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# First-year LGBTQ+ students in higher education: who are they and where do they enroll?

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*Boston University*

## How Many College Freshmen are LGBTQ?

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**Abstract:** How many college freshmen are lesbian, gay, bisexual, transgender or queer (LGBTQ)? Knowing the size of the LGBTQ community is both important for designing public policies and for understanding the number of people impacted by culture wars between groups trying to outlaw homosexuality and those demanding sexual freedom. Using a random sample from 2015 this research finds between 11% and 14% of entering freshman identify as LGBTQ. LGBTQ identification is higher for international students than for U.S. students and higher in private not religiously affiliated colleges than for religiously affiliated colleges and publicly funded schools. Interestingly, LGBTQ identification is related in a U shaped pattern to political beliefs, with both liberals and conservatives having higher LGBTQ identification than moderates and inversely related to self-reported high school GPA.

**Keywords:** Sexual Identity, Orientation, Gender, LGBT

## **Introduction**

How many college freshmen are lesbian, gay, bisexual, transgender or queer (LGBTQ)? The demographics of the U.S. are determined by large long running national data collections like the decennial Census, the American Community Survey and the Current Population Survey. However, none of these national data gathering programs ask questions about sexual orientation or sexual identification.<sup>1</sup> Without national data researchers, policy makers and the public use smaller surveys and estimates to piece together estimates of the LGBTQ community's size and growth. This research, using a 2015 survey of college freshman, finds between 11% and 14% identify as LGBTQ.

Understanding the demographics of the LGBTQ community is an important first step in thinking about public policies, health issues, social attitudes and behaviors. Many issues of importance to the LGBTQ community elicit large amounts of discussion and media interest. Without knowing the size of the community under discussion the world does not know if the topics are simply fodder for ongoing culture wars or actually impact many people. For example, during 2017 there was an acrimonious national debate over which bathrooms transgender people can use. It is useful to understand if the fight over bathroom usage is about an issue that impacts 10 people, 10,000 or 10 million.

This research analyzes a random selection of college freshman. The analysis is limited to this particular group because of data availability. While the sample is restricted, the results are important. Calculating the size of the freshmen LGBTQ community is a practical issue for colleges and universities. Without knowing the size of the LGBTQ community it is difficult for colleges to provide the appropriate number of extracurricular clubs, activities and staff support

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<sup>1</sup> These surveys also do not ask about religious affiliation or practice.

services. Knowing the number and size of the community is useful for estimating the extent of diversity training needed for academic and support staff to ensure discrimination does not occur.

Beyond staffing, knowing the size of the LGBTQ community is useful for college admission officers. Selective universities have acceptance policies that are designed to produce well-rounded and quite diverse entering classes. Admission officers look to populate incoming classes with students from a variety of backgrounds, ethnicities, incomes and experiences. Knowing the size of the LGBTQ community ensures diversity measures extend not only along social and economic lines, but also includes sexual orientation and gender.

Beyond the practical issues, the figure is important for understanding future trends in gender and sexuality in society. College is often a period of experimentation and learning who you are. Experimentation happens because for many students this is the first time they are away from parents and guardians' oversight for an extended period of time. Being provided with privacy enables young people to try out new things.

General policy makers also need to know the size and changes in the size of the LGBTQ community because this group has unique health, social, and economic concerns. For example, LGBTQ couples often have smaller families than straight couples and face discrimination in housing and employment. Understanding demographic changes is important for assessing public policies and knowing which policy areas might become important in the future.

## **Literature Review**

One early estimate of sexual orientation came from Alfred Kinsey et. al. (1948), who reported 10 percent of men were "more or less exclusively homosexual." However, numerous authors have widely discredited the figure because of underlying problems with the sample such as which type of people want to volunteer information for a sex study (Maslow & Sakoda, 1952).

Gates (2011) estimated that 3.5% of the U.S. populations was LGBTQ. However, he estimates that 8.2% of Americans have engaged in sex with a person of the same gender and 11% of Americans acknowledge some same-sex attraction.

Breaking the data down by education and age provides different results. Data from the National Survey of Family Growth in 2011 found that 12% of women at least once had sex with a same gender partner and 6% of men ever did among people aged 25 to 44 years. The survey report states “Looking at same-sex sexual experience, men showed no significant differences by educational attainment, but women with bachelor’s degrees or higher were less likely to report same-sex sexual behavior than women in the other education categories.”

