protect subgroups with less than 10 respondents in accordance with NCES data reporting standards. | | | | | |

### *Comparisons with previously fielded items*

The 2015 Youth Risk Behavior-Surveillance Survey (YRBS), collected nationally for students in grades 9-12 as well as for both middle and high school students in DC, asked a similar sexual identity item to the one piloted in this study: "Which of the following best describes you?" The possible response options were, "heterosexual (straight)," "gay or lesbian," "bisexual," or "not sure." This item does not include the response option of "something else" included in the present piloted item. Figures 2 and 3 provide comparisons between percentages of students identifying as each sexual orientation from each data collection as well as sexual orientation derived from the piloted attraction item. It should be noted that neither the national nor the DC-specific YRBS are directly comparable to the piloted items; all three data collections sampled different populations of students. For example, the ED-SCLS field test primarily included middle school students in grades 7 and 8 and high school students in grades 9 and 10, consistent with the objectives of the larger study for which these data were collected, whereas the YRBS data includes a higher proportion of responses from students in grade 6 on the middle school survey and students in grades 11 and 12 on the high school survey. Still, comparing frequencies between these data collections helps inform whether the piloted items similarly captured sexual identity in comparison to the previously fielded item. All comparisons described here are descriptive in nature; differences between surveys were not tested for statistical significance.

In comparing frequencies for high school students, a slightly lower percentage of students identified as straight on the piloted items than both the national and DC YRBS results (78 percent versus 89 and 82 percent, respectively). A slightly higher percentage identified as gay or lesbian on the piloted items (6 percent versus 2 percent and 4 percent, respectively) and a slightly higher percentage identified as not sure (5 percent versus 3 percent and 4 percent, respectively). Sexual orientation derived from the piloted attraction items consistently fall between the identity and YRBS prevalence rates.

For middle school students, sexual identity frequencies were largely consistent between the piloted items and the 2015 DC YRBS. Approximately the same frequency of students reported being straight (approximately 83 percent each), gay or lesbian (around 1 percent), and bisexual (between 5 and 6 percent). The added category of "something else" seemed to split those endorsing "not sure" (2 percent and 7 percent, respectively versus 10.5 percent endorsing "not sure" on the YRBS). Frequencies for sexual orientation derived from piloted attraction items higher than both the piloted identity and YRBS items for both gay and lesbian (2 percent) and bisexual (8 percent) orientations.

In sum, the percentages of students by sexual orientation were similar between the piloted items and the 2015 DC YRBS. While there were often larger differences between the piloted item for high school students and the 2015 National YRBS, this makes sense given that the two surveys are measuring sexual orientation for different populations. The results also demonstrate that the YRBS item is not accurately capturing around 2 percent of respondents that choose to identify as "something else" in the piloted identity item.

**Figure 2. Comparison of sexual orientation rates on high school surveys**

- Piloted Identity Item
- 2015 National YRBS
- 2015 D.C. YRBS
- Piloted Attraction Item

| | Straight | Gay or Lesbian | Bisexual | Not Sure | Something Else |
|---|---|---|---|---|---|
| Piloted Identity Item | 77.5% | 6.0% | 8.4% | 5.4% | 2.6% |
| 2015 National YRBS | 88.8% | 2.0% | 6.0% | 3.2% | |
| 2015 D.C. YRBS | 82.5% | 3.8% | 10.1% | 3.7% | |
| Piloted Attraction Item | 80.9% | 5.6% | 11.0% | | |

**Figure 3. Comparison of sexual orientation rates on middle school surveys**

- Piloted Identity Item
- 2015 D.C. YRBS Identity
- Piloted Attraction Item

| | STRAIGHT | GAY OR LESBIAN | BISEXUAL | NOT SURE | SOMETHING ELSE |
|---|---|---|---|---|---|
| Piloted Identity Item | 82.9% | 1.5% | 6.5% | 7.0% | 2.1% |
| 2015 D.C. YRBS Identity | 83.0% | 1.1% | 5.4% | 10.5% | |
| Piloted Attraction Item | 78.3% | 2.4% | 8.0% | | |

# Gender identity

The ED-SCLS field test included the two items which, together, were used to identify students who are transgender: gender at birth and gender identity.

*Gender at birth:*

What gender were you at birth, even if you are not that gender today? That is, what is the gender on your birth certificate? Mark one response.
- Male
- Female

## Current gender identity:

**What is your current gender identity, even if it is different than the gender you were born as? Mark one response.**
- Male
- Female
- I'm not sure yet
- I feel male sometimes and female at other times

Students were identified as transgender when their reported current gender identity was different than their reported gender at birth. About 1 percent of respondents, or 31 students, were identified in this way.

The 2015 DC YRBS included an item that asked whether respondents were transgender, with the following answer options:

- No, I am not transgender.
- Yes, I am transgender and I think of myself as really a boy or man
- Yes, I am transgender and I think of myself as really a girl or woman
- Yes, I am transgender and I think of myself in some other way
- I do not know if I am transgender
- I do not know what this question is asking

Approximately 3 percent of 2015 DC YRBS respondents identified as transgender, according to a report from OSSE.[19] This figure likely totals all three answer options that begin with "Yes, I am transgender" in the YRBS item.

To compare the percentage of transgender students identified in the ED-SCLS to that in the 2015 DC YRBS, students who answered, "I feel male sometimes and female at other times" for the piloted current gender identity item were also considered transgender, since this category would likely fall under "Yes, I am transgender and think of myself in some other way" in the DC YRBS item. When these students are included, the transgender population in the ED-SCLS is 3

percent of respondents, which is identical to the proportion identified in the 2015 DC YRBS.

