



A Cross-sectional Study Examining the (In)congruency of Sexual Identity, Sexual Behavior, and Romantic Attraction among Adolescents in the US

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Objective To examine how sexual identity, romantic attraction, and sexual behavior co-relate for cisgender adolescents.

Study design The Teen Health and Technology survey was a cross-sectional, self-report online survey. More than 5000 youth between 13 and 18 years of age were randomly recruited through Harris Panel OnLine's panel as well as outreach by GLSEN to over-recruit lesbian, gay, bisexual, and other sexual minority youth. Data were collected between 2010 and 2011. Analyses were conducted in 2018 and restricted to cisgender youth.

Results Overall, romantic attraction and sexual behavior most closely mapped each other. The greatest discordance was noted between sexual identity and romantic attraction. For example, 59% of girls and 16% of boys who identified with a nonheterosexual identity reported that at least 1 of their 2 most recent sexual partners was a different gender. Nine percent of heterosexually-identified girls and 3% of heterosexually-identified boys reported romantic attraction to the same sex, and 6% and 7% of heterosexually-identified girls and boys, respectively, reported that at least 1 of their 2 most recent sexual partners was the same gender.

Conclusions Treating romantic attraction, sexual identity, and sexual behavior as synonymous assumes a unidimensionality that is unsupported by the data. Pediatricians and others working with youth, including researchers, should be mindful not to assume identity on the basis of behavior. Researchers should be clear and purposeful about how they are operationalizing "sexual minority" and how it may affect the composition of their study population. Healthy sexuality and risk reduction programs need to acknowledge that adolescents with a particular sexual identity may have romantic attractions, and even sexual encounters, with people who fall outside of that identity. (*J Pediatr* 2019;214:201-8).

The sexual minority population is often categorized in 3 ways: sexual behavior (eg, engaging in sexual behaviors with a male partner, female partner, or both), sexual identity labels (eg, gay, lesbian, bisexual), and romantic attraction (eg, attracted to men, attracted to women, attracted to both men and women).¹⁻³ These categories are often used interchangeably to refer to what is assumed to be the same group of youth. As first noted by Laumann et al, this classification is problematic because it assumes an unlikely unidimensionality, particularly in adolescence when sexual development is at its peak.⁴⁻⁹ Indeed, these different measures have been found to have disparate relationships across various health outcomes. For example, when assessing identity, research often finds that sexual minority youth report more emotional and behavioral challenges;^{10,11} however, when assessing behavior, youth who reported only same-sex sexual partners had similar risk for most health risk behaviors compared with youth who reported different-sex partners.^{5,12} Additionally, same-sex romantic attraction alone does not seem to lead to the same poor health outcomes associated with identity and behavior,¹³ likely because it is harder for others to detect, which may make it less likely to attract minority stressors.¹⁴ Indeed the minority stress model¹⁵⁻¹⁸ attributes health disparities to added stressors that come with membership in a stigmatized minority group. Internalized homophobia, the internalization of negative messages about sexual minorities, may also contribute to differences in these 3 dimensions.^{19,20} Understanding how these 3 factors intersect during adolescence is critical for understanding health disparities and ensuring that pediatricians have an understanding of how they may or may not overlap to affect inclusive conversations.

Moreover, given the relative paucity of research on sexual minority persons under the age of 18 years, little is known about how many of these adolescents have multiple sexual identities and how they cluster. Understanding the overlap of sexual identities in adolescence is important because this is a period of intense sexual development and exploration,^{21,22} including the development of sexual identities.²³ The initiation of this process is often characterized by sexual exper-

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HPOL Harris Panel OnLine
LGBT Lesbian, gay, bisexual, and transgender

imentation and identity confusion,^{24,25} potentially reflected by the endorsement of multiple sexual identities.

Existing national surveys have examined some but not all 3 components of sexual orientation (ie, identity, attraction, and behavior) among youth 18 years of age and younger simultaneously. For example, Add Health measured the congruence of romantic attraction and sexual behavior and the Youth Risk Behavior Survey asks about sexual identity and behavior.^{7,26} The Teen Health and Technology survey includes measures of all 3 dimensions. As such, we use these cross-sectional data to examine youths' relative congruence of sexual identity, behavior, and romantic attractions.

