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Sexual Fluidity in Identity and Behavior Among Cisgender Youth: Findings from the Longitudinal Growing Up with Media Study

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Abstract

Objectives: To examine fluidity in sexual orientation identity and behavior among cisgender youth.

Study Design: Data were analyzed from five survey waves of the longitudinal US Growing Up with Media Study (2010–2019). Participants were 989 cisgender youth, aged 13–20 years at baseline, who completed online surveys assessing sexual orientation identity and behavior (gender of sexual partners). Amount of change (mobility) and patterns of change across waves were assessed for identity and behavior.

Results: Consistently heterosexual was the most common sexual orientation identity (89%-97% for boys; 80%-90% for girls), followed by gay (3%) for boys, and bisexual (8%) for girls. Sexual minority identities increased (3% to 11% for boys, 10% to 20% for girls) over time; same-gender sexual behavior also increased. Girls had more identity mobility than boys; no gender difference was found for behavior mobility. Movement from heterosexual to a sexual minority identity occurred for 9% of girls and 6% of boys; movement from different-gender sexual behavior to same-gender sexual behavior occurred for 2% of girls and boys.

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Conclusions: Findings highlight the need to assess multiple dimensions and patterns of change of youth sexual orientation in research and clinical care. Recognizing and creating space for conversations about changes in sexual identity and behavior over time will help providers accurately and effectively address the health needs of all patients.

Adolescence and young adulthood is a developmental period marked by identity formation, [1] including initial development[2] and potential fluidity[3, 4] of sexual orientation. Sexual fluidity (change over time in one or more dimension of sexual orientation: attraction, identity, behavior) is a common experience for youth, with greater fluidity among adolescents than young adults, and among sexual minority compared with heterosexual individuals. [3–6] Specific rates of sexual fluidity also differ based on the sexual orientation dimension assessed, [7] although the majority of studies on sexual fluidity only assess change in one sexual orientation dimension. [6] Findings regarding gender differences in sexual fluidity between cisgender women and men are mixed, with some research finding that cisgender women are more likely to be sexually fluid than cisgender men and other research finding no gender difference, particularly among sexual minority individuals. [8, 9] In addition, dimensions of sexual orientation do not always align with cultural expectations of congruence, [10] especially among sexual minority youth. [2] Despite the multidimensionality of sexual orientation and fluidity that is likely to occur during this critical developmental period, a lack of nuanced understanding about these factors limits the clinical care of youth.

Sexual fluidity may occur related to a range of individual, interpersonal, and societal factors, such as meeting a new person one finds attractive or being newly exposed to sexual orientation terminology or identity labels. [11] The concept of sexual fluidity is distinct from sexual orientation developmental milestones such as first experiencing attractions to a same-gender or different-gender person or first identifying with a specific sexual orientation identity label, [2] although sexual fluidity may encompass changes due to such milestones. Sexual fluidity is also conceptualized more broadly than “coming out”, a process that is necessary for many sexual minority individuals due to heteronormativity in US culture. Specifically, sexual fluidity describes any changes in sexual orientation, in any direction and at any point in the life course, not just a change from (presumed) heterosexual to another orientation.

Sexual minority youth in the US are disproportionately affected by adverse health outcomes due to minority stress experiences, , [12, 13] as well as insufficient social safety. [14] Sexual fluidity has also been linked to a number of adverse health outcomes, including increased depression and substance use. [15–18] These adverse outcomes may be due to exposure to prejudice and discrimination against sexual minorities and/or people with fluid sexual orientations. [19] While sexual fluidity may occur because of a range of factors, [11] for some youth, fluidity may be a response to experiences of discrimination targeting sexual minority status or reflect internalized stigma. Prior research on sexual fluidity has been limited in not assessing patterns of sexual fluidity, such as whether changes are toward heterosexual orientation, toward sexual minority orientation, or within sexual minority orientation. [6] Given that health-related experiences in adolescence and young adulthood set the stage for long-term health outcomes in adulthood, sexual fluidity has important health implications for youth. [20, 21]

The assessment of sexuality is a key component of social history-taking in adolescent well visits. [22] However, clinicians typically assess sexual behavior without assessing multiple dimensions of sexual orientation, such as gender of sexual partners, identity, and attractions, [23–25] or assessing change in these dimensions over time. Assumptions about the stability of heterosexual orientation may lead to missed opportunities to capture important changes in sexual orientation that have implications for patients' health and wellbeing. To address limitations of prior research on sexual fluidity, this study examined frequency of sexual fluidity and patterns of change in two dimensions of sexuality (sexual orientation identity and behavior – gender of sexual partners) across four waves of a longitudinal study of cisgender youth in the US.