**Figure 4. Percentage of students by gender identity (with transgender)**
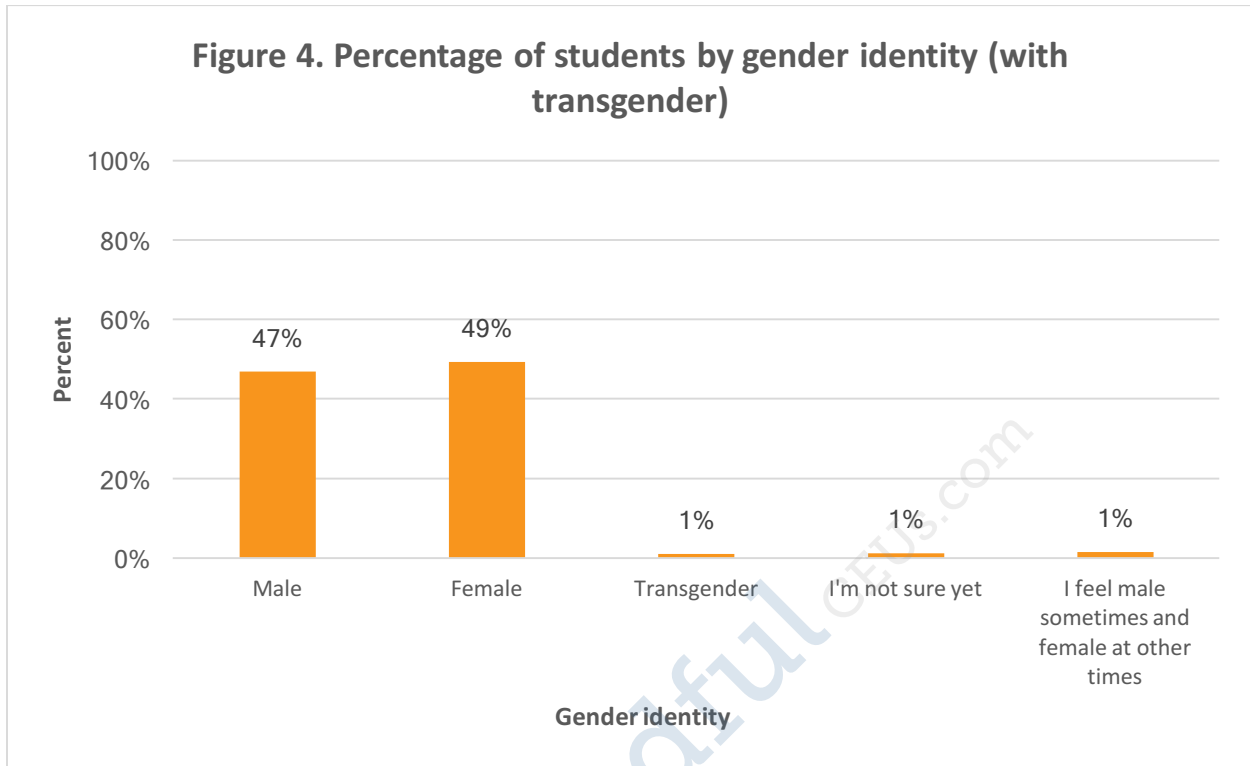
## Comparisons between ED-SCLS standard gender item and current gender identity item

The ED-SCLS survey includes a standard gender item that asks students, "Are you male or female?" with two answer options: male or female. We compared how students responded to this item and the added current gender identity item to see whether students were answering the standard item with their gender at birth or their current gender. We also measured how many students did not answer the standard gender item. Complete results are available in Appendix C.

One middle school was omitted from this analysis because Child Trends chose not to include the standard gender item in the survey for which the third-party platform was used. The standard gender item was required in the traditional ED-SCLS survey platform, but the item was removed when transitioning to the third-party platform since the added SOGI items already capture student gender.

Over 99 percent of students who answered the current gender identity and gender at birth items by selecting the same answer option of either "male" or "female" answered the standard ED-SCLS survey item with that same gender, with only 0.4 percent selecting the opposite gender. The correlation coefficient between the current gender identity item and the standard ED-SCLS item using only the "male"

and "female" answer options (excluding transgender students) is 0.99. This means that the two items are almost perfectly correlated when limiting the analysis to only those two answer options, and very few students diverged by selecting the opposite gender for the standard ED-SCLS item.

One third (33 percent) of transgender female students answered that they are male in the standard ED-SCLS item, while nearly one fifth (18 percent) of transgender male students answered that they are female. Of the students who answered "I'm not sure yet" for current gender identity, half answered that they are male and half female (50 percent each). Finally, around three fourths (74 percent) of students who answered, "I feel male sometimes and female at other times" responded that they are female in the standard ED-SCLS gender item. Caution should be used in interpreting these findings, however, due to very small sample sizes.

These results demonstrate that almost all students who identify with their gender at birth answer "Are You Male or Female" with that same gender. It is possible that some of the 0.4 percent of cisgender students who answered the standard ED-SCLS item differently than the gender identity and gender at birth items were just clicking randomly through the survey and may not be providing valid responses. Finally, there also could be "mischievous responders" who purposefully select inaccurate answers throughout the survey.

However, around one fourth of transgender students answer the standard ED-SCLS question differently than the question about their gender identification. This means that the standard ED-SCLS gender item may not reliably measure the current gender identity of transgender students. However, no hard conclusions can be made due to small sample size.

## SOGI item nonresponse rates

An analysis of how often each SOGI item is skipped by students was conducted to assess which items students may be unable to answer or not comfortable answering. Additionally, the nonresponse rates for the sexual identity item are compared to those from the 2015 YRBS, though differences were not tested for statistical significance.[vi] The YRBS sexual identity item asks:

> Which of the following best represents how you think of yourself?
> - Heterosexual (straight)
> - Gay or lesbian
> - Bisexual
> - Not sure

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[vi] Based on Child Trends' analysis of the publicly available 2015 National YRBS dataset

# SOGI item placement: End of survey

The SOGI items were added onto the end of the ED-SCLS survey for all schools except for one. The ED-SCLS is traditionally 73 items long, and an additional 13 items, including the SOGI items, were added to the survey. The ED-SCLS online survey platform does not allow for items to be added to the beginning of the survey, so the items were added to the end. Students who only answered the survey items in Spanish were not included in this analysis because the SOGI items were only asked in English.

Survey dropoff rates (i.e., those who stopped the survey before reaching the end) were high, likely because of the substantial survey length and students were not required to participate in or complete the survey. As shown in Table 5, 17.5 percent of students had already dropped off before reaching the SOGI items. The dropoff rate for students in grades 6-8 was 18.8 percent, and for students in grades 9-12 it was 12.5 percent.

| Table 5. ED-SCLS item nonresponse rates by survey dropoff status, SOGI item placement, and grade Level | | | | | | |
|---|---|---|---|---|---|
| | **Total** | | **Grades 6-8** | | **Grades 9-12** | |
| | **Percent missing** | **N** | **Percent missing** | **N** | **Percent missing** | **N** |
| **Questions at end of survey** | | | | | | |
| **Total students missing SOGI items** | 17.5% | 3028 | 18.8% | 2420 | 12.5% | 606 |
| **Questions at end of survey** | | | | | | |
| **Non-dropoff students missing SOGI items** | 1.6% | 2487 | 1.8% | 1967 | 1.0% | 518 |
| **Questions at beginning of survey[1]** | | | | | | |
| **Total students missing SOGI items** | 1.4% | 726 | 1.4% | 726 | - | - |
| - Data not available or reporting standards not met. [1]Only one school included the SOGI items at the beginning of the survey due to a change in the survey platform. However, the demographic characteristics of students at this middle school are not, on average, representative of other public or public charter schools in DC. | | | | | | |

Among non-dropoffs, or students who answered at least one of the five questions preceding the SOGI items, SOGI item participation was high. Only 1.6 percent of non-dropoffs did not answer any SOGI items. SOGI item nonresponse for non-

dropoffs was 1.8 percent for high school students and 1 percent for middle school students.