Methods

Teen Health and Technology was an online survey of adolescents and was conducted from August 4, 2010, to January 17, 2011, across the US. The protocol was reviewed and approved by the Chesapeake Institutional Review Board, the University of New Hampshire Institutional Review Board, and the GLSEN Research Ethics Review Committee. Youth provided informed assent. The institutional review boards granted a waiver of parental permission to protect participants from harm resulting from disclosure of their sexual identity to their caregivers as part of their study participation.

Participants and Procedures

Youth were between the ages of 13 and 18 years, living in the US, and provided informed assent. The survey questionnaire was self-administered online. Participants were recruited from the Harris Panel OnLine (HPOL) and through national outreach by GLSEN.

HPOL was an opt-in panel of individuals recruited through a variety of methods, including targeted mailings, word of mouth, and online advertising. They earned points for completing surveys, which could be exchanged for nominal gifts. Study respondents recruited through HPOL were randomly identified and subsequently invited through email invitations.

GLSEN is a national nonprofit research and advocacy organization focused on ensuring safe schools for all students, including lesbian, gay, bisexual, and transgender (LGBT) youth. GLSEN emailed notices about the survey to its list of student contacts, representing thousands of high school students across the country who had either participated in GLSEN's programs and online actions or signed up to receive information about GLSEN's programs and resources. GLSEN also publicized the survey through advertisements on Facebook.

Survey invitations to both groups were purposefully vague by referring to a survey about their online experiences to reduce self-selection bias based on interest in or experience with particular topics (eg, peer victimization).

Response Rate

Of the 514 744 emails sent to randomly identified HPOL members, 18 433 bounced back. Of the 496 311 valid emails,

35 627 completed a screener. Of these, 25 925 did not meet eligibility criteria, 878 were qualified but over quota, 4759 were incomplete when field closed, and 76 were removed post hoc owing to in-survey quality questions (eg, straightlining, length of interview). The final sample was 3989 youth. Calculated as the number of individuals who started the survey, divided by the number of email invitations sent less any email invitations that were returned as undeliverable, the response rate for the HPOL sample was 7.2% and is comparable with online health surveys at the time.^{27,28}

Of the 4035 screeners completed through GLSEN efforts, 294 were ineligible, 1818 were incomplete when field closed, and 5 were removed post hoc owing to quality control. The final sample was 1918 youth. The response rate for the GLSEN sample could not be calculated given the denominator (ie, the number of youth who saw the email notification) is unknown.

Measures

Sexual identity was assessed by asking, "How would you describe your sexuality or sexual orientation? Please select all that apply." Response options were gay, lesbian, bisexual, straight/heterosexual, questioning, queer, other, or not sure.

Sexual behavior was queried by asking youth: "Please think about the most recent person with whom you had any kind of sex when you wanted to. Remember, by sex we mean oral sex or sex where a penis, finger or sex toy goes into the vagina or anus." They were then asked a series of follow-up questions, including their most recent partner's gender. Response options to this particular follow-up question were male, female, or transgender. One's second most recent sexual partner was similarly assessed. To minimize participant fatigue given the length of the survey, partners beyond their two most recent were not queried.

Youth who reported only 1 sexual partner who was a different gender as their own (eg, a male who had sex with a female) or that both of their 2 most recent partners were a different gender from their own were coded as only having different-gender partners. Youth who reported only 1 sexual partner who was the same gender as their own or that both of their 2 most recent partners were the same gender as their own were coded as only have same-gender partners. Finally, youth who reported both a male and female as their two most recent sexual partners were coded as having partners of both genders. Only 5 youth (0.02%) reported that at least 1 of their most recent sexual partners was transgender; therefore, transgender partners were not separately included in these analyses.

Romantic attraction was assessed with 2 separate questions: "Have you ever had a romantic attraction to a female?" and "Have you ever had a romantic attraction to a male?"