Methods

Participants

Participants included 989 cisgender youth (502 girls, 487 boys), ages 13–20 years, from Waves 4–8 of the longitudinal Growing Up with Media Study. Sociodemographic characteristics of the analytic sample are provided in Table 1. For the full Growing Up with Media Study, 1,586 child-caregiver pairs were recruited in 2006 through an email sent to randomly identified adult Harris Poll OnLine panel members who reported a child living in their household. The panel was recruited through advertising online, at conferences and events, and referrals. Eligibility criteria for youth included: age 10–15 years old, able to read English, living in the household at least 50% of the time, and using the Internet at least once in the past six months. Recruitment was balanced on youth age and sex.

Study Procedures

Youth completed online surveys in 2006 (Wave 1), 2007–2008 (Wave 2), 2008 (Wave 3), 2010–2011 (Wave 4), 2011–2012 (Wave 5), 2012–2013 (Wave 6), 2016 (Wave 7), and 2017–2019 (Wave 8). Because sexual orientation identity was added at Wave 4 and subsequent waves, we examined data from Waves 4–8. Parents provided permission for their child's participation, and youth provided informed assent. The Wave 1 survey response rate (31%) is consistent with well-conducted surveys using online panels at the time of baseline recruitment; [26] response rates in Waves 4–8 varied between 40–61%. The survey protocol was reviewed and approved by the Centers for Disease Control and Prevention Institutional Review Board (IRB) for Waves 1–3, by Chesapeake IRB (now Advarra IRB) for Waves 4–7, and by Pearl IRB for Wave 8.

Measures

Sexual orientation identity.—Youth reported their sexual orientation identity at each wave with a single item: "Below is a list of terms that people often use to describe their sexuality or sexual orientation. How would you describe your sexuality or sexual orientation?" Response options included: straight/heterosexual, gay, lesbian, bisexual, questioning, queer, other, or not sure. Youth could select more than one identity.

Sexual behavior (partner gender).—Youth were asked about their voluntary (i.e., wanted) sexual behavior at each wave and to identify the gender of their most recent

voluntary sexual partner. Sexual behavior was not defined for participants. At Waves 4–6, response options were: male, female, or transgender. At Waves 7 and 8, response options were: 1) male, 2) female, 3) female-to-male/transgender male/trans man, 4) male-to-female/transgender female/trans woman, or 5) genderqueer.

Statistical Analysis

Analyses included youth who were cisgender (i.e., their birth sex matched their gender identity) at all waves of data collection. Youth who identified as a gender minority (i.e., transgender, genderqueer, or non-binary; n=31) for at least one wave were excluded from analyses due to low power to analyze fluidity in this small sub-group of youth. Gender minority youth did not differ from the analytic sample on age (point-biserial correlation=0.02, p=0.49) or race/ethnicity (X^2=6.7, p=0.15), although they were less likely to identify as heterosexual (X^2=11.4, p<0.05).

For sexual orientation identity analyses, we excluded cisgender youth who did not provide at least two waves of sexual orientation data (n=566) to enable examination of identity change over time. Youth who were excluded due to missing sexual orientation identity data did not differ from the analytic sample on gender (X^2=2.6, p=0.11), age (mean age excluded=16.8 years, mean age included=16.4 years, t=-1.8, p=0.07), or race/ethnicity (X^2=4.4, p=0.36).

For sexual behavior analyses, we restricted analyses to all cisgender youth who reported having had sex and provided data on the gender of their most recent sexual partner for at least two waves (n=633). Youth who were excluded from the analytic sample due to missing sexual behavior data were more likely to be male (56% vs 46%, X^2=12, p<0.05) and younger (mean age excluded youth=16 years, mean age included youth=16.7 years, t=5.5, p<0.01), but did not significantly differ from the analytic sample on race/ethnicity (X^2=9.0, p=0.06) or sexual orientation identity (X^2=9.5, p=0.09).

