

Comparison of Estimates of Same-Sex Couple Households from the American Community Survey and Current Population Survey

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Abstract:

Over the last several years, there has been a growing desire for estimates of same-sex couples. The U.S. Census Bureau has been attempting to fill this desire using data from the American Community Survey. The ACS is only one of many surveys conducted by the Census Bureau. In this paper we explore the possibility of additional surveys being used to reliably estimate same-sex couples who reside in the same residence, specifically the Current Population Survey. To do this, we will examine the overall estimates and socio-demographic characteristics of same-sex couple households between the 2008 ACS and 2010 CPS. We find that householders in same-sex relationships in the CPS are slightly younger, more likely to be white, less likely to be employed, less likely to have both partners employed and report a lower income than their ACS counterparts. Education levels and Hispanic origin are similar in the ACS and CPS, as are estimates of the total number of same-sex households.

This report is released to inform interested parties of ongoing research and to encourage discussion of work in progress. The views expressed on statistical or methodological issues are those of the authors and not necessarily those of the U.S. Census Bureau.

Introduction

Over the last several years, there has been a growing desire for estimates of same-sex couples. The U.S. Census Bureau has been attempting to fill this desire using nationally representative data. Thus far, much of the research has focused on the data from the American Community Survey (ACS) because the large sample size of this survey allows for a reasonable representation of small populations, including same-sex couples. This paper uses the ACS as a standard for measuring the ability of other surveys to estimate same-sex couple households and their characteristics. In this paper we will use the Current Population Survey as a test comparison.

The ACS is a nationally representative survey that has a large sample size, which makes it an ideal data source for gathering information on same-sex couples since this is a relatively small population that makes up less than 1 percent of all households (O'Connell & Lofquist, 2009). Some researchers believe that prior to 2008 the estimates of same-sex couples were overestimated in the ACS; however since 2008 they believe that the ACS estimates of the number of same-sex households are closer to what is expected (Gates 2009). Thus the ACS has become a go-to source for same-sex couple estimates. Previous research has even considered the data from other Census surveys as inadequate for estimating same sex households. O'Connell and Lofquist (2009) argue that other Census Bureau surveys, such as the Current Population Survey (CPS) and the Survey of Income Program and Participation, are not able to provide statistically reliable estimates on such a small portion of the population, especially at the state level.

However, changes recently made to the Current Population Survey may allow the CPS to become a more effective tool for estimating same-sex couples who reside in the same residence. Prior to 2010, all reported same-sex couples in the CPS were changed to be their opposite-sex counterpart (i.e. from same-sex spouse to opposite-sex spouse). In 2010, instead of changing the gender of the partner to make them into opposite-sex couples, they were all edited to be same-sex unmarried partners. This procedure follows that first incorporated into the decennial census and the ACS in 2000. This change in edits allows us, for the first time, to be able to estimate same-sex couple households and some of their socio-demographics. The CPS includes additional measures that are not available in the ACS, which may be valuable in extending research on same-sex couple households. Given the differences between the ACS and CPS, we believe that comparing the demographics of same-sex couple households using these two surveys will allow us to evaluate the quality of the CPS estimates, along with verifying the overall reliability of the estimates in both surveys.

Data and Methods

For this paper we use both the 2008 American Community Survey (ACS)¹ and the 2010 Current Population Survey (CPS). The American Community Survey is a mandatory survey that is conducted annually over a 12-month calendar period. Since 2000 the ACS has served as a replacement for the Decennial long form. It has a sample of approximately 3 million households, with a monthly sample size of about 250,000 households. The questionnaire is administered through a mailout/mailback paper form, and followed up with computer assisted telephone and

¹ We use the data from the 2008 ACS since it is the most recently released. The 2009 ACS data will be available later this fall.

in-person interviews. The ACS provides nationally representative data on households², which includes social, demographic, economic, and housing data. Given the large sample size and extensiveness of topics collected by the ACS, it is an ideal survey for measuring the socio-demographics of small populations, including same-sex couples. Same-sex couples are identified in the ACS using both the household roster and sex item.