Statistical Weighting and Identifying the Analytical Sample

The HPOL- and GLSEN-recruited samples of LGBT teens were statistically weighted to approximate the national population of adolescents and so that they could be validly combined. First, the HPOL general population sample was weighted to the demographic characteristics of 13- to 18-

year-old youth in the US at the time of the survey (eg, sex, age, parents' highest level of education).²⁹ Next, from the weighted HPOL sample, a demographic profile was created for teens who identified as LGBT. This profile was then applied to the GLSEN respondents who identified as LGBT, stratified by sex assigned at birth. A second weight was then added to adjust for behavioral and attitudinal differences noted between the 2 groups. Similar to the demographic weight, the behavioral and attitudinal weight aligned GLSEN data to HPOL data. Additional details of the procedures for weighting and methodology can be found elsewhere.³⁰

A target sample of 2000 youth from the HPOL general population and 700 from the GLSEN outreach efforts was determined to have sufficient power to detect an OR equal to 2. Subsequent budgetary measures supported a larger sample, specifically 3989 youth were surveyed from HPOL and 1918 from GLSEN. All missing (ie, 'do not want to answer') data were imputed using the single-imputation command "impute" in Stata.³¹ To ensure data were not imputed for truly nonresponsive youth, respondents were required to meet valid data requirements (eg, responded do not know to more than 20% of the main questions, survey length was less than 5 minutes) and 227 participants (3.8%) were thusly excluded. An additional 138 (2.3%) were removed owing to having an extreme weight. Thus, 5542 surveys comprised the sample identified as valid.

Although many people who identify as transgender also identify as sexual minority, transgender youth face unique challenges and likely have identity, behavior, and romantic attraction patterns that are different than cisgender youth who are sexual minorities. Simply combining them with other sexual minority youth would hide these differences, and unfortunately we lack the sample size to include them as their own group. As such, the additional 442 youth who did not identify as cisgender (ie, the "T" in LGBT: transgender, gender nonconforming, etc) were excluded from current analyses. This resulted in a final analytical sample size of 5100 youth.

Data Analyses

Weighted data from the HPOL sample were used to examine the total number of identities endorsed by youth using a multi-response sexual identity variable. The intersection between sexual identity, romantic attraction, and sexual behaviors was examined through χ^2 analyses. A *P* value of .05 or greater was deemed statistically significant. Here the combined HPOL and GLSEN sample was used to take advantage of the over-sampling of LGB youth and because relations, not prevalence rates, were of interest. Per the Stata protocol, reported percentages are weighted whereas sample sizes are not.

A Note about Nomenclature

Sex is assigned at birth. Gender is how one knows oneself as male, female, nonbinary, or any number of other gender identities. For some people, their sex and gender are not congruent. We use the term sex to refer to one's sex assigned at birth. Gender is only used in reference to one's sexual partners, as that is how the question is asked (see Measures).

Results

Respondents were, on average, 15.6 years of age (SD, 1.7); 70% were non-Hispanic white and 9% were non-Hispanic Black/African American. Just over 1 in 10 youth (12%) were Hispanic. One in 4 (23%) appraised their household income as lower than the average family and 17% said their household income was higher than average. One in 3 (31%) lived in a rural area.

Prevalence Rates of Sexual Minority Status

One in 10 youth (9.4%) self-identified with at least 1 sexual minority identity and 7.6% reported same-sex or dual-sex romantic attraction. Among the 1538 youth who had ever had sex, 8.7% reported that at least 1 of their 2 most recent partners was the same gender.

Estimates of youth by sexual identity are shown in [Table I](#). More adolescent boys than girls identified as gay, and more

Table I. National estimates of adolescents' sexual identity (n = 3727)

Characteristics	All youth (n = 3727)	Girls (n = 2111)	Boys (n = 1616)	χ^2
Age, mean (SE) (range, 13-18)	15.6 (.02)	15.7 (.03)	15.4 (.03)	<i>P</i> < .001
Sexual identity*				
Gay	1.3 (41)	.30 (6)	2.3 (35)	<i>P</i> < .001
Lesbian	.62 (28)	1.2 (27)	.04 (1)	<i>P</i> < .001
Bisexual	3.2 (122)	4.8 (98)	1.6 (24)	<i>P</i> < .001
Questioning	2.6 (107)	3.6 (81)	1.6 (26)	<i>P</i> = .002
Queer	.29 (7)	.12 (2)	.46 (5)	<i>P</i> = .21
Other	1.1 (42)	1.1 (27)	1.0 (15)	<i>P</i> = .82
Not sure	1.6 (68)	2.2 (47)	1.1 (21)	<i>P</i> = .02
Straight/heterosexual	93.8 (3491)	92.2 (1951)	95.3 (1540)	<i>P</i> = .001

Significance comparisons are sex differences in endorsement of each sexual identity.