We calculated two measures of change in sexual orientation identity and behavior (i.e., sexual fluidity): mobility and patterns of change. Sexual fluidity was operationalized as any change in sexual orientation identity and behavior across two or more waves, regardless of the pattern of change. Mobility (M), calculated as the number of changes divided by the number of total possible changes over time, [3] reflects a proportion of the number of changes relative to how often a youth could change across waves. For example, a youth who identified as heterosexual at Waves 4–5, bisexual at Wave 6, and gay at Waves 7–8 would have a mobility score of M=0.5 as this youth had four opportunities to change over the five timepoints and changed identity twice (M=2/4=0.5). For youth who selected multiple identities at one wave, the number of changes was calculated as any change in identity across waves (i.e., if identity at the next wave (t+1) was identical to the previous wave (t), no change was counted). For example, a youth who identified as heterosexual/bisexual at Wave 4 and bisexual at Wave 5 would be counted as changing once.

The second calculated measure of sexual fluidity was patterns of change, [18] determined by categorizing the direction of changes in sexual orientation identity and behavior, relative to their first report. Youth were categorized as “immobile” if no changes in identity or behavior occurred across waves (i.e., mobility score=0). For identity, a youth who first identified as

heterosexual and then as a sexual minority (i.e., gay, lesbian, questioning, queer, other, or not sure) at subsequent waves was categorized as "toward sexual minority identity," and a youth who first identified as a sexual minority and then as heterosexual at subsequent waves was categorized as "toward heterosexual identity." For behavior, a youth who first endorsed sex with a different-gender partner and subsequently endorsed sex with a same-gender partner was categorized as "toward same-gender behavior," and a youth who first endorsed sex with a same-gender partner and subsequently endorsed sex with a different-gender partner was categorized as "toward other-gender behavior." A youth who changed identity or behavior multiple times across waves was categorized as "multidirectional."

When calculating mobility and patterns of change for sexual behavior, we excluded youth who reported a gender minority sexual partner at any wave due to small cell sizes (see Table 2). Youth excluded for this reason did not differ from the analytic sample on gender, age, or race/ethnicity. These youth were more likely than the analytic sample to identify as a sexual minority (X^2=0.68, p<0.05), but did not differ in sexual behavior mobility or patterns of change.

Results

Youths' self-reported sexual orientation identity and gender of their most recent sexual partner across waves is provided Table 2. Mobility and patterns of change in sexual orientation identity and behavior are presented in Table 3. Figure 1 shows changes in identity over time specifically for sexual minority identities.

Sexual Orientation Identity

The most common identity for both boys and girls across waves was consistently heterosexual (89%-97% for boys; 80%-90% for girls). The second largest identity group at any timepoint was gay for boys (3.3%) and bisexual for girls (8.4%), both at Wave 8. The proportion of sexual minority-identified youth increased over time.

The average identity mobility score was M=0.08 (SD=0.22); range: 0 to 1. Girls had significantly more identity mobility than boys (girls: M=0.12, boys: M=0.05, t=−5.0, p<0.01). With respect to patterns of change, the majority of boys (91%) and girls (79%) were categorized as "immobile", with no identity change across waves. Girls were significantly less likely than boys to be classified as "immobile" (X^2=30, p<0.01). The next most common pattern of change for boys (6%) and girls (9%) was "toward sexual minority"; this gender difference was also significant (p<.01).

Identity mobility was not significantly related to age (F(7,780)=0.14, p=0.99), race/ethnicity (F(4,984)=1.5, p=0.20), or geographic region (F(4,984)=0.70, p=0.59). Similarly, identity patterns of change were not significantly associated with age (F(4,783)=0.96, p=0.43), race/ethnicity (X^2=19, p=0.26), or geographic region (X^2=16, p=0.47).

Finally, we examined whether youth who ever selected more than one identity at any wave differed in their identity mobility and patterns of change. Youth who ever endorsed multiple sexual orientation identities at a single wave had more identity mobility (F(1,987)=841,

$p<0.01$) and were less likely to be classified as "immobile" in their patterns of change ($X^2=553$, $p<0.01$).

Sexual Behavior

The average sexual behavior mobility score was M=0.03 (SD=0.14); range: 0 to 1. The proportion of participants with same-gender sexual behavior increased over time. At the final timepoint, significantly more boys than girls reported a same-gender sexual partner (7.1% of boys; 4.4% of girls), although sexual behavior mobility did not differ significantly by participant gender (girls: M=0.04, boys: M=0.02, $t=-1.7$, $p=0.09$).

With respect to patterns of change in sexual behavior, the majority of boys (97%) and girls (94%) were categorized as "immobile," with no behavior change across waves. The next most common pattern of change was "toward same-gender behavior" for both boys (2.1%) and girls (2.3%). Sexual behavior patterns of change did not significantly differ by participant gender ($X^2=3.0$, $p=0.40$).

