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Food Insecurity Among MSM in the United States During the COVID-19 Pandemic, 2020

By

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Global Epidemiology

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By

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An abstract of
A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
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Abstract

Food Insecurity Among MSM in the United States During the COVID-19 Pandemic, 2020
By Emma McLeod

Background

In 2020, the COVID-19 pandemic changed the landscape of food insecurity in part by the rapid increase in unemployment. Men who have sex with men (MSM) are a demographic who may have been distinctly impacted by food insecurity during COVID-19, because food insecurity varies across sexual identities in the United States. This study examines the prevalence and demographic factors of food insecurity among MSM in 2020 in the US and examines the effect of job loss on food insecurity in this population.

Methods

Data were from the 2020 cycle of the American Men's Internet Survey (AMIS), an annual online cross-sectional survey of MSM ages 15 years and older in the United States (N = 13081). The prevalence of food insecurity by race, age, region, and sexual identity were described. The association between job loss during 2020 and food insecurity was examined, controlling for demographic characteristics. The difference between food insecurity in the 2017 and 2020 AMIS data cycles was also tested.

Results

17.7% of MSM were food insecure. Food insecurity among American Indian/Alaska Native (30.9%), Black (21.6%), Hispanic (21.3%), and MSM with other or multiple racial identities (27.4%) was significantly higher than food insecurity among White MSM (14.8%). The lowest prevalence of food insecurity among MSM by region was in the Northeast (14.5%), and older MSM had lower food insecurity than younger MSM. MSM who defined their sexual identities as "other" had significantly higher food insecurity compared to gay MSM. Job loss due to COVID-19 and job loss due to other factors were both significantly associated with food insecurity. Food insecurity also increased from the 2017 AMIS data cycle to the 2020 cycle.

Conclusions

Food insecurity among MSM followed many of the same food insecurity trends as the general population in the first year of the COVID-19 pandemic. Future research may examine the long-term effects of COVID-19 on food insecurity among MSM. Overall, food insecurity in the sample was higher than national estimates of food insecurity in 2020. Therefore, MSM are an important demographic to consider in interventions on food insecurity.

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Introduction

In 2020, 10.5%, or 13.8 million, of US households were food insecure.[1] Food insecurity as defined by the USDA is a household level measure characterized by lack of consistent access to adequate food for active, healthy living.[1] Food insecurity in 2020 was particularly important given the context of the COVID-19 pandemic. Food insecurity levels from April to May 2020 were 2.7 times the estimated levels in February 2020 with over half of this increase explained by increased unemployment.[2] Food insufficiency, a measure of 7-day food access related to food insecurity, increased from 9.5% in April 2020 to 13.4% in December 2020.[1] However, year-long food insecurity of US adults remained stable between 2019 and 2020, at 10.5%.[1]

The stability of year-long food insecurity from 2019 to 2020 does not necessarily indicate that COVID-19 did not affect food insecurity. A key characteristic of food insecurity is its heterogeneity which a single population-level measure does not necessarily capture. Immediate access to food after COVID-19 shutdowns and long-term effects on food insecurity due to COVID-19 may be different. In the pre-pandemic era, food insecurity did increase from 2019 to 2020 for households with Black, non-Hispanic householders.[1] Food insecurity changes also varied geographically with increased food insecurity from 2019 to 2020 in the South and estimated increases in counties with American Indian Reservations.[1,3] These variabilities are reflective of general food insecurity disparities in the US. Hispanic, Black, and American Indian and Alaska Native (AI/AN) individuals are disproportionately affected by food insecurity compared to White individuals, even among the same income categories.[4-6] Therefore, it can be informative to look at food insecurity among and between specific populations.

Sexual minorities are one such population that is particularly affected by food insecurity. Food insecurity has been found to be higher among sexual minorities when compared to heterosexual individuals in the US.[7-11] However, the prevalence of food insecurity among sexual minorities varies by race, gender, sexual orientation, age, income, housing status, and marital status.[7-9] Sexual minorities have also been affected by COVID-19. Men who have sex with men (MSM) reported difficulty buying food and paying rent as well as job loss due to COVID-19.[12] Similar findings of job loss and difficulty paying rent and bills due to COVID-19 have been found for the broader LGBT population in the US.[13] These factors may contribute to increased food insecurity.