Later data from the National Health Survey in 2013 found that about 3% or about 3.2 million adults ages 18 to 44 considered themselves not “straight” but gay, lesbian or bisexual (Gates, 2017).

More recent Gallup (2017) poll data show that among people born between 1980 and 1998 about 7.3% described themselves as lesbian, gay, bisexual or transgender (LGBT). Interestingly, Gallup data showed educational attainment had little impact on the percent stating they were LGBT on all age groups in 2016.

Dividing the LGBTQ community into parts allowed researchers from UCLA using 2014 national data to estimate that 0.6% of the U.S. population was transgender, (Flores et al., 2016). Hawaii (0.78%) had the most transgender individuals and North Dakota (0.3%) the least.

## **Data**

Data for this research come from the Interfaith Diversity Experiences and Attitudes Longitudinal Survey (IDEALS). The survey is a national, longitudinal study of undergraduates first fielded in the fall of 2015 to entering students at 122 different college and universities

spread across the U.S. More than twenty-thousand (20,436) students participated in the first round.

Data on sexual identity was collected from 121 colleges. No data on sexual identity for 100 students at Wheaton College in Illinois are available. Analysis found later in this research show including or not including Wheaton does not impact the findings.<sup>2</sup>

Raw IDEALS data over-represent white women and under-represent non-white men. White women comprise about 28% of U.S. freshmen, but comprised almost 45% of the raw survey responses. Non-white males comprise almost 22% of the freshmen population but only made up 11% of the raw data. Because of these issues almost all tables presented in this research use the survey's weight to reduce the bias caused by the over-sampling of white women. Weighted results were designed so that they match national totals of first year students.<sup>3</sup>

## **Overall Results**

Table 1 shows the sexual orientation of entering college students by gender and reveals non-heterosexuals comprise a substantial number and percentage of entering students. The table uses the survey weights to ensure the oversampling of females does not impact the results and to allow the values to be read as national figures.

The table's left hand side shows the number of people in each category. Out of the 3.2 million students who entered college in 2015 approximately 1.5 million were heterosexual

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<sup>2</sup> Wheaton is an evangelical Christian school located outside of Chicago, Illinois. Wheaton likely has a very high percentage of heterosexuals. The Chicago Tribune (Vivanco, 2016) titled an article, "Lists rank Wheaton College among worst schools for LGBTQ students." Nevertheless, Wheaton does have some LGBTQ students. Shortly after the Tribune's story the magazine "Christianity Today" (Streckert, 2016) published an article on "Coming Out at Wheaton College."

<sup>3</sup> Weights match national totals found in the Integrated Postsecondary Education Data System (IPEDS) fall 2015 census of fall postsecondary enrollment. IDEALS weights match IPEDS data along six dimensions; gender, race, if the school is private or public, the school's Carnegie classification geographic area, and if school is in an urban area.

females and 1.3 million were heterosexual males. Roughly 450,000 of students are non-heterosexual males or females. Among the non-heterosexuals slightly more than 220,000 are bisexual, about 150,000 are gay or lesbian and about 75,000 stated something else. Roughly one percent or about 30,000 students classified themselves as neither male nor female.

The breakdown by percentages is found on the right hand side of Table 1. Each percentage represents the share of that particular column. For example, the “percent females” column shows the sexual orientation of just women students. Looking at the last column, overall about 86% of entering students are heterosexual males or females. About 7% of students are bisexual, 5% are gay or lesbian and about 2% are another sexual or gender orientation.

Table 1: Sexual orientation of entering college students by gender in 2015

	<b>Number Females</b>	<b>Number Males</b>	<b>Number Neither</b>	<b>Total Number</b>		<b>Percent Females</b>	<b>Percent Males</b>	<b>Percent Neither</b>	<b>Total Percent</b>
<b>Heterosexual</b>	1,478,969	1,291,124	5,306	<b>2,775,399</b>		86.3%	87.5%	17.6%	<b>86.2%</b>
<b>Bi-sexual</b>	123,252	95,625	4,051	<b>222,928</b>		7.2%	6.5%	13.4%	<b>6.9%</b>
<b>Gay / Lesbian</b>	67,088	71,262	8,991	<b>147,341</b>		3.9%	4.8%	29.8%	<b>4.6%</b>
<b>Other</b>	45,083	17,713	11,797	<b>74,593</b>		2.6%	1.2%	39.1%	<b>2.3%</b>
<b>Total</b>	<b>1,714,392</b>	<b>1,475,724</b>	<b>30,145</b>	<b>3,220,261</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Notes: All figures are adjusted by the round 1 survey weights. The female and male percentage columns are not statistically distinguishable at the 95% confidence level from each other, but both are statistically distinct from the neither column.