Data are among HPOL respondents and weighted to reflect national prevalence rates.

The degrees of freedom for all χ^2 tests are F (1, 3721). Data are % (number) unless otherwise indicated.

*Columns do not sum to the total because participants were permitted to select all sexual identities that apply.

adolescent girls than boys identified as bisexual. Girls were also more likely to identify as questioning and unsure and less likely to identify as heterosexual than boys. Boys and girls were equally likely to endorse an identity of queer or other, however.

The Overlap of Sexual Identity

Most youth chose 1 sexual identity (84% of girls and 90% of boys). That said, an important minority chose 2 identities (10.0% of girls and 7.8% of boys), and a few chose 3 or more identities. Youth who identified as heterosexual were the most likely subgroup to choose only one sexual identity (96% of boys and 91% of girls), as were boys who identified as gay (66%), and girls who identified as bisexual (60%).

Comparisons by Adolescent Romantic Attraction, Sexual Identity, and Sexual Behavior

Sexual Identity by Romantic Attraction. One’s romantic attractions were generally consistent with one’s reported sexual identity (Table II). That said, 9% of heterosexually-identified girls reported ever having either only same-sex or dual-sex romantic attractions, as did 3% of heterosexually-identified boys. Sixty-eight percent of girls who identified as gay and 59% who identified as lesbian reported dual-sex romantic attraction at some point in their lives. One in 3 boys who identified as gay reported having a romantic attraction to both sexes.

For girls, most (83%) who identified as queer also reported dual-sex romantic attraction, whereas for boys slightly more than one-half (52%) who identified as queer reported only same-sex romantic attractions at some point in their lives. Neither boys nor girls who identified as queer reported only different-sex romantic attraction, which was unique to this identity.

Youth who identified as questioning, not sure, or other for their sexual identity were most likely to report dual-sex romantic attractions, although many (6%-35%) reported only different-sex romantic attraction at some point in their lives.

An important minority of youth reported never having a romantic attraction to either sex (9.6%), sometimes referred to as aromantic. The most common sexual identity for whom this was true was straight/heterosexual: 13.2% of girls and 12.4% of boys. Additionally, 6.6% of girls and 12.9% of boys who reported being unsure of their sexual identity also did not have a romantic attraction to either females or males.

Sexual Identity by Behavior. Among the 30% of youth (n = 1538) who had ever had sex, the gender of youths’ 2 most recent sexual partners was also generally consistent with their sexual identity, although important incongruences were noted here as well (Table III). This finding was especially true among girls: 6% of heterosexually-identified sexually active girls reported that either their 2 most recent sexual partners were girls, or 1 was female and the other male. Furthermore, 32% of sexually active lesbian-identified and 36% of gay-identified girls reported that at least 1 of their 2 most recent sexual partners was male. Additionally, more than one-half of all other sexually active sexual minority-identified girls (eg, queer) reported having recent male sexual partners.

Although there was more consistency between identity and behavior among boys, 7% of sexually active heterosexually-identified boys reported that their 2 most recent sexual partners were male. For all sexual minority-identified boys, only same-gender partners were the most commonly reported recent sexual behavior (69%-97%). Reporting that one’s 2 most recent sexual partners were different genders was relatively uncommon among boys, particularly compared with girls; at the same time, boys who identified as questioning were more likely to report sexual partners of both genders (16%) than other sexual identity categories. Similar rates were noted of sexually active bisexually-identified boys (10%).

Romantic Attraction and Behavior. Among youth who had ever had sex, romantic attractions and sexual behaviors were perhaps the most congruent of the pairwise comparisons (Table IV). Among youth who reported only ever having

Table II. Youth sexual identity by romantic attractions (n = 5100)