Research on food insecurity is important as food insecurity is a determinant of health and related to a number of health behaviors and chronic health conditions including cardiovascular disease, diabetes, obesity, mood disorders, and HIV/AIDS.[14] Food insecurity is also associated with poor sleep, hypertension, and decreased nutrient intake in adults.[15] The relationship between food insecurity and disease is complex and often cyclical, because poor health outcomes may affect employment and income which may then increase food insecurity. Additionally, this relationship may be affected by the social and economic impacts of the COVID-19 pandemic.

The term sexual minority encompasses a number of identities, and most research on food insecurity and sexual minorities has included individuals who identify as being lesbian, gay, or bisexual (LGB). Some research has focused specifically on sexual minority women (SMW);[11] however, there has been little research focused specifically on MSM and food insecurity. Food insecurity during COVID-19 is also understudied given the rapid evolvement of the pandemic

and the complexity of food insecurity across populations. Together, there is little information available on food insecurity among MSM during COVID-19. The American Men's Internet Survey (AMIS) is an online cross-sectional survey of MSM ages 15 and older in the United States that began in 2013 and is administered annually. In 2020, survey responses were gathered from 13,081 MSM, and the survey contained questions on both food insecurity and COVID-19. This study examines the prevalence of food insecurity among MSM in 2020, concurrent with the COVID-19 pandemic, and how COVID-19 has affected food insecurity.

Methods

Data Source and Eligibility

AMIS is an annual cross-sectional survey of MSM ages 15 years and older in the United States. Participants were recruited for the survey through convenience sampling from websites using banner advertisements and from email blasts. People who clicked on the ads or email links were taken to the survey website hosted on a secure server. To be eligible, participants had to be 15 years or older, be a cisgender man, live in the United States, report having had anal and/or oral sex with a male partner at least once, and be able to complete the survey in either English or Spanish. Eligible participants who consented to participation then proceeded to the web-based survey. Data cleaning was performed on the responses to achieve the final data set for analysis which included removing duplications, limiting the data set to surveys deemed successful, and validating ZIP codes. More detailed recruitment methods and data cleaning methods have been reported elsewhere.[16] Data for this analysis were from the 2020 AMIS data cycle. The analysis also includes food insecurity data taken from the 2017 AMIS data cycle.

Measures

The primary exposure included in the analysis was job loss due to COVID-19. Although a number of factors contribute to household food insecurity, job loss is one of the primary pathways through which the COVID-19 pandemic has the potential to affect food insecurity.[17] Job loss was categorized as those who lost their job because of COVID-19 or those who lost their job because of something other than COVID-19 and was compared to those who did not lose their job.

Food insecurity was assessed with the question, "In the past 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn't enough money for food?" This question comes from the USDA Adult Food Security Survey.[18] Food insecurity as defined by the USDA has two levels: low food security and very low food security.[18] Low food security is generally characterized by changes in diet and very low food security is characterized by disruptions of food intake and used to be called food insecurity with hunger.[18] Although the single measure of food insecurity in this study does not map completely onto either USDA food security level, food insecurity here is defined by reducing or missing meals and is a measure of food insecurity with hunger. Food insecurity data were collected in AMIS 2017 and 2020 cycles. The main analyses of this study were performed on the 2020 cycle data in order to examine food insecurity in MSM in the setting of COVID-19. The change in food insecurity from 2017 to 2020 among MSM was also examined. Other variables included in the analyses were race/ethnicity, age, region, educational attainment, income, and sexual identity.

Analyses

Descriptive statistics were calculated for the entire sample and stratified by food insecurity. Chi-square tests were used to examine differences in participant characteristics by job loss and by food insecurity. Unadjusted prevalence ratios (PR) and 95% confidence intervals (CI) were estimated by bivariate log binomial regression for food insecurity by race, age, region, and sexual identity in order to further describe food insecurity in the sample. A Chi-square test was performed to test the difference between the prevalence of food insecurity in 2017 and 2020. Unadjusted and adjusted prevalence ratios and 95% confidence intervals were estimated from multivariate log binomial regression analyses to explore the association between job loss due to COVID-19 and food insecurity. Age, region, race/ethnicity, and educational attainment were included in the multivariable model. Analyses were conducted using SAS 9.4 (SAS Institute Inc., Cary, NC) and statistical significance was set at $p < 0.05$.