The Current Population Survey is a monthly conducted, for the Bureau of Labor Statistics, to assess the employment level in the country. While most of it is a sample of March households, the Annual Social Economic supplement of the CPS combines respondents from February, March, and April into a sample size of 99,000 households. The questionnaire is administered through telephone and personal-visit interviews. Some of the items in the survey are basic household relationship and cohabitation questions, sex, age, race, Hispanic or Latino origin, household income, employment status, educational attainment, along with many other topic areas that are asked in special supplements. Although the CPS is largely a labor force survey, it does include more detailed relationship data than what is available in the ACS. Same-sex couples are identified using both the household roster and sex item and a subsequent probe on cohabitation.³

This paper compares the socio-demographic characteristics of same-sex couple households between the 2008 American Community Survey and 2010 Current Population Survey. The demographic characteristics include age of householder, race of householder, Hispanic or Latino origin of householder, educational attainment, employment status, and household income. We present information on the distribution of these characteristics within

² The data used for this paper are for households only and not group quarters.

³ Rose Kreider, "Improvements to Demographic Household Data in the Current Population Survey: 2007" March 2008, <http://www.census.gov/population/www/documentation/twps08/twps08.pdf>

three types of households: unmarried same-sex, unmarried male-male partner, and unmarried female-female households. We calculate the z-scores to test if the characteristics are significantly different across the surveys.

Preliminary Findings

As shown on Table 1, data from the 2008 American Community Survey show that there are 567,000 reported same-sex unmarried partner households, of which 272,000 of these households are unmarried male-male couples and 295,000 of them are female-female couples. Data from the 2010 Current Population survey show that there are 539,000 same-sex unmarried partner households, approximately 264,000 of these households are unmarried male-male couples and 275,000 of them are female-female couples. The weighted number of people who reported being in an unmarried same-sex relationship does not significantly differ across the ACS and CPS. Even the weighted number of those in male-male relationships and female-female relationship are not significantly different across the two surveys.

Table 1 also presents the distribution of sociodemographic characteristics for unmarried same-sex households. There are no statistical differences between the ACS and CPS in educational attainment or Hispanic origin of the householder. For unmarried same-sex couples as a whole, we find that a greater percentage of householders in the CPS report being 25 to 34 years old than in the ACS. However for those aged 65 years and over, there is a greater percentage in the ACS than the CPS. Therefore, it can be said that those same-sex unmarried partners in the ACS tend to be older than those in the CPS. Turning towards racial breakdown, the data show that there is a larger percentage of whites in the CPS than in the ACS (89 percent and 86 percent,

respectively). While the ACS reports 5.1 percent of householders of some other race compare to only 2.9 percent of householders in the CPS.

Examining differences by economic status, the ACS reports more households where the householder and both partners are employed than does the CPS. In the ACS, 77 percent of householders are employed compared to only 73 percent of those in the CPS. In the ACS, just under 63 percent of households have both the householder and partner in the workforce compared with 60 percent in the CPS. The CPS also reports a higher percentage of household income in the \$35,000-\$49,999 range, while ACS reports more households with an income \$100,000 or more.

Preliminary Findings by gender

To better understand the similarities and differences between same-sex couples, we further examine the socio-demographics of same-sex couples by gender. Table 2 shows that for unmarried male-male households, there is a larger percentage of householders aged 45 to 54 years in the CPS than there are in the ACS. However, in the ACS, there is a larger percentage of householders aged 65 years and older compared to the CPS. The data show a larger percentage of white householders in the CPS than in the ACS (96 percent and 88 percent respectively). There is also a larger percent of white only, not Hispanic or Latino households, in the CPS (86 percent) than in the ACS (80 percent). The ACS reports 5.1 percent of householders of some other race compare to less than 1 percent of householders in the CPS. The CPS has more households reporting their household income within the \$35,000-\$49,999 range while ACS reports more households with an income \$100,000 or more. There are no statistical differences

between the ACS and CPS in educational attainment, employment status, or Hispanic origin in male-male households.

Table 2 shows that for female-female unmarried households, there is a higher percentage of white only, not Hispanic or Latino households, in the ACS than the CPS (79 percent and 71 percent, respectively). The ACS reports more households where the householder and both partners are employed than does the CPS. In the ACS, 75 percent of householders are working, while only 70 percent of those in the CPS are working. While in the ACS, just under 61 percent of households have both the householder and partner in the workforce compared with 53 percent in the CPS. The CPS also reports a higher percentage of household income in the less than \$35,000 range, but a smaller percentage with household income exceeding \$100,000. There are no statistical differences between the ACS and CPS in female-female couples by age, race, educational attainment, or Hispanic or Latino origin, or different years.