Sexual behavior mobility was not significantly associated with age ($F(7,486)=0.20$, $p=.99$), race/ethnicity ($F(4,628)=0.27$, $p=0.90$), or geographic region ($F(4,628)=0.44$, $p=0.78$). Similarly, sexual behavior patterns of change were not significantly associated with age ($F(7,486)=0.20$, $p=0.99$), race/ethnicity ($X^2=4.7$, $p=0.97$), or geographic region ($X^2=2.9$, $p=1.0$).

Finally, youth who endorsed more than one sexual orientation identity at any wave had more sexual behavior mobility ($F(1,630)=19$, $p<0.01$) and were less likely to be categorized as "immobile" in their sexual behavior patterns of change ($X^2=31$, $p<0.01$).

Discussion

This study is among the first to use longitudinal data to examine fluidity in sexual orientation identity and sexual behavior among cisgender youth in the US. Most youth in the sample identified as heterosexual and did not report change in their sexual orientation identity or gender of their sexual partners over the course of the study. That said, a notable proportion of youth identified as a sexual minority and reported change in their sexual orientation identity or the gender of their sexual partners across the 9-year period. As sexual minority individuals experience substantial health inequities both during adolescence and across their lifetime, [15–18, 27] it is critical for providers to understand sexual fluidity in youth and to use inclusive language, not just to affirm youths' current identities and behaviors, but also to allow for what might occur in the future.

The proportion of cisgender youth who identified as sexual minority increased over time. These results mirror previous research, indicating that adolescent girls are more likely than adolescent boys to report a sexual minority identity, and that youth are more likely to endorse a sexual minority identity as they age. [3, 7, 28] There was also a shift towards more same-gender sexual behavior across waves, likely due to multiple factors, including sexual exploration, identity formation, and sexual orientation development that typically occur during adolescence, [1, 2, 29] as well as youth gaining more independence and easier

access to potential sexual partners as they age. [30] Notably, the proportion of cisgender youth who reported a sexual minority identity was greater than the proportion who reported same-gender sexual behavior at all timepoints, suggesting that for some youth, sexual orientation identity may develop before youth have experienced any sexual behavior. [2, 10] It is also possible that some youth had same-gender sexual experiences earlier that were not captured in the current study, since only gender of the most recent sexual partner was assessed.

No differences were found in identity and behavior mobility or patterns of change by age, race/ethnicity, or geographic region, suggesting cisgender youth of all sociodemographic characteristics may experience sexual fluidity. Among youth who were mobile in their sexual orientation identity or behavior, participants tended to move from a heterosexual identity or different-gender sexual behavior towards a sexual minority identity or same-gender sexual behavior. Although sexual fluidity refers to any change in one or more dimensions of sexual orientation, these particular changes could reflect a sexual minority coming out process within the context of heteronormativity, in which youth first adopt a heterosexual orientation prior to ultimately adopting a sexual minority orientation. For youth who experienced change within sexual minority identities or toward a heterosexual identity, these changes could reflect a developmental process of identity exploration as youth “try on” different identities to see what might ultimately fit their experiences. [1, 31, 32] However, we were unable to examine these possibilities directly as we did not assess potential reasons for change; this would be a fruitful area for future research, particularly using qualitative methods to understand how youth interpret these changes in their own words.

Interestingly, identity mobility was more common among cisgender girls, whereas behavior mobility did not significant differ for cisgender boys and girls. This indicates that although more girls than boys appear to hold sexual minority identities over time, there are similar changes in same-gender sexual behavior across genders. Further, youth who selected more than one sexual orientation identity had more identity and behavior mobility, compared with those who selected only one identity option. This marker of sexual fluidity speaks to the increasing flexibility and sophistication of some youths’ understanding and articulation of their sexual orientation identities and behaviors, [33, 34] as well as potentially increased access to sexual orientation terminology and visibility compared with previous generations.