Missing rates varied slightly by individual SOGI item (see Appendix C), although none of these differences are statistically significant. Around 6.7 percent of non-dropoffs did not answer the sexual identity item, followed by 6.4 percent for gender identity, 5.8 percent for middle school sexual attraction, 4.8 percent for high school sexual attraction, and 4.7 percent for gender at birth.

The item nonresponse rate for the piloted sexual identity item (6.7 percent) is slightly higher overall than the item nonresponse rate for the 2015 National YRBS for high school students (5.9 percent). However, the item nonresponse rate for the piloted sexual identity item for high school students alone was 4.8 percent, which is lower than the item nonresponse rate for high school students in the 2015 National YRBS.

The two most likely possibilities for students not responding to particular items is that students were not comfortable answering the items or that they suffered from survey fatigue. In the cognitive interviews, about 1 out of 5 respondents mentioned that some students, especially those that are LGBTQ, may not feel comfortable answering the SOGI items if the survey is not administered in a private environment out of fear that other students might see their answers. The ED-SCLS was often taken using tablets or laptops at classroom desks. In some cases, survey proctors reported that students were sharing tables or long desks. In these scenarios, it is possible that students could see some of their peers' computer or tablet screens while they were taking the survey. Therefore, the lack of privacy may have led some students to answer the SOGI items differently than they would have in a solitary environment or to not answer the items at all. Although there were no significant differences between item nonresponse rates, slightly higher nonresponse rates for the sexual identity and current gender identity items than for the gender at birth item indicates that student comfort levels may have played a role in item nonresponse. It is uncertain whether the same privacy concerns existed with the YRBS, although the survey was also administered in a classroom setting.

Another possibility is that students were suffering from survey fatigue, and so they did not answer any of the SOGI items. Fully 17.5 percent of respondents had dropped off the survey before reaching the SOGI items, likely in part due to survey fatigue, so it makes sense that non-dropoffs would skip some SOGI items for the same reason. However, we cannot conclusively determine the reason that students did not respond to certain items.

## SOGI item placement: beginning of survey

A third-party platform, rather than the traditional ED-SCLS platform, was used for survey administration at one large middle school. This allowed us to place the SOGI items were asked at the beginning of the survey, joining the other demographic questions such as race and ethnicity. The sexual attraction items were not asked for this school. We advise caution in interpreting these results because the demographics of students in this school are, on average, not representative of other DC middle schools.

Overall response rates were much higher for this school. Only 1.4 percent of students did not answer the SOGI items, compared to 17.5 percent for schools who were asked the items at the end of the survey. However, the SOGI nonresponse rate for this school was similar to that of non-dropoff students who had the SOGI items at the end of the survey (1.6 percent). We advise using caution when interpreting these results, as the student population at this school is not representative of the student population in DC as a whole.

Missing rates did not vary significantly by SOGI item (see Appendix C). The sexual identity item had the highest missing rate at 1.8 percent, while the missing rate for gender identity and gender at birth items were 1.4 percent each. The middle school sexual attraction item was not asked at this school. The missing rate for the piloted sexual identity item (1.8 percent) is lower than the item nonresponse rate from the YRBS (5.9 percent).

These results suggest that the higher item nonresponse rates for items at the end of the ED-SCLS survey could be in large part from survey fatigue rather than students not feeling comfortable answering the questions. The sexual identity item in the YRBS also fell later in the survey (item 68 out of 89 in the 2015 study), so it is possible that survey fatigue also resulted in higher item nonresponse rates in the YRBS (CDC, 2015b). However, because the demographic characteristics of students at this middle school are different from the others in our sample, it is difficult to draw any hard conclusions.

# Analyses of item bias

By examining whether frequencies of those responding to the sexual identity, sexual attraction, and gender identity item response options vary by student and school demographics, we can infer whether certain subgroups of students understand or respond to items differently. These analyses assume that the actual percentage of students who are LGBT does not vary as a function of such demographics. However, this may not always be accurate. For example, sexual identity significantly varied by gender on the 2015 YRBS.[6] Whether this is a function of actual variations in sexual orientation or differential item functioning is unclear.

We advise using caution when interpreting these results, particularly around differences between genders.

We have organized frequencies in to demographic subgroups by gender, race/ethnicity, and the proportion of students at a school who are at risk for academic failure. Results are not reported for subgroups with less than 10 respondents in accordance with data reporting standards set by the National Center for Education Statistics.

The respondents' current gender identity is used to create the gender subgroups of male and female, and both the current gender identity and gender at birth items are used to identify the transgender subgroup. However, for the analysis of item nonresponse rates, the standard ED-SCLS gender item is used to create the male and female subgroups because current gender identity is one of the items that is analyzed for missing responses. ED-SCLS data was used to create seven subgroups for respondent race/ethnicity: (1) non-Hispanic white, (2) non-Hispanic black, (3) Hispanic, (4) non-Hispanic Native Hawaiian or Pacific Islander, (5) non-Hispanic American Indian or Alaskan Native, (6) non-Hispanic Asian American, and (7) non-Hispanic two or more races. Finally, the proportion of at-risk students for each school was identified using data from OSSE's 2016-17 School Year Student Enrollment Audit.[vii] The proportions of at-risk students at each school level were sorted into quartiles based on the number of students in each school so that each quartile would include a similar number of students, rather than sorting into quartiles based on the number of schools. These quartiles were used to form four categories of at-risk students by school: (1) low risk, (2) moderately low risk, (3) moderately high risk, and (4) high risk.

To examine the statistical significance of the differences in results between subgroups, ANOVA tests with follow up Tukey's Honest Significant Differences (HSD) tests are reported. All significant results are reported at the 95 percent confidence level. All differences reported are statistically significant unless otherwise noted.

## Sexual identity

Sexual identity results by subgroup can be found in Appendix C. Student responses to the sexual identity item did not vary significantly by race or ethnicity for groups that met reporting standards. Moderate differences were found in students from schools with low proportions of at-risk students to those with high proportions of at-

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[vii] The "at risk" designation "includes students who are either homeless, in the District's foster care system, qualify for Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP), or high school students that are one year older, or more, than the expected age for the grade in which the students are enrolled" (OSSE, 2015a).

risk students. Specifically, students who attend schools with a low or moderately low risk of student academic failure were more likely to report that they were straight (84 and 85 percent) than students at high-risk schools (77 percent). Students at high-risk schools are more likely to report being gay or lesbian (5 percent) than students at moderately low- or moderately high-risk schools (2 percent each). Both students at high- and moderately high-risk schools were more likely to answer that they are bisexual (11 and 9 percent) than students at low- and moderately low-risk schools (5 percent and 4 percent).