Because the survey was not given to every entering student, all values in table 1 are the best approximation. Since each value is only an approximation there is a range where each value is likely found. For example, while the survey found about 86% of entering students are heterosexual, the value could range as low as 82% or as high as 89.5%. This means the LGBT percentage could range from 10.5% to 18%,

Another example is that the best estimate of bisexual students is about 220,000 people, but this figure might be as low as 97,000 people or as high as 350,000. The 95% confidence ranges for each value are shown in table 2.

Table 2: 95% Confidence range for sexual orientation of entering college students by gender

	<b>Female</b>	<b>Male</b>	<b>Neither</b>	<b>Total</b>
<b>Heterosexual People Range</b>	930,000 - 2,000,000	850,000 - 1,700,000	0 - 11,000	1,800,000 - 3,700,000
<b>Bisexual People Range</b>	71,000 - 1,800,000	2,600 - 190,000	1,500 - 6,600	97,000 - 350,000
<b>Gay / Lesbian People Range</b>	29,000 - 110,000	25,000 - 120,000	4,000 - 14,000	66,000 - 230,000
<b>Other People Range</b>	27,000 - 63,000	7,900 - 27,000	6,500 - 17,000	48,000 - 100,000
<b>Total</b>	1,100,000-2,500,000	980,000 - 2,100,000	19,000 - 42,000	
<b>Heterosexual % Range</b>	83.2% - 88.8%	80.1% - 92.4%	6.7% - 38.8%	82.0% - 89.5%
<b>Bisexual % Range</b>	6.0% - 8.6%	3.1% - 13.2%	8.3% - 21.0%	4.8% - 9.9%
<b>Gay / Lesbian % Range</b>	2.6% - 5.8%	3.3% - 7.0%	20.1% - 41.8%	3.3% - 6.4%
<b>Other % Range</b>	2.0% - 3.3%	0.7% - 2.0%	27.2% - 52.6%	1.8% - 3.0%

Notes: All ranges are the 95% confidence intervals calculated by Stata using the linearized method for approximating standard errors.

### *Unweighted Results*

Table 3 checks if the results are biased because of the survey weights. It repeats the analysis using unweighted raw response values. The key figures are in the top left corner of the table. These figures show 11,160 females and 6,119 males stated they were heterosexual in the survey. Adding together these two numbers and dividing by the overall number of survey respondents (19,450) who provided both gender and sexual identity answers results in 88.8% of IDEALS respondents stating they were male or female heterosexuals.



The unweighted data show 11.2% of respondents stated they were LGBTQ or did not consider themselves male or female. This figure indicates that weighting is not driving the findings, since without weights more than ten percent of respondents were non-heterosexual males or females.

Another possibility is that the results are influenced by the 192 respondents which are in the neither male nor female columns. Examining the raw data shows there are 7 cases where the respondent appears to be fooling around, by providing answers like Martian and grilled cheese.

However, the vast majority of other answers suggest most of these 192 respondents do not identify using the male or female gender label and are correctly classified as neither. Forty-seven respondents had “fluid” or “flux” in their descriptions, while 34 stated “agender” or “neutrois” which is neither male nor female. There were 29 respondents who stated phrases like “not binary” or “non-binary,” 20 stated phrases that included the word “queer,” 14 included “trans,” 6 included “bi,” and 5 stated “demi-girl” or “demi-boy.” In addition there were other classifications which did not appear multiple times like “shemale” and “androgynous.”