Results

Of the 13,081 eligible MSM who completed the American Men's Internet Survey in 2020, over half were non-Hispanic White individuals (Table 1). Participants were most commonly between the ages of 15 to 24 years and were most commonly from the South. Most participants had at least some college, technical degree, or higher education, and 43% of participants had a college degree or some level of postgraduate education. Almost 20% of participants (17.7%) reported having faced food insecurity in the past 12 months. Of those who had experienced food insecurity, almost one in five (18.6%) reported having lost their job due to COVID-19.

Food insecurity was associated with race/ethnicity, region, education, income, age, and sexual identity ($p < 0.01$ for all listed variables using a χ^2 test). AI/AN participants, Black participants,

and Hispanic participants each reported significantly higher food insecurity than White participants (Table 2). About one-fifth of Black participants reported food insecurity with hunger in the past 12 months. One-fifth of Hispanic individuals also reported facing food insecurity. The prevalence of food insecurity was twice as high in AI/AN participants than in White participants (PR = 2.1; 95% Confidence Interval: 1.5, 2.8). Younger participants also reported significantly higher food insecurity than participants ages 40 years and older. Although the prevalence of food insecurity among participants was similar across the Midwest, South, and West, all of these areas had significantly higher food insecurity than the Northeast. Food insecurity did not differ significantly between bisexual and gay participants or between straight and gay participants, but the prevalence of food insecurity among those who identified as "another sexual identity" was twice as high as those who identified as "homosexual or gay."

Food insecurity information was also collected through AMIS in 2017 with 9,801 participants providing information on food insecurity from the 10,049 MSM who completed a survey. In 2017, 15.8% of participants reported food insecurity with hunger compared to 17.7% of participants in 2020 and this difference was significant (χ^2= 11.4; $p < 0.01$).

Finally, job loss during COVID-19 was related to race/ethnicity, age, education, income, and sexual identity ($p<0.01$) (Table 3). About one-third of those who reported an income of less than $20,000 reported losing their job due to COVID-19. Approximately a quarter of Black individuals and a quarter of Hispanic individuals who provided information on job loss during COVID-19 reported losing their job because of COVID-19. The unadjusted prevalence of food insecurity among those who lost their job due to COVID-19 was 2.6 times those who did not lose

their job (95% CI: 2.3, 2.9). Among those who lost their job due to factors other than COVID-19, food insecurity was 2.4 times those who did not lose their job (95% CI: 2.0, 2.9). Adjusted for age, education, region, and race/ethnicity, the prevalence of food insecurity among those who lost their job due to COVID-19 was 2.2 times those who did not lose their job due to COVID (95% CI: 2.0, 2.5), and the prevalence of food insecurity among those who lost their job for other reasons was 2.1 times those who did not lose their job (95% CI: 1.7, 2.5).

Discussion

In 2017, 11.8% of households in the US were food insecure, and 4.5% had very low food security.[19] In 2020, 10.5% of households were food insecure, and 3.9% of households had very low food security.[1] 15.8% of MSM in the AMIS 2017 cycle were food insecure and 17.7% of MSM in the AMIS 2020 cycle were food insecure. Food insecurity was higher than the national statistics for both years which is consistent with previous findings of higher food insecurity among sexual minorities.[7-11] Food insecurity in this study does not completely correspond to the USDA categories,[18] and is likely an underestimate, because it does not include people who were food insecure based on reduced diet quality without reduced food intake. Notably, food insecurity increased significantly from 2017 to 2020 among MSM in AMIS which was contrary to the prevalence of food insecurity nationally which decreased across these timepoints both for overall food insecurity and very low food security.[1] Given that these samples were not representative, this increase may not reflect an overall trend of increasing food insecurity in MSM from 2017 to 2020 in the United States; however, food insecurity in 2017 and 2020 in the AMIS data was consistently higher than national food insecurity for both years. This higher prevalence of food insecurity among MSM may partly be due to experiences of discrimination.