Responses to the sexual identity item also significantly varied by gender identity, with male students more likely to answer that they are straight (93 percent) than both female students (76 percent) and transgender students (43 percent). Female students were also significantly more likely to answer that they are straight than transgender students. Transgender students were more likely to answer that they are gay or lesbian or "something else" than both male and female students (see Appendix C for percentages). Additionally, students who are transgender were more likely to report that they are bisexual or answer "I am not sure yet" than male students. While it appears that transgender students have more variation in reported sexual identity than cisgender students, these results should be interpreted with caution due to a small sample size of transgender students.

## Sexual attraction (middle school)
There were no significant differences in response patterns on sexual attraction by either race/ethnicity or the school's proportion of at-risk students. Male middle school students were more likely to report having a crush on the opposite gender than female students (85 and 72 percent, respectively). However, there was no significant difference between male and female students reporting that they had a crush on someone of the same gender (2 percent each). Male students were less likely to answer that they have had a crush on both boys and girls (2 percent) than both transgender and female students (25 and 14 percent).

## Sexual attraction (high school)
There were no significant differences in response patterns on sexual attraction by either race/ethnicity or the school's proportion of at-risk students. Male high school students were more likely to report being sexually attracted to the opposite gender than female students (90 and 72 percent). The difference between male and female students reporting that they had a crush on someone of the same gender was not statistically significant (4 and 8 percent). Transgender students were not broken into groups that identify as male and female due to small sample sizes. There were no other significant differences by gender identity between groups that both met the reporting standards.

## Transgender

The percentage of transgender students did not vary significantly by race/ethnicity. However, there were significantly more transgender students at high-risk schools than at low-risk schools (2 and 1 percent, respectively).

## Item nonresponse rates by subgroup

Missing rates by subgroup for students who did not dropoff the survey and were asked the SOGI items at the end of the survey are available in Appendix C. There were no significant differences in the item nonresponse rates for specific items by grade level, gender, or race/ethnicity. However, there were significant differences by at-risk status. For the sexual identity item, students at moderately low-risk schools were significantly more likely to have a missing answer (9 percent) than students at low-risk schools (5 percent). Students at moderately low-risk schools were also more likely to have a missing answer for the gender identity question (8 percent) than low-risk students (3 percent). There were no significant differences by at-risk status for the sexual attraction or gender at birth items.

Missing rates by subgroup for students who were asked the SOGI items at the beginning of the survey are available in Appendix C. There were no significant differences in the item nonresponse rates for specific items by grade level, gender, or race/ethnicity.

## Item bias summary

In general, our piloted items did not vary by race/ethnicity and had only moderate variation by gender generally consistent with previous patterns observed in the 2015 YRBS data. More variation was observed based on the proportion of students at each respondents' school who were considered "at risk" for academic failure. Because this is a school-level variable (student level at-risk indicators were not available for these analyses), it is not fully clear why these differences occurred. Patterns in the significant differences between at-risk groups for the different SOGI items are not consistent between items. It may be that students at some schools are more comfortable identifying as LGBTQ than at others. However, it seems as though the SOGI items function relatively well across groups.

# Analyses of data patterns

An item regarding bullying in schools based on a student's sexual orientation is included in the standard ED-SCLS survey and was not added with the additional items by the research team. This item is only asked to high school students in the ED-SCLS survey, but the item was also added to the survey for one middle school, though the demographics of students at this school are not representative of other middle schools in DC. If we include only high schools and the one middle school, the sample size for this analysis decreases to 1,220 respondents. We can assess

the validity of these items by examining if students answered as one would expect based on their sexual identity and sexual attraction answers.

### Question
Students at this school are teased or picked on about their real or perceived sexual orientation.
- Strongly Agree
- Agree
- Disagree
- Strongly Disagree

Some previous research suggests that bullying based on sexual orientation (or an anti-LGBT climate) may be more salient to LGBQ youth, regardless of whether they themselves have been subjected to bullying.[20] If this hypothesis is confirmed in examining how students answered this item based on their self-reported sexual identity and/or sexual attraction, then it provides evidence that these items validly capture students' sexual orientations. Differences in how LGBQ and straight students answered this item were tested for statistical significance to examine this theory. Sexual orientation (derived both from identity and attraction) was not broken down into smaller groups for LGBQ students because of low sample sizes.

For sexual orientation derived from self-reported sexual identity, there were significant differences between the percentages of LGBQ and straight students who answered that they strongly agree or strongly disagree. LGBQ students were significantly more likely than straight students to strongly agree that students at school are teased or picked on about their real or perceived sexual orientation (25 and 12 percent, respectively) while straight students were significantly more likely than LGBQ students to strongly disagree with the statement (20 and 13 percent, respectively). However, there were no significant differences by sexual identity for the more moderate "agree" and "disagree" answers. These differences remained significant when controlling for clustering by school using ordinal logistic regression.

For sexual orientation derived from sexual attraction, however, there were no significant differences between straight and LGB students.

These results indicate that the sexual identity item is likely more related to perceptions of the school environment than the sexual attraction item, and that the sexual identity is validly capturing student sexual orientation.

## Field test summary
Based on our analysis of student responses and item nonresponse rates from the piloted SOGI items, it appears that these items are both valid and reliable. The comparison between the ED-SCLS and 2015 DC YRBS sexual identity items shows

that students answered the items quite similarly. However, the ED-SCLS sexual identity item identified a category of students that the YRBS did not, which is adolescents who identify as "something else" other than heterosexual, homosexual, or bisexual. This group accounts for about 2 percent of students. Additionally, the finding that LGBQ adolescents are significantly more likely to strongly agree that students are teased or picked on because of their real or perceived sexual orientation than straight students is what we would predict if our item correctly measures sexual identity. The ED-SCLS sexual identity item also had item nonresponse rates on par with the 2015 YRBS, and lower rates when the items were asked at the beginning of the ED-SCLS survey. Overall, these results suggest that the sexual identity item consistently measures sexual identity accurately.

Additionally, comparisons between the ED-SCLS sexual identity and sexual attraction items show that the two items are highly correlated. The correlation coefficients and the analysis by gender identity demonstrate that students generally choose the sexual attraction that aligns with their societal expectations for their reported sexual identity. However, there are some students whose sexual identity does not align with societal expectations with regard to their sexual attraction.