Findings should be interpreted within the study’s limitations. First, it is worth noting that this analysis did not assess attraction, which may be another key factor when understanding the fluidity of sexual orientation among youth. [7, 8] Some youth experience shifts in their attractions before they change their sexual orientation identity or have sexual partners of different genders. [8] As such, it will be important for future studies to assess all three components of sexual orientation (attraction, identity, and behavior) to fully capture sexual fluidity among youth. The current study also assessed partner gender only for the most recent sexual partner rather than taking a more comprehensive sexual history, which may have led to conflation between an adolescent developing a plurisexual orientation identity and sexual behavior fluidity. Further, although the sample is national, it may not be fully representative as participants were recruited within an online panel. To increase generalizability and minimize self-selection bias, caregivers living with children in the household were randomly invited to complete the screener, and eligibility was determined

before describing the study's purpose so as not to attract participants with particular experiences. Another limitation is that the sample sizes for gender minority participants and those reporting gender minority sexual partners were too small to calculate fluidity. Future research could oversample gender minorities to address this limitation. Finally, it is worth noting that the data from Wave 4 (the first wave in these analyses) were collected a decade ago. Evidence suggests that in recent years, more youth may be identifying as sexual minorities earlier; [35] thus the sexual fluidity exhibited in this sample may be an underestimate of the fluidity among youth today.

Taken together, findings from this study highlight that, to provide the best care to adolescent and young adult patients, clinicians should assess multiple dimensions of sexual orientation at several timepoints and not assume that sexual orientation identity and behavior are immobile. This will give clinicians more complete information about their patients and help clinicians normalize and support their patients through these changes by providing inclusive sexual health care. Further, accurate identification of sexual minority youth will enable providers to proactively address minority stress-related health concerns that youth may experience related to exposure to structural stigma (e.g., anti-LGBTQ+ policies) and interpersonal stigma (e.g., victimization at school or home) related to their experiences with fluidity. Sexual fluidity itself may have unique health impacts on youth of all sexual orientations, including those who identify as heterosexual; this is an important area for future inquiry. Recognizing that sexual orientation identity and behavior may change multiple times across adolescence and young adulthood will help providers to more accurately and effectively address their patients' health needs.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

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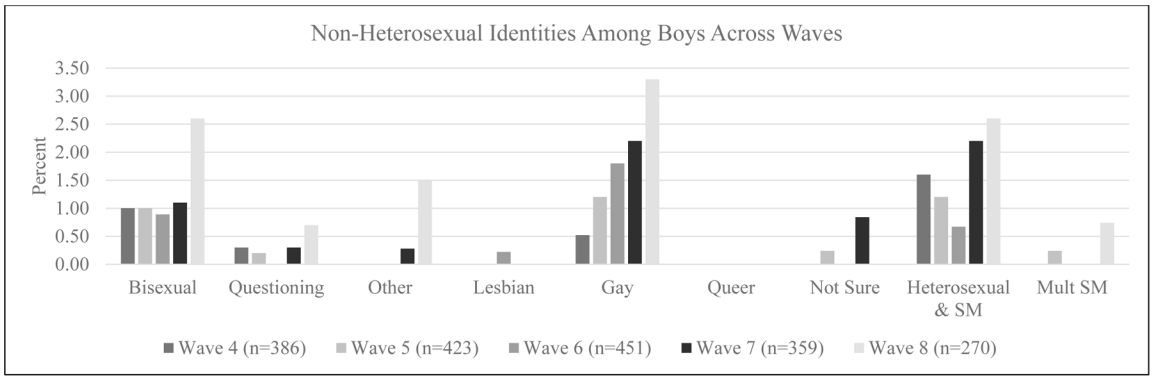
References

1. Arnett JJ. Emerging adulthood. A theory of development from the late teens through the twenties. Am Psychol May 2000;55:469–480. [PubMed: 10842426]
2. Katz-Wise SL, Rosario M, Calzo JP, Scherer EA, Sarda V, Austin SB. Endorsement and timing of sexual orientation developmental milestones among sexual minority young adults in the Growing Up Today Study. J Sex Res Feb 2017;54:172–185. [PubMed: 27148762]
3. Ott MQ, Corliss HL, Wypij D, Rosario M, Austin SB. Stability and change in self-reported sexual orientation identity in young people: application of mobility metrics. Arch Sex Behav Jun 2011;40:519–532. [PubMed: 21125325]