Sexual identities*	Girls (n = 2840)				Sexual identities*	Boys (n = 2260)			
	Same-sex romantic attraction only (n = 181)	Different-sex romantic attraction only (n = 1626)	Dual-sex romantic attraction (n = 757)	Never had romantic attraction (n = 276)		Same-sex romantic attraction only (n = 464)	Different-sex romantic attraction only (n = 1363)	Dual-sex romantic attraction (n = 248)	Never had romantic attraction (n = 185)
Gay (n = 89)	18.0	13.9	67.5	.55	Gay (n = 634)	65.0	.28	34.3	.47
Lesbian (n = 357)	38.9	1.6	59.3	.24	Lesbian (n = 1)	0	100		0
Bisexual (n = 577)	.79	4.6	91.3	3.3	Bisexual (n = 111)	7.9	8.9	83.1	0
Questioning (n = 253)	2.5	6.0	88.1	3.4	Questioning (n = 65)	22.0	10.4	62.6	5.0
Queer (n = 133)	17.2	0	82.8	0	Queer (n = 107)	51.9	0	45.2	2.9
Other (n = 101)	2.3	21.3	69.4	6.9	Other (n = 39)	5.6	17.0	73.1	4.3
Not sure (n = 100)	3.4	19.5	70.4	6.6	Not sure (n = 33)	3.7	35.3	48.1	12.9
Straight/heterosexual (n = 1982)	.43	77.8	8.6	13.2	Straight/heterosexual (n = 1551)	.25	84.2	3.2	12.4

Percentages are the percentage of youth of a given sexual identity who have ever had a given romantic attraction (eg, 18% of gay-identified girls have only same-sex romantic attractions). Data include all respondents (HPOL + GLSEN) and are weighted to allow comparisons across identities.

*Rows do not sum to the total because participants were permitted to select all sexual identities that apply.

Table III. Sexual identity by sexual behavior (most recent sexual partners) among sexually active youth* (n = 1538)

Sexual identities	Girls (n = 808)			Sexual identities	Boys (n = 730)		
	Recent same-gender partners only (n = 162)	Recent different gender partners only (n = 572)	Recent partners of both genders (n = 74)		Recent same-gender partners only (n = 416)	Recent different gender partners only (n = 297)	Recent partners of both genders (n = 17)
Gay (n = 37)	63.8	35.2	1.0	Gay (n = 407)	96.9	1.1	2.0
Lesbian (n = 180)	68.3	13.1	18.7	Lesbian (n = 1)	0	100	0
Bisexual (n = 283)	15.2	63.8	20.9	Bisexual (n = 61)	69.6	20.2	10.2
Questioning (n = 93)	32.2	54.8	12.9	Questioning (n = 29)	74.1	10.1	15.8
Queer (n = 58)	48.8	45.6	5.6	Queer (n = 67)	95.1	1.0	3.9
Other (n = 37)	26.0	39.9	34.1	Other (n = 23)	83.5	14.9	1.6
Not sure (n = 25)	32.5	59.4	8.1	Not sure (n = 7)	78.8	21.2	0
Straight/heterosexual (n = 401)	3.9	94	2.1	Straight/heterosexual (n = 296)	6.5	92.7	.79

Data include all respondents (HPOL + GLSEN) and weighted to allow comparisons across identities.

Data are percentages. Percentages are the percentage of youth in a given sexual identity who had a given sex partner (eg, 64% of gay-identified girls reported a recent same-gender partner). Also, the percentage of youth who had a recent male or female sex partner differs slightly in this paper than an earlier published manuscript using the same data because there,³² one's most recent sexual partner was included whereas here, the 2 most recent partners were included.

*Youth were asked the gender of their 2 most recent sexual partners. Sexual partners reported here are limited to only those who were cisgender.

same-sex romantic attractions, 89% of girls and 99% of boys reported only same-gender recent sexual partners. In contrast, 6% of girls who reported ever having same-sex romantic attraction reported having recent different-gender sexual partners exclusively. The majority of boys who reported ever having dual-sex romantic attractions (78%) reported only having recent same-gender sexual partners. This is in comparison with the 63% of ever dually-attracted girls who were more likely to report different-gender partners.

Discussion

In this national sample of more than 5000 youth 13-18 years of age recruited and surveyed online, sexual identity is not monolithic. More than 1 in 10 youth chose 2, 3, or even more sexual identities when given the choice. This finding is especially true of girls who identify as gay and boys who identify as bisexual. Perhaps these 2 identities connote a particular place in one's sexual identity formation that reflects the fact that they are sure they are not heterosexual, but they are unsure about where on the homophilic contin-

uum they lie. Identity formation is an important aspect of adolescent development³³ and research suggests that an adolescent's uncertainty about their identity can be a common part of the identity development process.³⁴ It is not, therefore, surprising that this is reflected in their sexual identities as well. Pediatricians and others working with youth need to be mindful to provide young people the opportunity to articulate as many different-sexual identities as they feel apply to them and for these identities to change.