Using the current gender identity and gender at birth items to identify transgender students participating in the ED-SCLS, as well as the "I feel male sometimes and female at other times" answer option for the current gender identity item, this study revealed an identical proportion of transgender students to that in the 2015 DC YRBS (3 percent each) [19].When the gender identity item is compared to the standard ED-SCLS item asking if students are only "male" or "female," the large majority of students responded similarly to both questions. However, there were groups of students outside these gender categories that only the current gender identity item could capture, such as "I'm not sure yet" or "I feel male sometimes and female at other times." There were also other gender identities that only the current gender identity and gender at birth items together could capture, including male and female transgender students. The standard ED-SCLS item could not capture transgender students, and did not consistently capture the current gender identity of transgender students, which were identified using the SOGI items.

# Summary and Recommendations

Findings from our expert panel, cognitive interviews, and item field test analyses suggest that our fielded sexual identity, sexual attraction, and gender identity items are suitable for use with adolescents, including both high-school-aged and middle-school-aged students. However, several important considerations were revealed through each of the phases of the project. These considerations have implications for researchers and others using these items on their own instruments, as well as

for the U.S. Department of Education, specifically to improve the ability to integrate these items onto the School Climate Survey (ED-SCLS) platform.

# Final recommended items

## Sexual orientation

Although our expert panel strongly recommended measuring multiple dimensions of sexual orientation, this may not always be feasible for surveys which must restrict the number of items to reduce respondent burden. When surveys use more than one dimension of sexual orientation, survey administrators must decide which dimension to use for disaggregation and comparisons between groups. The expert panel generally agreed that perceived sexual orientation is likely most relevant for issues related to school climate, but cognitive interviews revealed that these items could not be reliably answered by students. Thus, only identity and attraction items were fielded on the ED-SCLS.

Associations with the included item related to bullying and harassment based on sexual orientation revealed significant differences between straight and LGBQ students when the identity item was used, but not when the attraction item was used. However, most data for this analysis were from high school students. Comparisons between the attraction and identity items revealed that, particularly for middle school students whose recognition of their identities may still be developing, the attraction item may capture unique information. As such, we recommend for purposes of school climate surveys that both the identity and attraction item be included, especially for middle school students.

The fielded sexual identity item largely followed the NHIS version that included a fifth option choice, "something else," as well as the option choice of "I am not sure yet." Because the ED-SCLS platform does not allow for skip patterns, the two follow-up questions included on the NHIS were not included on the ED-SCLS field test. Instead, following suggestions raised during the cognitive interviews, we included examples of other sexual orientations alongside the "something else" answer response. During fielding, proctors reported that several students were confused by the meaning of these examples, although it did not seem to impact the ultimate ability of students to answer this item. As such, we recommend not including these examples in future fielding of the item. Thus, our final recommended sexual orientation items are as follows:

## Sexual identity

Which of the following best describes your sexual orientation? Mark one response.
- Straight, that is, not gay
- Gay or lesbian
- Bisexual
- I am not sure yet
- Something else

## Sexual attraction

Have you ever had a crush on a boy or a girl? Mark one response. (Middle school)
- A boy
- A girl
- Both
- Neither

Who are you sexually attracted to? Mark one response. (High school)
- Boys
- Girls
- Both
- Neither

## Gender identity

The two-step version of gender identity functioned well during cognitive interviews and field tests. Based on feedback received from fielding we recommend slight wording modification to the current gender identity item to promote clarity. Thus our final recommended gender items are as follows:

## Gender at Birth:

What gender were you at birth, even if you are not that gender today? That is, what is the gender on your birth certificate? Mark one response.
- Male
- Female

## Current Gender Identity:

What is your current gender identity, even if it is different than the gender you were born as? Mark one response.
- Male
- Female
- I do not identify as either male or female
- I'm not sure yet

# Recommendations for fielding SOGI items with adolescents

The expert panel, cognitive interviews, and results of the ED-SCLS field test revealed several important considerations for how the SOGI items should be administered to adolescents.

### Ensure survey privacy and confidentiality.

The majority of cognitive interview participants noted that although their peers likely would understand and be able to respond to the SOGI items, they may not feel comfortable doing so in situations where peers or others may be able to see their responses and/or if confidentiality of data could not be assured. The ED-SCLS is administered using web-based technology and thus often administered either in computer labs or classroom settings with laptops, where students may have the potential to see others' responses. Thus, administrators should take precautions to minimize the risk of other students seeing classmates' responses and to ensure respondents feel comfortable responding to items honestly, for example by providing students privacy filters for computer monitors or laptops to limit others' ability to see respondents' screens.

### Include SOGI items with other demographic items at the beginning of surveys.

Missing rates for the SOGI items were dramatically different during our field test when the items were placed at the end of the survey rather than the beginning, after the other demographic items. Although we were only able to test this difference at one school, and thus are unable to draw definitive conclusions about the generalizability of this finding to schools in DC more broadly, SOGI item placement should be a critical consideration for anyone using these items. Including SOGI items at the beginning prevented data loss due to survey drop. Inclusion at the beginning of the survey may also help LGBT students feel more included throughout the survey and prevent disengagement from the survey. It should be noted that at present, it is not possible to include user-added items to the beginning of the ED-SCLS platform (see Recommendations for the ED-SCLS below).

# Recommendations for the ED-SCLS

The following recommendations are provided for the U.S. Department of Education to consider in updating their school climate survey (ED-SCLS). The ED-SCLS is designed to be a free, comprehensive, valid, and reliable survey for state and local education agencies to assess school climate in schools and disaggregate data by subgroups. However, SOGI items are not currently included as part of the survey despite research suggesting that LGBT students may experience school climate differently than their straight and cisgender peers.[15]

### Include SOGI items as part of the standard demographics asked on the ED-SCLS.

Our cognitive interview and field test data demonstrate that our recommended SOGI items are both appropriate and valid for use for both middle and high school students. As such, they should be included on the standard ED-SCLS so states and local education agencies can analyze how best to serve the needs of all students.

### Modify current ED-SCLS gender item.

The current gender item on the ED-SCLS, which appears as the first item on the survey, requires students to identify within the gender binary of "male" and "female." Our data suggest that this item does not validly capture gender for transgender students; some respond to this item with their current gender identity whereas others respond with their gender assigned at birth. Beyond validity concerns, this item also has the potential to disengage transgender or other gender expansive youth from completing the survey when they do not see themselves represented in this item. The current ED-SCLS gender item should be replaced by the recommended current gender identity item described previously in this chapter.