Table 3: Unweighted Number of Survey Respondents by Sexual Orientation and Gender

	<b>Number Females</b>	<b>Number Males</b>	<b>Number Neither</b>	<b>Total Number</b>	<b>Percent Females</b>	<b>Percent Males</b>	<b>Percent Neither</b>	<b>Total Percent</b>
<b>Heterosexual</b>	11,160	6,119	23	<b>17,302</b>	88.5%	92.0%	12.0%	<b>89.0%</b>
<b>Bi-sexual</b>	776	207	32	<b>1,015</b>	6.2%	3.1%	16.7%	<b>5.2%</b>
<b>Gay / Lesbian</b>	332	254	58	<b>644</b>	2.6%	3.8%	30.2%	<b>3.3%</b>
<b>Other</b>	342	68	79	<b>489</b>	2.7%	1.0%	41.2%	<b>2.5%</b>
<b>Total</b>	<b>12,610</b>	<b>6,648</b>	<b>192</b>	<b>19,450</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

*Results by Type of College*

How does heterosexual or non-heterosexual status vary based on the type of college?

Table 4 breaks the figures down by sponsorship, geography and urban location. The top part of the table shows that private not religiously affiliated colleges have the highest percentage of non-heterosexuals (18.2%), public colleges (13.0%) are in the middle and private religiously affiliated colleges have the lowest (8.2%).

The middle portion of the table shows the Northeast (16.6%) and Southern (17.4%) parts of the country have higher percentages of non-heterosexuals than the Midwest (9.8%) and West (10%). The bottom portion of the table shows that colleges located in urban areas (14.6%) have roughly the same percentage of non-heterosexuals as those located in suburban and rural areas (13.5%).

Table 4: Heterosexual and LGBTQ status based on college characteristics.

<b>Category</b>	<b>Heterosexual</b>	<b>LGBTQ</b>
<b>Overall</b>	85.9%	14.1%
<b>Sponsorship</b>		
<b>Public College</b>	86.1%	13.9%
<b>Private: Not Religious</b>	81.8%	18.2%
<b>Private: Religious</b>	91.7%	8.3%
<b>Geographic Region</b>		
<b>Northeast</b>	83.4%	16.6%
<b>Midwest</b>	90.2%	9.8%
<b>South</b>	82.6%	17.4%
<b>West</b>	90.0%	10.0%
<b>Urban Area</b>		
<b>Not In Urban Area</b>	86.6%	13.5%
<b>In Urban Area</b>	85.4%	14.6%

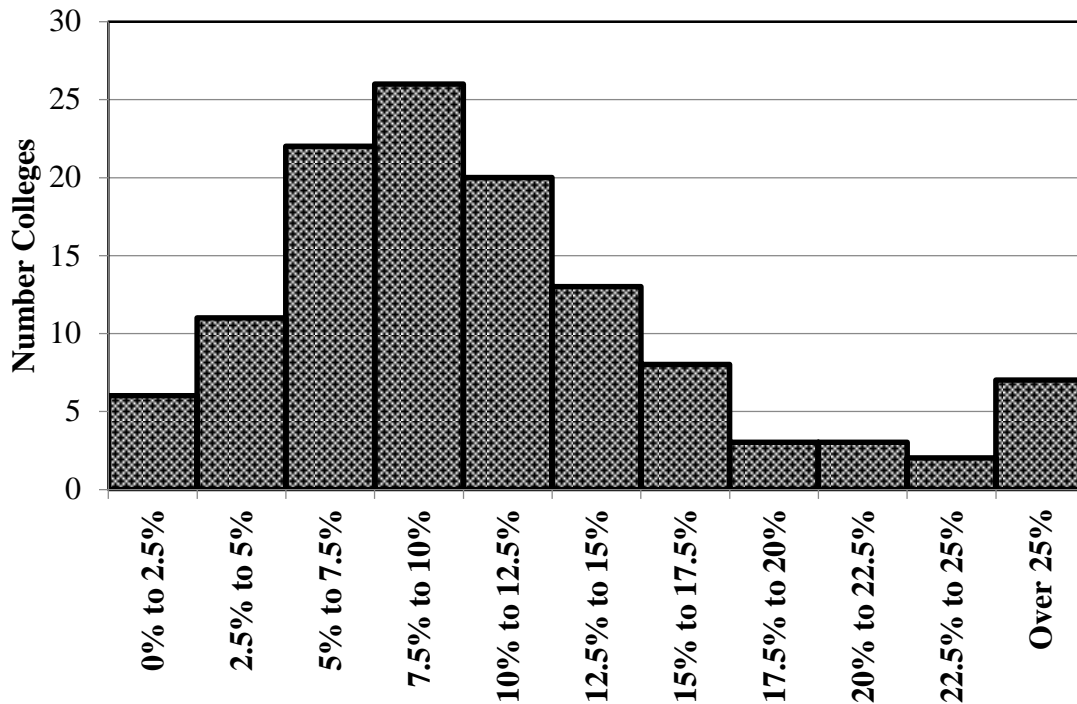
Notes: Sponsorship based on the IPEDS 2015 classification found at <https://nces.ed.gov/ipeds/>. Northeast are the states CT, DE, DC, MA, ME, MD, NH, NJ, NY, PA, RI, and VT. Midwest is IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD and WI. South is AL, AR, AZ, FL, GA, KY,