There is some evidence that perceived discrimination is related to higher prevalence of food insecurity among sexual minority men[20], and sexual minorities face housing discrimination which can impact food insecurity.[21,22]

There was also heterogeneity of food insecurity within the sample of MSM by race, region, and sexual orientation. The higher prevalence of food insecurity in Black and Hispanic/Latino MSM compared to White MSM is consistent with higher levels of foods insecurity among these racial groups at a population level in 2020.[1] The highest prevalence of food insecurity in this study was among AI/AN MSM. Statistics on food insecurity for AI/AN people are not reported annually by the USDA; however, a national survey of US adults in 2020 found twice the odds of food insecurity among Native American respondents than among White respondents and also found higher odds of food insecurity among Black and Hispanic respondents.[5] These disparities in 2020 reflect consistent longitudinal food insecurity disparities for Black, Hispanic, and AI/AN populations compared to White populations in the United States since the USDA began assessing food insecurity.[6,23] However, racial disparities in food insecurity are not simply reflections of economic inequality, as food insecurity disparities in 2020 remain even when households are stratified by income.[24] In the context of COVID-19, cases, hospitalizations, and deaths have also been higher for Black, Hispanic, and AI/AN populations than White populations in the United States.[25,26] Disparities in food insecurity by race for MSM during COVID-19, therefore, have a complex context of racism and racial discrimination both for established factors of food insecurity and newer factors surrounding COVID-19.

Nationally in 2020, households in the South had statistically higher food insecurity than average, and the Northeast and West were statistically below the average for very low food security.[1] In this study, MSM in the Northeast had the lowest food insecurity compared to other regions, and MSM in the South had the highest prevalence of food insecurity, but food insecurity among MSM in the South did not differ much from those in the Midwest. There was also a similar prevalence of food insecurity among those identified as bisexual and those who identified as gay. This differs from previous research which found bisexual individuals to have the highest prevalence of food insecurity among sexual minorities, although both studies which reached this finding included sexual minority women in their samples which may account for some of this difference.[27,28] However, in the current study, MSM who had other sexual identities beyond gay, straight, or bisexual had higher food insecurity than gay MSM. A study of food insecurity among LGBT people in the US during 2021 had a similar finding; those who identified as "other" for sexual orientation status had higher odds of food insecurity in reference to straight participants than lesbian/gay or bisexual participants did compared to straight participants.[29] In the present study, those who identified as another sexual identity were only 1.2% of the total sample. Therefore, few conclusions can be drawn from this finding, but food insecurity and other health risks for people of sexual identities other than gay, straight, and bisexual or those who do not use labels for their sexuality may be an area for future research.

In 2020, employment fell by 8.8 million people with over 22 million jobs lost between January and April, and the unemployment rate spiked at 14.7% in April.[30,31] Unemployment among MSM in this study followed similar patterns to the general population in that people who were younger, had less education, were Black or Hispanic, or who were low income were more likely

to lose their job.[30] Job loss in this study was also a predictor of food insecurity for MSM. Reasons for food insecurity vary by household, but on a national level, unemployment, annual inflation, and the relative price of food were estimated by the USDA to account for 92% of the year-to-year variation in food insecurity from 2001 to 2012.[32] Therefore, as the effects of COVID-19 change, the determinants which most effect food insecurity may also change. This study was conducted in 2020 which was the first year of the COVID-19 pandemic in the United States. The early pandemic was characterized by the shutdown of many public-school systems and businesses as well as a sharp rise in unemployment,[33] and in 2020, COVID-19 was the underlying cause of 350,831 deaths.[34] As of April 16, 2022, the cumulative number of deaths from COVID-19 reached 986,042 deaths, so COVID-19 and its effects have extended beyond just the 2020 data examined in this study.[35] The acute effects of the early COVID-19 pandemic on food insecurity may differ from the later or lasting effects of the pandemic. Research on how food insecurity among MSM changed across the COVID-19 pandemic and research into how government interventions for COVID-19 such as increased unemployment benefits and Economic Impact Payments affected the relationship between job loss and food insecurity may be areas for future research.