### Allow users to determine where added items appear on ED-SCLS and to use skip patterns.

The current ED-SCLS platform only allows users to add items to the end of survey and does not allow users to define who should respond to such items (i.e., "skip patterns"). Our data show that missing rates are reduced dramatically when SOGI items are included at the beginning of the survey. Even if SOGI items are not included on the standard ED-SCLS platform, allowing the ability for users to place these items with other demographic items will help ensure the validity of these items. Further, we were unable to test follow-up responses for those responding "something else" to the sexual identity item, as had been done on the NHIS, due to the inability to include skip patterns on the ED-SCLS platform.

## Conclusion and Future Directions

This project is one of the first large-scale efforts to develop and test sexual orientation and gender identity items for use with middle- and high-school-aged adolescents. Although this project demonstrated that the tested items validly captured students' sexual orientation and gender identities on school climate surveys collected in Washington, DC, further work is needed to understand how these items work in other contexts. Still, these items move the field closer to more consistent, valid measures and provide a foundation for better understanding the experiences of LGBT youth.

# Appendix A. Summary and Review of Existing SOGI Measures

In November 2009, the Williams Institute published "Best Practices for Asking Questions about Sexual Orientation on Surveys." The report includes a section on best practices with adolescents and youth (p. 24-27), which states in part:

> There are a number of issues to keep in mind when surveying adolescents, in particular, in order to ensure the most useful and reliable data. Because physical sexual maturity, sexual orientation, and sexual relationships most commonly develop during the adolescent years, all of the orientation questions have limitations that should be considered.

**Sexual orientation measures:**

**The Kinsey Scale – used only with adults, historical importance**
- The Kinsey team interviewed thousands of people about their sexual histories. Research showed that sexual behavior, thoughts, and feelings towards the same or opposite sex were not always consistent across time. Instead of assigning people to three categories—heterosexual, bisexual, and homosexual—the team used a 7-point scale. It ranges from 0 to 6 with an additional category of "X."
  - Rating | Description
    0 | Exclusively heterosexual
    1 | Predominantly heterosexual, only incidentally homosexual
    2 | Predominantly heterosexual, but more than incidentally homosexual
    3 | Equally heterosexual and homosexual
    4 | Predominantly homosexual, but more than incidentally heterosexual
    5 | Predominantly homosexual, only incidentally heterosexual
    6 | Exclusively homosexual
    X | No socio-sexual contacts or reactions

**The Klein Sexual Orientation Grid** (KSOG) – used only with adults
- KSOG is a system for describing a person's sexual proclivities in a more detailed and informative way than previous methods. For each person, it sets out the seven component variables of sexual orientation, listed as A through G, down the left side. The three columns indicate three different points at which sexual orientation is assessed: the person's past, their present, and their ideal. The person then receives a rating from 1 to 7 for each of the 21 resulting combinations, one rating for each empty box in the chart.

**Behavioral Risk Factor Surveillance System** (BRFSS) – used only with adults
- To determine sexual orientation the BRFSS interviewer asks the respondent: "Do you consider yourself to be: 1 Straight, 2 Lesbian or gay, 3 Bisexual."

Other response options not read to the respondent: "Other," "Don't know/Not sure," and "Refused"

## [Youth Risk Behavior Surveillance System](#) (YRBSS) - used with both middle and high school aged youth in the District of Columbia

- For the YRBSS, respondents read and answered questions in an online survey. The YRBSS measure used for orientation include:
    - "Which of the following best describes you?"
        - A. Heterosexual (straight)
        - B. Gay or Lesbian
        - C. Bisexual
        - D. Not Sure
- On the YRBSS, only high-school-aged youth in the District of Columbia were also asked:
    - "During your life, with whom have you had sexual contact?"
        - A. I have never had sexual contact
        - B. Females
        - C. Males
        - D. Females and males

## [National Health Interview Survey](#) (NHIS) - used with adults only

- The NHIS askes in regards to sexual orientation for men:
    - "Which of the following best represents how you think of yourself?"
    - Men's response choices were:
        - A. Gay
        - B. Straight, that is, not gay
        - C. Bisexual
        - D. Something else
        - E. I don't know the answer
    - Women's response choices were:
        - A. Lesbian or gay
        - B. Straight, that is, not lesbian or gay
        - C. Bisexual
        - D. Something else
        - E. I don't know the answer
- When respondents answered "something else" on the NHIS they were given a follow-up question:
    - "What do you mean by something else?"
        - A. You are not straight, but identify with another label such as queer, trisexual, omnisexual, or pansexual
        - B. You are transgender, transsexual, or gender variant
        - C. You have not figured out or are in the process of figuring out your sexuality
        - D. You do not think of yourself as having a sexual identity
        - E. You do not use labels to identify yourself
        - F. You mean something else
- When respondents answered "I don't know the answer" on the NHIS, they were given a follow-up question:

- o "What do you mean by don't know?"
  - A. You don't understand the words
  - B. You understand the words, but you have not figured out or are in the process of figuring out your sexuality
  - C. You mean something else

## Add Health Survey measure – used with young adults (ages 18 to 25)
- The Add Health Survey added in a sexual orientation measurement when participants reached age 18 or older.
  - o Asks respondents to identify their sexual orientation along a 5-point scale:
    - 100 percent heterosexual (straight)
    - Mostly heterosexual
    - Bisexual
    - Mostly gay
    - 100 percent gay

## Friedman Measure of Adolescent Sexual Orientation – used with adolescents:
- A comprehensive survey for adolescent sexual orientation, it is broken into three separate sections:
  - o Sexual Attraction - Physical
  - o Sexual Attraction - Thoughts and Emotions
  - o Sexual Identity
  - o Sexual Contact

## National Survey of Family Growth (NSFG) – used with adults (ages 18 to 44) and youth (ages 15 to 17):
- Male respondents of the NSFG were asked in regards to sexual orientation:
  - o "Do you think of yourself as…"
    - A. Heterosexual or straight
    - B. Homosexual or gay
    - C. Bisexual
    - D. Something else
- Female respondent of the NSFG were asked in regards to sexual orientation:
  - o "Do you think of yourself as…"
    - A. Heterosexual or straight
    - B. Homosexual, gay, or lesbian
    - C. Bisexual
    - D. Something else

## National Health and Nutrition Examination Survey (NHANES) –used with adults only:
- NHANES question to males and females about sexual orientation:
  - o "Do you think of yourself as one of the following…"
    Response options for males were:
    - A. Heterosexual or straight (that is, sexually attracted only to women)
    - B. Homosexual or gay (that is, sexually attracted only to men)

C. Bisexual (that, is sexually attracted to men and women)
D. Something else
E. You're not sure
Response options for females were:
A. Heterosexual or straight (that is, sexually attracted only to men)
B. Homosexual or lesbian (that is, sexually attracted only to women)
C. Bisexual (that is, sexually attracted to men and women)
D. Something else
E. You're not sure

## Sexual Romantic Scale (Galupo et al., 2014) – used with an adult convenience sample

- The Sexual Romantic Scale is a 7-point Likert scale:
  - Participants were asked to rate: "I am (sexually/romantically) attracted to individuals of the (same-sex/other-sex)" where 1=*almost never true* to 7=*almost always true*.