About 1 in 10 youth report not having romantic attractions to either males or females. This finding may reflect youth who have not yet matured sexually to a point where they have become aware of their romantic attractions. This notion is supported by the fact that more than one-half of youth in this category are 13-14 years old vs being older. Some of these youth may also be aromantic, an identity that indicates the person does not have romantic attractions; however, this was not included as a response option and so cannot be tested. This finding serves as a reminder for adolescent health professionals that we cannot assume all youth have conscious romantic

Table IV. Romantic attractions by behavior among sexually active youth (n = 1538)

Sexual partners	Girls (n = 808)			Sexual partners	Boys (n = 730)		
	Recent same-sex partners only (n = 162)	Recent different-sex partners only (n = 572)	Recent partners of both sexes (n = 74)		Recent same-sex partners only (n = 416)	Recent different-sex partners only (n = 297)	Recent partners of both sexes (n = 17)
Same-sex romantic attraction only (n = 83)	88.8	6.0	5.2	Same-sex romantic attraction only (n = 286)	98.7	.61	.68
Different-sex romantic attraction only (n = 342)	.38	99.1	.56	Different-sex romantic attraction only (n = 286)	1.9	97.5	.56
Dual-sex romantic attraction (n = 381)	17.5	62.9	19.6	Dual-sex romantic attraction (n = 157)	78.2	12.4	9.4
Never had a romantic attraction (n = 2)	100	0	0	Never had a romantic attraction (n = 1)	0	100	0

Data are percentages. Percentages are the percentage of youth who reported a given romantic attraction who reported a given sexual partner (eg, 89% of girls who reported only same-sex romantic attraction only had recent sexual partners of the same sex).

Data include all sexually experienced respondents (HPOL + GLSEN) and weighted to allow comparisons across identities.

attractions. We need to craft our conversations about sexuality accordingly.

The differences between romantic attraction and sexual behavior may be explained by curiosity for some youth, who might want to know what it is like to have sex with someone of a particular gender.^{35,36} Others may be testing out their romantic attractions by having sex. It also could be a way to determine whether one likes having sex with same-gender youth before taking on a particular sexual minority identity. For others, engaging in sexual activity with someone of a different gender while being attracted to both sexes may reflect attempts to be seen as heterosexual by their friends or family.³⁷ Having sex with someone of the opposite gender may also be due to partner availability. Although the internet has helped to narrow the gap, it is typically easier to find an opposite-gender partner than a same-gender partner. The seeming incongruence may also reflect internalized homophobia that is a result of societal and personal expectations and pressure by others to conform to a cisgender, heteronormative society.^{38,39}

Consistent with findings from Add Health,⁷ romantic attraction and sexual identity are most often congruent for youth in the current study. That said, it is not uncommon for youth to have ever had romantic attractions to people who are counter to their stated identity. For example, a small, but important, number of heterosexually-identified youth report reported ever having romantic attractions to the same sex. This incongruency is particularly true for gay and lesbian girls, the majority of whom report some romantic attraction to boys at some point in their lives. It also is true for a large minority of gay boys, who report some romantic attraction to girls at some point. This may again be due to pressures exerted by a heteronormative society. It may also reflect the continuum on which romantic attractions lie, which may be broader than the way in which we articulate our sexual identities. Findings also further speak to the dynamism of these constructs during adolescent development that pediatricians need to be mindful of when talking with youth about sex.

Incongruence is borne out in behavior as well—especially for sexual minority girls. One in 5 lesbian-identified and 1 in 3 gay-identified girls reported that at least 1 of their 2 most recent sexual partners was male. These differences in identity and behavior help explain heightened pregnancy⁴⁰⁻⁴⁴ and sexually transmitted infection^{45,46} risk that sexual minority teen girls face. These data further emphasize the need for inclusive sexual health programs that provide pregnancy and sexually transmitted infection risk reduction strategies resonant with sexual minority girls.