4. Savin-Williams RC, Joyner K, Rieger G. Prevalence and stability of self-reported sexual orientation identity during young adulthood. Arch Sex Behav Feb 2012;41:103–110. [PubMed: 22302504]
5. Mock SE, Eibach RP. Stability and change in sexual orientation identity over a 10-year period in adulthood. Arch Sex Behav Jun 2012;41:641–648. [PubMed: 21584828]
6. Katz-Wise SL, Todd KP. The current state of sexual fluidity research. Curr Opin Psychol Oct 25 2022;48:101497. [PubMed: 36401908]
7. Stewart JL, Spivey LA, Widman L, Choukas-Bradley S, Prinstein MJ. Developmental patterns of sexual identity, romantic attraction, and sexual behavior among adolescents over three years. J Adolesc Dec 2019;77:90–97. [PubMed: 31693971]
8. Katz-Wise SL. Sexual fluidity in young adult women and men: associations with sexual orientation and sexual identity development. Psychology & Sexuality 2014;6:189–208.
9. Diamond LM. Sexual fluidity in male and females. Current Sexual Health Reports 2016;8:249–256.
10. Ybarra ML, Price-Feeney M, Mitchell KJ. A cross-sectional study examining the (in)congruency of sexual identity, sexual behavior, and romantic attraction among adolescents in the US. J Pediatr Nov 2019;214:201–208. [PubMed: 31402142]
11. Katz-Wise SL, Hyde JS. Facilitative environments related to sexual orientation development and sexual fluidity in sexual minority young adults across different gender identities. Journal of Bisexuality 2017:1–31.
12. National Academies of Sciences, Engineering, and Medicine,. Understanding the well-being of LGBTQI+ populations Washington, DC 2020.
13. Meyer IH. Prejudice, social stress, and mental health in lesbian, gay, and bisexual populations: conceptual issues and research evidence. Psychol Bull Sep 2003;129:674–697. [PubMed: 12956539]
14. Diamond LM, Alley J. Rethinking minority stress: A social safety perspective on the health effects of stigma in sexually-diverse and gender-diverse populations. Neurosci Biobehav Rev Jul 2022;138:104720. [PubMed: 35662651]
15. Everett B Sexual orientation identity change and depressive symptoms: a longitudinal analysis. J Health Soc Behav Mar 2015;56:37–58. [PubMed: 25690912]
16. Katz-Wise SL, Williams DN, Keo-Meier CL, Budge SL, Pardo S, Sharp C. Longitudinal associations of sexual fluidity and health in transgender men and cisgender women and men. Psychol Sex Orientat Gend Divers 2017;4:460–471. [PubMed: 29276717]
17. Katz-Wise SL, Rosario M, Calzo JP, Scherer EA, Sarda V, Austin SB. Associations of timing of sexual orientation developmental milestones and other sexual minority stressors with internalizing mental health symptoms among sexual minority young adults. Arch Sex Behav Jul 2017;46:1441–1452. [PubMed: 28271349]
18. Ott MQ, Wypij D, Corliss HL, Rosario M, Reisner SL, Gordon AR, et al. Repeated changes in reported sexual orientation identity linked to substance use behaviors in youth. J Adolesc Health Apr 2013;52:465–472. [PubMed: 23298999]
19. Diamond LM. Sexual fluidity: Understanding women's love and desire Cambridge, MA: Harvard University Press; 2008.
20. Burdette AM, Needham BL, Taylor M, Hill TD. Health lifestyles in adolescence and self-rated health into adulthood. J Health Soc Behav 2017;58:520–536. [PubMed: 29172769]
21. Daw J, Margolis R, Wright L. Emerging adulthood, emergent health lifestyles: Sociodemographic determinants of trajectories of smoking, binge drinking, obesity, and sedentary behavior. J Health Soc Behav Jun 2017;58:181–197. [PubMed: 28661779]
22. Hagan JF, Shaw JS, Duncan PM, eds. Bright futures: Guidelines for health supervision of infants, children, and adolescents 4th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2017.
23. Alexander SC, Fortenberry JD, Pollak KI, Bravender T, Ostbye T, Shields CG. Physicians use of inclusive sexual orientation language during teenage annual visits. LGBT Health Dec 2014;1:283–291. [PubMed: 26789857]
24. Fuzzell L, Shields CG, Alexander SC, Fortenberry JD. Physicians talking about sex, sexuality, and protection with adolescents. J Adolesc Health Jul 2017;61:6–23. [PubMed: 28391967]
25. Kitts RL. Barriers to optimal care between physicians and lesbian, gay, bisexual, transgender, and questioning adolescent patients. J Homosex 2010;57:730–747. [PubMed: 20582799]