## Gender-Inclusive Scale (Galupo et al., 2014) – used with an adult convenience sample

- The Gender-Inclusive Scale is a 7-point Likert scale and allows participants to consider their attraction across six dimensions:
  - "I am attracted to (individuals of the same sex/individuals of the other-sex/masculine individuals/feminine individuals/androgynous individuals/gender non-conforming individuals.") Participants were asked to rate their level of attraction for each dimension using a 7-point Likert scale where 1=*almost never true* to 7=*almost always true*.

## Gender and transgender identity measures:

## Behavioral Risk Factor Surveillance System (BRFSS) - Used only with adults:

- The Williams Institute recently released a report, "How Many Adults Identify as Transgender in the United States?" In order to look at prevalence on a state level, the Williams Institute used the 2014 BRFSS. Via phone interview, participants were asked: "Do you consider yourself to be transgender?" If the respondent said yes, then the interviewer asked, "Do you consider yourself to be male-to-female, female-to-male, or gender non-conforming?" Other options were "No" and "Don't know/not sure," and participants could also refuse to answer.

## Youth Risk Behavior Surveillance System (YRBSS) – used with both middle and high school aged youth in the District of Columbia:

- For the YRBSS, respondents read and answered questions in an online survey. The YRBSS measure used for gender/transgender identity:
  - "A **transgender** person is someone whose biological sex at birth **does not match** the way they think or feel about themselves. Are you **transgender?**"
  A. No, I am not transgender

B. Yes, I am transgender and I think of myself as really a boy or man
C. Yes, I am transgender and I think of myself as really a girl or woman
D. Yes, I am transgendered and I think of myself in some other way
E. I do not know if I am transgender
F. I do not know what this question is asking

**[The Center of Excellence for Transgender Health](#) at the University of California, San Francisco (UCSF) – used with adults, including an older youth/young adult population:**

- UCSF developed and has advocated for the use of two-step question that captures a transgender person's current gender identity as well as their assigned sex at birth. The questions ask:
  - "What is your current gender identity?"
    A. Male
    B. Female
    C. Trans male/Trans man
    D. Trans female/Trans woman
    E. Genderqueer/Gender non-conforming
    F. Different identity (please state):
  - "What sex were you assigned at birth, meaning on your original birth certificate?
    A. Male
    B. Female

## Online resources on LGBT data collection:

1. [LGBTData.com](#), a no-cost, open access clearinghouse for the collection of sexual orientation and gender identity.
2. [American Institute of Bisexuality](#), founded by Dr. Fritz Klein, the author of the KSOG measurement.
3. [Gender Related Measures Overview](#) from the Williams Institute, reports the current state of gender-related measurement in surveys.

# Appendix    Supplemental Data Tables

## Table C-1: Sexual identity of ED-SCLS respondents by subgroup

| | Straight, that is, not gay | Gay or lesbian | Bisexual | I am not sure yet | Something else | N |
|---|---|---|---|---|---|---|
| **Total** | 82.0% | 2.3% | 6.8% | 6.7% | 2.2% | 3054 |
| **Grades** | | | | | | |
| **6-8** | 82.9% | 1.5% | 6.5% | 7.0% | 2.1% | 2553 |
| **9-12** | 77.5% | 6.0% | 8.4% | 5.4% | 2.6% | 498 |
| **Gender Identity[1]** | | | | | | |
| **Female** | 75.9% | 2.6% | 10.5% | 9.3% | 1.7% | 1447 |
| **Male** | 92.6% | 1.3% | 1.9% | 2.9% | 1.2% | 1399 |
| **Transgender** | 43.3% | - | - | - | - | 30 |
| **Race/Ethnicity** | | | | | | |
| **White, non-Hispanic** | 81.0% | - | 4.1% | 9.4% | - | 459 |
| **Black, non-Hispanic** | 83.1% | 2.3% | 7.0% | 5.8% | 1.7% | 1677 |
| **Hispanic** | 81.2% | - | 6.7% | 7.1% | - | 504 |
| **Asian American, non-Hispanic** | 84.8% | 0.0% | - | - | 0.0% | 66 |
| **Two or more races** | 78.2% | - | 10.4% | 6.2% | - | 308 |
| **At-Risk status[2]** | | | | | | |
| **Low risk** | 83.5% | 1.5% | 4.6% | 8.2% | 2.2% | 987 |
| **Moderately low risk** | 85.4% | 1.6% | 4.0% | 6.4% | 2.6% | 698 |
| **Moderately high risk** | 81.1% | 1.9% | 9.3% | 6.0% | 1.6% | 794 |
| **High risk** | 76.7% | 4.9% | 10.8% | 5.4% | 2.3% | 575 |

- Data not available or not reported to protect subgroups with fewer than 10 respondents.

[1] The gender subgroups are based on the current gender identity of students. Transgender students are identified by examining if gender changed between the gender at birth and current gender identity items for students who answered "male" or "female."

[2] The "at risk" designation "includes students who are either homeless, in the District's foster care system, qualify for Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP), or high school students that are one year older, or more, than the expected age for the grade in which the students are enrolled." The proportions of at-risk students by school are sorted into quartiles to form the at-risk subgroups.

| Table C-2: Current gender identity (incl. transgender) of ED-SCLS respondents by subgroup | | | | | | |
|---|---|---|---|---|---|---|
| | Male | Female | Transgender | I'm not sure yet | I feel male sometimes and female at other times | N |
| **Total** | 46.9% | 49.4% | 1.0% | 1.2% | 1.5% | 3076 |
| **Grades** | | | | | | |
| **6-8** | 47.0% | 49.1% | 1.0% | 1.3% | 1.6% | 2569 |
| **9-12** | 46.2% | 50.8% | - | - | - | 504 |
| **Race/Ethnicity** | | | | | | |
| **White, non-Hispanic** | 50.1% | 45.1% | - | - | 2.4% | 463 |
| **Black, non-Hispanic** | 48.2% | 48.0% | 1.4% | 1.2% | 1.3% | 1667 |
| **Hispanic** | 41.9% | 54.3% | - | - | - | 525 |
| **NHPI, non-Hispanic** | - | - | - | - | - | <10[‡] |
| **AIAN, non-Hispanic** | - | - | - | - | - | <10[‡] |
| **Asian American, non-Hispanic** | 56.5% | 43.5% | 0.0% | 0.0% | 0.0% | 69 |
| **Two or more races** | 40.6% | 57.1% | - | - | - | 308 |
| **At-Risk status[1]** | | | | | | |
| **Low risk** | 47.8% | 48.9% | - | - | 1.6% | 998 |
| **Moderately low risk** | 48.5% | 48.1% | - | - | 1.4% | 715 |
| **Moderately high risk** | 44.9% | 51.0% | - | 1.8% | - | 786 |
| **High risk** | 46.1% | 49.6% | 1.9% | - | - | 577 |

- Data not available or not reported to protect subgroups with fewer than 10 respondents

[1] The "at risk" designation "includes students who are either homeless, in the District's foster care system, qualify for Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP), or high school students that are one year older, or more, than the expected age for the grade in which the students are enrolled." The proportions of at-risk students by school are sorted into quartiles to form the at-risk subgroups.