It is important to note that the meaning of identity labels may be different for different youth. For example, the meaning of “queer” has been noted for its ambiguity in the scientific literature.^{47,48} Findings here suggest that it may be different for boys and girls; for girls, it seems to most often connote dual romantic attraction, whereas for boys it seems to connote same-sex romantic attraction. Beyond sex, there is some suggestion in the literature that self-definitions of identity may also differ by race and ethnicity.⁴⁹ Unfortunately, the current

study was not designed to explore these differences. This highlights the larger point that the strength of congruence across romantic attraction, identity, and behavior for sexual minority boys and girls are different, and perhaps that boys who are dually attracted or bisexual may be limited in their sexual behaviors, either by themselves or culturally. Indeed, sexual minority boys and girls experience different cultural influences and pressures^{14,50,51} and, as a result, may internalize their identities as well as express them to the world differently.

In addition to the factors discussed, certain study limitations need to be taken into account when considering the findings. Romantic attraction is a dimension rather than a dichotomous experience. A Likert scale rather than a dichotomous (yes/no) measure would have better captured this dimension. So, too, identity may be a dimension. Previous research with adults suggests that, when given the option, some people will choose “mostly heterosexual,” or “mostly gay/lesbian” identities.^{52,53} Youth in the current study who identified as heterosexual and reported same-sex romantic attractions may have chosen these ‘mostly’ defined identities had they been provided. It is also possible that, given the fluidity of sexual identity,⁵⁴ youth may have a strong identity as solely heterosexual in adolescence while at the same time be experiencing same-sex romantic attractions and perhaps even exploring these romantic attractions behaviorally before shifting to a mostly or completely nonheterosexual identity in adulthood. Also, attractions to transgender and non-binary people were not assessed.

Related, sexual behavior is a continuum, particularly during adolescence.⁵⁵ It is possible that, if other experiences such as kissing and petting had been included, different findings would have resulted. Furthermore, some youth may have considered mutual masturbation experiences to fall within the survey’s definition of sex, and included these experiences in their self-report.

Additionally, data were collected in 2011. Since then, progress has been made that reflects greater cultural acceptance of people who are LGBT (eg, the legalization of marriage). The current political climate may be one of less acceptance, however. It is unclear how data may differ were they to be collected today. Related, nontraditional sexual minority identities, such as pansexual, have gained popularity since the survey was fielded.⁴⁸ Pansexual was not included in the list of sexual identities, although it was the most common identity that was written in by youth who chose ‘other’ as their sexual identity. Importantly, too, the sample reflects youth who use the internet. Findings may not be generalizable to non-internet-using youth.

Finally, recruiting truly nationally representative samples is increasingly difficult,²⁷ especially when recruiting youth for studies about sensitive topics. Although comparable with other surveys,^{21,22} our response rate is lower than desired. The low proportion of non-white youth prevent our examining the intersection with race. Furthermore, underlying factors related to self-selection in the online panel may have affected the sample’s generalizability. For example, it is possible that panel members may be more

digitally literate than nonmembers or that GLSEN youth are more publicly out than HPOL sexual minority youth. To address this limitation and to minimize self-selection bias, HPOL participants were recruited randomly from the panel. The study description was purposefully vague so as not to attract youth with specific experiences. Moreover, these potential underlying differences were adjusted for in the weighting.^{56,57}

Discussions between healthcare providers and youth about their recent sexual activity might begin with questions about one's romantic attractions and assurances that it is normal to be attracted to people of the opposite and/or same sex, or to have no romantic attractions at all. For example, a pediatrician might say: "I talk with a lot of teens and one of the things I hear is that some people are attracted to boys, some are attracted to girls, and some are attracted to both boys and girls. I also hear sometimes that a teen is not attracted to anyone, or they are unsure about to whom they are attracted. As I doctor, I can say that all of these feelings are normal; no one type is better than another. Who are you attracted to?"

Findings suggest that pediatricians and others working with youth, including researchers, should be mindful not to conflate behavior (eg, men who have sex with men) with sexual identity (eg, gay, bisexual) or romantic attraction. If a youth discloses the gender of a sexual partner to their healthcare provider, pediatricians should nonetheless avoid labels until the youth offers them, given the sometimes incongruence between behavior and identity labels. Pediatricians may also consider asking youth whether the adolescent is in a relationship with partners who have a penis or vagina, as this can help inform recommendations (such as contraception) without relying on gender-related labels. Researchers should be clear and purposeful about how they are operationalizing sexual minority and how it may affect their study population. Prevention programs would benefit from acknowledging that adolescents with a particular sexual identity may have romantic attractions, and even sexual encounters, with people who fall outside of that identity. ■

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