Summary

Although, the overall estimates of the number of same-sex couples as a whole are similar for both American Community Survey and the Current Population Survey on same-sex couples, there are significant demographic differences between the two surveys. Our results show that there is no significant difference between the estimates on the total number of same-sex couple households for unmarried same-sex couples. This finding holds regardless of gender. In terms of socio-demographics, we find that householders in same-sex relationships in the CPS are slightly younger, more likely to be white, less likely to be employed, less likely to have both partners employed and report a lower income than their ACS counterparts. Education levels and Hispanic origin are similar in the ACS and CPS, as are estimates of the total number of same-sex

households. Although we are not able to say definitively, it could be argued that the differences in the socio-demographics between the two surveys could possibly be due to: differences in how the data are collected – mail versus telephone or in person interviews - or the fact that the CPS is a voluntary and the ACS is a mandatory survey.

The finding on the overall estimate of same-sex couple households is encouraging because it means that the Current Population Survey could be used for some analyses on same-sex couples at the national level. However, the larger sample size of American Community Survey still makes it the better survey for the detailed analysis of questions, particularly if state level or smaller analysis is desired. The similarity in the estimates between the surveys strengthens the argument that Census Bureau surveys can provide consistent estimates of same-sex couple households.

So far, we have only presented some preliminary descriptive results of the socio-demographic variables for same-sex couples as a whole. We plan to do additional analyses to further examine why there are similarities and differences in the socio-demographic variables but not the overall estimate of same-sex couples between these two surveys. To do this we will first look to see if the differences are due to the way in which the data are collected. This is important since about half of the ACS questionnaires are administered by mailout/mailback and the other half are computer assisted telephone and in-person interviews, while all of the CPS questionnaires are administered in person or by telephone. We, also, plan to look at the differences between the ACS and CPS by relationship status. That way we will be able to see the similarities and differences across surveys for those who reported as spouse and as unmarried partner. Finally, we plan to remove those same-sex couples in the CPS who originally reported their partner as a non-relative, and only identified them in the follow-up question. This accounts

for about 12% of the same-sex couples. By excluding these couples, we will be able to see if the follow-up question is responsible for the differences between the American Community Survey and Current Population Survey. Prior research suggests that couples added to the overall number of unmarried partners via the secondary probe on cohabitation are indeed a younger population (Kreider 2008).

References

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Table 1. Household Characteristics of Same-sex Couple Households: ACS 2008 and CPS 2010
(Percent distribution)

Household Characteristics	Unmarried same-sex couples					
	ACS		CPS		Percentage point difference ACS-CPS	
	Percent	Std Error	Percent	Std Error		
All Respondents (number)	567,188	3,605.3	539,585	23,708.0		
Age of Householder						
15 to 24 years	4.1	0.3	5.4	1.0	-1.3	
25 to 34 years	15.5	0.5	19.3	1.7	-3.8	*
35 to 44 years	26.5	0.6	26.0	1.9	0.5	
45 to 54 years	27.6	0.5	28.6	2.0	-1.0	
55 to 64 years	14.6	0.4	15.8	1.6	-1.2	
65 years and over	11.6	0.4	4.9	1.0	6.8	*
Race of householder						
White	86.3	0.5	89.2	1.4	-2.9	*
Black or African American	6.2	0.3	6.0	1.1	0.2	
Asian	2.4	0.2	1.5	0.5	0.9	
Some Other Race	5.1	0.3	3.3	0.8	1.9	*
Hispanic Origin of householder						
Hispanic or Latino origin (of any race)	10.0	0.4	10.9	1.4	-0.9	
White alone, not Hispanic or Latino	79.6	0.5	78.6	1.8	1.0	
Educational Attainment						
Householder has at least a Bachelor's degree	47.6	0.6	49.7	2.2	-2.1	
Both partners with at least a Bachelor's degree	30.6	0.6	33.6	2.2	-2.9	
Employment Status						
Householder employed	77.1	0.5	72.6	2.0	4.5	*
Both partners employed	62.8	0.6	59.9	2.2	2.9	
Household income						
Less than \$35,000	15.0	0.4	16.4	1.6	-1.4	
\$35,000 to \$49,999	11.0	0.4	15.1	1.6	-4.0	*
\$50,000 to \$74,999	18.3	0.5	20.1	1.8	-1.7	
\$75,000 to \$99,999	16.0	0.4	16.0	1.6	0.0	
\$100,000 or more	39.7	0.6	32.4	2.1	7.3	*

Source: Unpublished tabulations from the American Community Survey and Current Population Survey

Standard errors for the ACS were derived using the Taylor Expansion method.