LA, MS, NM, NC, OK, SC, TN, TX, VA and WV. West is AK, CA, CO, HI, ID, MT, NV, OR, UT, WA and WY.

The next graph shows data at the college level instead of the individual. This consolidates the data and shows the percentage breakdown by college to provide an institutional view. Figure 1's horizontal axis contains ranges for the percentage of students self-identifying as LGBTQ. The vertical axis contains the number of colleges in each percentage category.

The graph's peak occurs in the 7.5 to 10% category. Analyzing the underlying data shows the typical college had a freshman class in 2015 where approximately ten percent of its students (mean 11.2%; median 9.5%) identified as non-heterosexual males or females.

Figure 1: Rankings of 121 Colleges Based on Percent LGBTQ



Six colleges had relatively few (< 2.5%) students identifying as non-heterosexual. Five of the six colleges in this category were institutions with a strong religious focus.<sup>4</sup> At the top end of the list seven colleges had over 25% of students reporting they were non-heterosexual. A number of these seven colleges were ranked by Internet lists as LGBTQ friendly institutions.<sup>5</sup>

To check the robustness of results a number of tests were done. First, all students from Wheaton College, Illinois which have missing data were classified as heterosexual to see if nonresponse at the college level skewed the findings. Changing the 100 students from an unknown sexual status to heterosexual had almost no impact since the typical college before the change had 11.2% of their freshman class identifying as LGBTQ and after the change had 11.1%.

Second, the top 5 and top 10 colleges based on their weighted percentage of heterosexual and non-heterosexual students were eliminated to see the impact of removing outliers. Table 5 shows the impact of doing these tests. Overall, the tables suggest eliminating the top five or ten most heterosexual or LGBTQ colleges has a small but discernible quantitative impact. The bottom row shows eliminating the ten colleges with the most LGBTQ students and the ten colleges with the biggest percentage of heterosexual students changes sexual orientation of college freshman by roughly 3 percentage points. Dropping these outliers changes the freshman class from about 86% heterosexual to about 89% heterosexual.

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<sup>4</sup> The six colleges with less than 2.5% non-heterosexual students were God's Bible School and College; Morgan State University; Central Christian College of Kansas; Union University; Presbyterian College and Notre Dame de Namur University

<sup>5</sup> The seven colleges with over 25% non-heterosexual students were Green Mountain College; University of North Florida; University of North Carolina School of the Arts; Mount Holyoke College; Mary Baldwin College; Warren Wilson College and Gallaudet University.

Table 5: Percentage of Heterosexual and LGBTQ Students under Different Situations

	<b>Mean Heterosexual</b>	<b>Mean LGBTQ</b>
<b>Original Values</b>	85.91%	14.09%
<b>Set missing Wheaton College values to heterosexual</b>	85.94%	14.06%
<b>Eliminate top 5 most LGBTQ Colleges</b>	88.59%	11.41%
<b>Eliminate top 5 most Heterosexual Colleges</b>	85.78%	14.22%
<b>Eliminate top 5 most LGBTQ &amp; Heterosexual Colleges</b>	88.48%	11.52%
<b>Eliminate top 10 most LGBTQ Colleges</b>	89.19%	10.81%
<b>Eliminate top 10 most Heterosexual Colleges</b>	85.69%	14.31%
<b>Eliminate top 10 most LGBTQ &amp; Heterosexual Colleges</b>	89.01%	10.99%

Notes: Wheaton College values were left as missing in all tests that start with the word “Eliminate.”