## Table C-3: ED-SCLS item nonresponse rates by SOGI question and subgroup for items at the end of the survey

| | Sexual identity | N | Sexual attraction (MS) | N | Sexual attraction (HS) | N | Gender identity | N | Birth gender | N |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total** | 6.7% | 2487 | 5.8% | 1967 | 4.8% | 518 | 6.4% | 2487 | 4.7% | 2487 |
| **Grade** | | | | | | | | | | |
| **6-8** | 7.2% | 1967 | 5.8% | 1967 | - | - | 6.9% | 1967 | 5.1% | 1967 |
| **9-12** | 4.8% | 518 | - | - | 4.8% | 518 | 4.6% | 518 | 3.1% | 518 |
| **Gender[1]** | | | | | | | | | | |
| **Female** | 7.8% | 1257 | 6.4% | 989 | 6.7% | 267 | 6.3% | 1257 | 4.2% | 1257 |
| **Male** | 5.6% | 1197 | 5.1% | 952 | 2.9% | 244 | 6.8% | 1197 | 5.2% | 1197 |
| **Transgender** | 3.7% | 27 | 4.8% | 21 | - | <10‡ | 0.0% | 27 | 0.0% | 27 |
| **Race/ Ethnicity** | | | | | | | | | | |
| **White, non-Hispanic** | 4.7% | 150 | 5.0% | 100 | 10.0% | 50 | 4.0% | 150 | 1.3% | 150 |
| **Black, non-Hispanic** | 6.5% | 1593 | 6.4% | 1254 | 4.1% | 338 | 7.4% | 1593 | 5.1% | 1593 |
| **Hispanic** | 8.3% | 424 | 4.3% | 346 | 5.1% | 78 | 5.0% | 424 | 5.2% | 424 |
| **NHPI, non-Hispanic** | - | <10‡ | - | <10‡ | - | <10‡ | - | <10‡ | - | <10‡ |
| | Sexual identity | N | Sexual attraction (MS) | N | Sexual attraction (HS) | N | Gender identity | N | Birth gender | N |
| **AIAN, non-Hispanic** | - | <10‡ | - | <10‡ | - | <10‡ | - | <10‡ | - | <10‡ |

## Table C-3: ED-SCLS item nonresponse rates by SOGI question and subgroup for items at the end of the survey

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Asian American, non-Hispanic** | 11.4% | 35 | 6.5% | 31 | - | <10$^{\ddagger}$ | 2.9% | 35 | 2.9% | 35 |
| **Two or more races** | 4.0% | 252 | 3.8% | 210 | 2.4% | 42 | 4.0% | 252 | 3.6% | 252 |
| **At-Risk status[2]** | | | | | | | | | | |
| **Low risk** | 5.0% | 282 | 6.7% | 178 | 7.7% | 104 | 2.8% | 282 | 2.1% | 282 |
| **Moderately low risk** | 9.1% | 761 | 5.4% | 761 | - | - | 7.6% | 761 | 5.1% | 761 |
| **Moderately high risk** | 5.5% | 834 | 5.0% | 767 | 1.5% | 66 | 6.6% | 834 | 4.9% | 834 |
| **High risk** | 6.2% | 610 | 8.8% | 261 | 4.6% | 348 | 6.4% | 610 | 5.1% | 610 |

**NOTES: Subgroup Ns** may **not equal the total N when added together** for a SOGI item **due to** demographic item nonresponse.
**-** Data not available or not reported to protect subgroups with fewer than 10 respondents
**[1]** The gender subgroups are based on the standard ED-SCLS gender item asking "Are you male or female?" Transgender students are identified by examining if gender changed between the biological sex and current gender identity items for students who answered "male" or "female."
**[2]** The "at risk" designation "includes students who are either homeless, in the District's foster care system, qualify for Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP), or high school students that are one year older, or more, than the expected age for the grade in which the students are enrolled." The proportions of at-risk students by school are sorted into quartiles to form the at-risk subgroups.

## Table C-4: ED-SCLS item nonresponse rates by SOGI question and subgroup for items at the beginning of the survey

| | Sexual identity | Gender identity | Birth gender | N |
|---|---|---|---|---|
| **Total** | 1.8% | 1.4% | 1.4% | 658 |
| **Grade** | | | | |
| **6-8** | 1.8% | 1.4% | 1.4% | 657 |
| **9-12** | - | - | - | - |
| **Gender[1]** | | | | |
| **Female** | 1.2% | 0.3% | 0.3% | 341 |
| **Male** | 0.3% | 0.3% | 0.3% | 307 |
| **Transgender** | - | - | - | <10[‡] |
| **Race/Ethnicity** | | | | |
| **White, non-Hispanic** | 0.7% | 0.3% | 0.0% | 296 |
| **Black, non-Hispanic** | 0.0% | 0.7% | 0.7% | 152 |
| **Hispanic** | 2.9% | 0.0% | 1.0% | 103 |
| **NHPI, non-Hispanic** | - | - | - | <10[‡] |
| **AIAN, non-Hispanic** | - | - | - | <10[‡] |
| **Asian American, non-Hispanic** | 0.0% | 0.0% | 0.0% | 34 |
| **Two or more races** | 0.0% | 0.0% | 0.0% | 53 |

NOTES: Only one school included the SOGI items at the beginning of the survey due to a change in the survey platform. However, the demographic characteristics of students at this middle school are not, on average, representative of other public or public charter schools in D.C. The sexual attraction item was not asked for this school. Subgroup Ns may not equal the total N when added together for a SOGI item due to demographic item nonresponse.

- Data not available or not reported to protect subgroups with fewer than 10 respondents.

[1] The gender subgroups are based on the standard ED-SCLS gender item asking "Are you male or female?" Transgender students are identified by examining if gender changed between the biological sex and current gender identity items for students who answered "male" or "female."