-- Represents zero or rounds to zero

* Represents statistically significant difference between the two surveys.

Table 2. Household Characteristics of Same-sex Couple Households by Gender : ACS 2008 and CPS 2010 (CPS from RRP only)
(Percent distribution)

Household Characteristics	Unmarried male-male couples					Unmarried female-female couples						
	ACS		CPS		Percentage point difference ACS-CPS	ACS		CPS		Percentage point difference ACS-CPS		
	Percent	Std Error	Percent	Std Error		Percent	Std Error	Percent	Std Error			
All Respondents (number)	272,407	2,537.5	264,662	16,413.0		294,781	2,555.3	274,923	17,021.0			
Age of Householder												
15 to 24 years	3.6	0.4	4.0	1.2	0.3	4.6	0.4	6.7	1.6	*	2.2	
25 to 34 years	14.1	0.7	15.5	2.3	1.4	16.9	0.7	23.0	2.6		6.1	
35 to 44 years	27.7	0.8	24.6	2.7	-3.1	25.4	0.8	27.3	2.8		1.9	
45 to 54 years	29.1	0.8	34.9	3.0	*	5.8	0.7	22.6	2.6		-3.7	
55 to 64 years	15.0	0.6	18.6	2.5		3.6	0.5	13.1	2.1	*	-1.1	
65 years and over	10.5	0.5	2.4	1.0	*	-8.1	12.7	0.5	7.2		-5.5	
Race of householder												
White	87.7	0.6	95.6	1.3	*	7.9	85.0	0.6	83.1	2.3	-1.9	
Black or African American	4.5	0.4	2.3	0.9	*	-2.3	7.7	0.5	9.6	1.8	1.9	
Asian	2.7	0.3	1.1	0.7	*	-1.6	2.1	0.3	1.9	0.9	-0.2	
Some Other Race	5.1	0.4	1.0	0.6	*	-4.0	5.2	0.4	5.5	1.4	0.3	
Hispanic Origin of householder												
Hispanic or Latino origin (of any race)	10.6	0.6	9.3	1.8		-1.3	9.4	0.5	12.5	2.1	*	3.1
White alone, not Hispanic or Latino	80.3	0.8	86.3	2.2	*	6.0	78.9	0.7	71.1	2.8	-7.8	
Educational Attainment												
Householder has at least a Bachelor's degree	49.8	0.9	51.6	3.2		1.7	45.5	0.8	48.0	3.1	2.4	
Both partners with at least a Bachelor's degree	31.1	0.8	34.9	3.0		3.8	30.2	0.9	32.3	2.9	2.1	
Employment Status											*	
Householder employed	79.1	0.7	75.8	2.7		-3.2	75.3	0.7	69.5	2.9	-5.8	
Both partners employed	65.1	0.9	64.3	3.0		-0.9	60.7	0.8	55.7	3.1	-5.0	
Household income											*	
Less than \$35,000	12.3	0.6	10.4	1.9		-1.8	17.5	0.6	22.3	2.6	4.7	
\$35,000 to \$49,999	9.7	0.5	15.8	2.3	*	6.2	12.3	0.6	14.3	2.2	2.1	
\$50,000 to \$74,999	16.5	0.7	19.3	2.5		2.8	19.9	0.7	20.8	2.5	0.9	
\$75,000 to \$99,999	15.8	0.7	16.7	2.4		0.8	16.1	0.6	15.4	2.2	*	-0.8
\$100,000 or more	45.6	0.9	37.8	3.1	*	-7.8	34.2	0.8	27.3	2.8	-6.9	

Source: Unpublished tabulations from the American Community Survey and Current Population Survey

Standard errors for the ACS were derived using the Taylor Expansion method.

-- Represents zero or rounds to zero

* Represents statistically significant difference between the two surveys.