*Results by Individual Characteristics*

How does heterosexual and non-heterosexual status vary based on individual characteristics? Table 6 breaks the figures down by race, political leanings, international student status and high school GPA. The top part of the table shows that sexual orientation does not vary by race. White students (14.3%) have roughly the same percentage of non-heterosexuals as black (14%) and other races (13.8%). The differences are not statistically significant at the 95% level.

Table 6: Heterosexual and LGBTQ status based on individual characteristics.

<b>Category</b>	<b>LGBTQ</b>	<b>Heterosexual</b>
<b>Overall</b>	14.1%	85.9%
<b>Race</b>		
<i>White</i>	14.3%	85.7%
<i>Black</i>	14.0%	86.0%
<i>Non-White, Non-Black</i>	13.8%	86.2%
<b>Political Leaning</b>		
<i>Very Conservative</i>	12.8%	87.2%
<i>Conservative</i>	13.7%	86.3%
<i>Moderate</i>	7.3%	92.7%
<i>Liberal</i>	16.8%	83.2%
<i>Very Liberal</i>	33.0%	67.0%
<b>International Student</b>		
<i>U.S. Student</i>	12.8%	87.2%
<i>International Student</i>	23.6%	76.4%
<b>High School GPA</b>		
<i>Under 2.0</i>	27.0%	73.0%
<i>2.00 to 2.49</i>	22.2%	77.9%
<i>2.50 to 2.99</i>	20.2%	79.8%
<i>3.00 to 3.49</i>	13.9%	86.1%
<i>3.50 to 3.99</i>	14.2%	85.8%
<i>4.00 or A</i>	11.9%	88.1%

The chance of being LGBTQ varies with political leanings. People who report being very liberal (33%) had the highest percentage of being LGBTQ, while political moderates (7.3%) had the least. Interesting, the table shows a U shaped pattern with LGBTQ identification rising for conservatives (13.7%) and very conservative (12.8%) compared to being a political moderate.

International students comprise a sizable number of people in U.S. colleges. In the 2015-16 school year there were roughly 1 million international students among the 20 million total students enrolled in U.S. colleges and universities (National Center for Education Statistics, 2017).<sup>6</sup> The table's middle shows international students report a much higher rate of being LGBTQ (23.6%) than U.S. students (12.8%). This suggests figures reported in this research cannot be used directly to estimate future levels of LGBTQ identification in U.S. society since many international students return to their home countries.

The bottom of the table shows LGBTQ status and high school grade point average. There is a clear inverse relationship between high school grades and self-identifying as LGBTQ. Among students stating they had a 4.0 average in high school only 11.9% classified themselves as LGBTQ. However, among students who stated their high school GPA was under 2.0 the percentage of LGBTQ students was 27%. There is no way to know if this is a cause or an effect.

## **Discussion**

How many individuals are lesbian, gay, bisexual, transgender or queer (LGBTQ)? Numerous estimates in the past have produced numbers which are generally below 10 percent. This research examined a new data source that randomly selected college freshman to understand their interfaith experiences. Questions on gender identity from the interfaith survey suggest much higher values. In 2015 between 11% and 14% of U.S. college freshman were LGBTQ, in simple terms around one out of every eight college freshman is not heterosexual.

These results could be upwardly biased. There might be underlying problems with the sample that techniques used in this research such as weighting the data and eliminating outliers might not fix. There is also the possibility that individuals who are LGBTQ might be more

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<sup>6</sup> The number of international students is as of the 2015-16 school year and comes from table 310.20. The total number of students is taken from table 303.10.

likely to answer interfaith surveys than heterosexual respondents, biasing the results. The best way to check if the results are biased is to collect more data on college freshman to see if the results are replicated.

If the results are not upwardly biased, then the findings suggest the LGBTQ population in the U.S. is growing and becoming a larger proportion of society. If this is the case then there will be more debate over public policies, such as which individuals are allowed to use which kinds of bathrooms. U.S. society will need to brace for more culture clashes between religious groups attempting to ban homosexuality and LGBTQ individuals demanding recognition, fair treatment and a lack of discrimination.



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