26. Kaplowitz MD, Hadlock TD, Levine R. A comparison of web and mail survey response rates. Public Opinion Quarterly 2004;68:94–101.
27. Katz-Wise SL, Jun HJ, Corliss HL, Jackson B, Haines J, Austin SB. Child abuse as a predictor of gendered sexual orientation disparities in body mass index trajectories among U.S. youth from the Growing Up Today Study. J Adolesc Health Jun 2014;54:730–738. [PubMed: 24388110]
28. Phillips G, Beach LB, Turner B, Fenstein BA, Marro M, Philbin MM, et al. Sexual identity and behavior among U.S. high school students, 2005–2015. Arch Sex Behav 2019;48:1463–1479. [PubMed: 31123950]
29. Kar SK, Choudhury A, Singh AP. Understanding normal development of adolescent sexuality: A bumpy ride. J Hum Reprod Sci Apr-Jun 2015;8:70–74. [PubMed: 26157296]
30. Viner RM, Ozer EM, Denny S, Marmot M, Resnick M, Fatusi A, et al. Adolescence and the social determinants of health. Lancet Apr 28 2012;379:1641–1652. [PubMed: 22538179]
31. Erikson EH. Identity: Youth and crisis New York, NY: W. W. Norton; 1968.
32. Marcia JE. Identity in adolescence. In: Adelson JL, ed. Handbook of adolescent psychology New York, NY: Wiley; 1987:159–187.
33. Hammack PL, Hughes SD, Atwood JM, Cohen EM, Clark RC. Gender and sexual identity in adolescence: A mixed-methods study of labeling in diverse community settings. Journal of Adolescent Research 2021.
34. Watson RJ, Wheldon CW, Puhl RM. Evidence of diverse identities in a large national sample of sexual and gender minority adolescents. J Res Adolesc Feb 2020;30 Suppl 2:431–442. [PubMed: 30758906]
35. Bishop MD, Fish JN, Hammack PL, Russell ST. Sexual identity development milestones in three generations of sexual minority people: A national probability sample. Dev Psychol Nov 2020;56:2177–2193. [PubMed: 32833471]



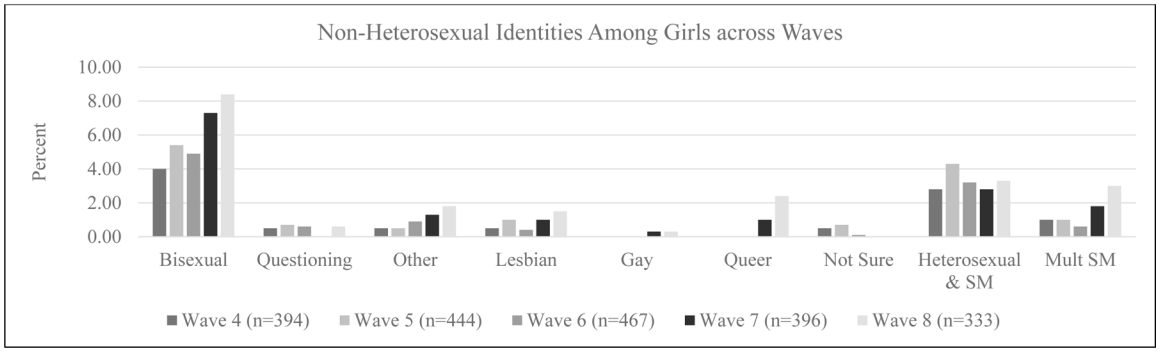


Figure 1.

Non-Heterosexual Identities Among Youth in the Growing up with Media Study Across Waves. Age ranges by wave: Wave 4 = 13–20 years old: Wave 5 = 14–21 years old; Wave 6 = 15–22 years old; Wave 7 = 19–25 years old; Wave 8 = 20–26 years old.

Table 1.

Sociodemographic Characteristics at Wave 4 of Youth from the Growing up with Media Study (N=989)

Variable	**Mean (SD)**
Age in years, range: 13–20 years	16 (1.8)
	n (%)
Gender	
Boys	487 (49%)
Girls	502 (51%)
Race/ethnicity	
White	584 (59%)
Black/African-American	110 (11%)
Mixed race/ethnicity	51 (5.2%)
Another race/ethnicity	20 (2.0%)
Asian/Pacific Islander	14 (1.4%)
Native American/Hawaiian Native	2 (.20%)
Ethnicity	
Latina/o or Hispanic	121 (12.0)
Geographic region	
South	302 (31%)
Midwest	252 (26%)
Northeast	236 (24%)
West	198 (20%)

Table 2.

Sexual Orientation Identity and Gender of Most Recent Sexual Partner Across Time Among Youth by Gender in the Growing up with Media Study, n (%)

	Boys					**Girls**				
	Wave 4	**Wave 5**	**Wave 6**	**Wave 7**	**Wave 8**	**Wave 4**	**Wave 5**	**Wave 6**	**Wave 7**	**Wave 8**
Sexual Orientation Identity	n=386	n=423	n=451	n=359	n=270	n=394	n=444	n=467	n=396	n=333
Heterosexual	373 (97)	406 (96)	435 (96)	334 (93)	239 (89)	355 (90)	385 (87)	412 (88)	334 (84)	266 (80)
Bisexual	4 (1.0)	4 (.95)	4 (0.89)	4 (1.1)	7 (2.6)	16 (4.1)	24 (5.4)	23 (4.9)	29 (7.3)	28 (8.4)
Questioning	1 (0.26)	1 (0.24)	0 (0)	1 (0.28)	2 (0.74)	2 (0.51)	3 (0.68)	3 (0.64)	0 (0)	2 (0.60)
Other	0 (0)	0 (0)	0 (0)	1 (0.28)	4 (1.5)	2 (0.51)	2 (0.45)	4 (0.86)	5 (1.3)	6 (1.8)
Lesbian	0 (0)	0 (0)	1 (0.22)	0 (0)	0 (0)	2 (0.51)	4 (.90)	2 (0.43)	4 (1.0)	5 (1.5)
Gay	2 (0.52)	5 (1.2)	8 (1.8)	8 (2.2)	9 (3.3)	0 (0)	0 (0)	0 (0)	1 (0.25)	1 (0.30)
Queer	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (1.0)	4 (1.2)
Not sure	0 (0)	1 (0.24)	0 (0)	3 (0.84)	0 (0)	2 (0.51)	3 (0.68)	5 (1.1)	1 (0.25)	0 (0)
Heterosexual and sexual minority identity	6 (1.6)	5 (1.2)	3 (0.67)	8 (2.2)	7 (2.6)	11 (2.8)	19 (4.3)	15 (3.2)	11 (2.8)	11 (3.3)
Multiple sexual minority identities	0 (0)	1 (0.24)	0 (0)	0 (0)	2 (0.74)	4 (1.0)	4 (.90)	3 (0.64)	7 (1.8)	10 (3.0)
Partner Gender	n=112	n=162	n=200	n=224	n=183	n=124	n=186	n=244	n=284	n=252
Male	2 (1.8)	6 (3.7)	9 (4.5)	11 (4.9)	13 (7.1)	122 (98)	177 (95.0)	235 (96)	272 (96)	241 (96)
Female	109 (97)	156 (96)	191 (95)	212 (95)	170 (93)	2 (1.6)	9 (4.8)	9 (3.7)	11 (3.9)	11 (4.4)
Transgender/genderqueer	1 (0.89)	0 (0)	0 (0)	1 (0.45)	0 (0)	0 (0)	0 (0)	0 (0)	1 (0.35)	0 (0)

Table 3.

Sexual Orientation Identity and Behavior Mobility and Patterns of Change by Gender Among Youth in the Growing up with Media Study, n (%)

	Sexual Orientation Identity		Sexual Behavior	
Mobility	**Boys (n=487)**	**Girls (n=502)**	**Boys (n=289)**	**Girls (n=344)**
Immobile (M=0)	441 (91.0)	400 (80.0)	280 (97.0)	325 (94.0)
Some change (M=1/4–3/4)	39 (8.0)	81 (16.0)	6 (2.0)	11 (3.2)
Change at every wave (M=1)	7 (1.4)	21 (4.2)	3 (1.0)	8 (2.3)
Patterns of Change: Sexual Orientation Identity				
Immobile	441 (91.0)	398 (79.0)		
Mobile within sexual minority identity	1 (0.2)	15 (3.0)		
From heterosexual identity toward sexual minority identity	28 (6.0)	47 (9.4)		
From sexual minority identity toward heterosexual identity	3 (0.6)	11 (2.2)		
Multidirectional	14 (2.9)	31 (6.2)		
Patterns of Change: Sexual Behavior				
Immobile			280 (97.0)	326 (94.0)
Toward same-gender behavior			6 (2.1)	8 (2.3)
Toward other-gender behavior			2 (0.7)	5 (1.5)
Multidirectional			1 (0.4)	5 (1.5)

Note: Sexual orientation identity and behavior mobility (M) reflects the number of changes across waves divided by the number of changes possible (e.g., a youth who changed identity or behavior at every wave would have a mobility score of (4/4) = 1). Sexual orientation identity and behavior patterns of change were calculated based on the pattern of changes, if any, in comparison to youths' report at their first wave.