There are several limitations to this study. First, data were gathered through an online convenience sample of MSM and may not be generalizable to all MSM. Second, in terms of assessing the effects of COVID-19 on food insecurity among MSM, there are other pathways by which the presence of the COVID-19 pandemic affects food insecurity which do not go through job loss, so the total effect of COVID-19 on food insecurity is difficult to capture without data from immediately before the pandemic. Third, 49.3% of participants did not respond to the

question of job loss, so there may be response bias for the analysis which included the job loss variable. Fourth, as previously discussed, the definition of food insecurity is limited to those who have reduced or missed a meal within the last year and may not completely capture food insecurity as it is more broadly defined. Finally, as a cross-sectional study, inferences cannot be made about causal relationships between job loss or demographic factors and food insecurity. Strengths of the study include a wide depiction of food insecurity among MSM during the first year of the COVID-19 pandemic by a variety of factors.

Conclusion

Food insecurity among MSM in the United States in 2020 was higher than the general population. This indicates a need to consider MSM when designing programmatic or policy implementations for food insecurity reduction. Food insecurity among MSM also varied by race/ethnicity, age, region, and sexual identity. Those who are food insecure are a heterogeneous group and intersecting identities and geographies are important when addressing food insecurity. Job loss during 2020 was also related to food insecurity among MSM. Interventions aimed at mitigating upstream factors like job loss or its effects on food insecurity may be useful in public health. Times of economic change can have lasting impacts on food insecurity.[32] Looking at the national percentage of households facing food insecurity which remained unchanged from 2019 to 2020 does not necessarily provide comprehensive information on food insecurity.[1] Therefore, it is important to continue research on food insecurity in populations like MSM in the United States particularly in the context of the COVID-19 pandemic to be able to best meet the public health needs of the population.

Table 1. Demographic characteristics of 13,081 MSM, American Men's Internet Survey, 2020

Category	Total N = 13081	Food insecurity (past 12 months) N = 2310	No food insecurity (past 12 months) N = 10567	Food insecurity Missing N = 204
Race/ethnicity				
American Indian/Alaska Native	94 (0.7)	29 (1.3)	64 (0.6)	1 (0.5)
Asian/Native Hawaiian/Other Pacific Islander	381 (2.9)	40 (1.7)	331 (3.1)	10 (4.9)
Black	1598 (12.2)	345 (14.9)	1222 (11.6)	31 (15.2)
Hispanic/Latino	2568 (19.6)	548 (23.7)	1963 (18.6)	57 (27.9)
White	7663 (58.6)	1137 (49.2)	6442 (61.0)	84 (41.2)
Other/Multiple	511 (3.9)	140 (6.1)	362 (3.4)	9 (4.4)
Missing	266 (2.0)	71 (3.1)	183 (1.7)	12 (5.9)
Age				
15-24	5426 (41.5)	1059 (45.8)	4229 (40.0)	138 (67.7)
25-29	3202 (24.5)	621 (26.9)	2548 (24.1)	33 (16.2)
30-39	1380 (10.6)	257 (11.1)	1109 (10.5)	14 (6.9)
40 or older	3073 (23.5)	373 (16.2)	2681 (25.4)	19 (9.3)
Region				
Northeast	2215 (16.9)	321 (13.9)	1862 (17.6)	32 (15.7)
Midwest	2639 (20.2)	492 (21.3)	2114 (20.0)	33 (16.2)
South	5246 (40.1)	990 (42.9)	4171 (39.5)	85 (41.7)
West	2948 (22.5)	501 (21.7)	2393 (22.7)	54 (26.5)
U.S. dependent areas	33 (0.3)	6 (0.3)	27 (0.3)	0 (0.0)
Education				
< HS diploma	340 (2.6)	87 (3.8)	244 (2.3)	9 (4.4)
HS diploma or equivalent	2357 (18.0)	549 (23.8)	1733 (16.4)	75 (36.8)
Some college or technical degree	4689 (35.9)	1091 (47.2)	3519 (33.3)	79 (38.7)
College degree or postgraduate education	5630 (43.0)	572 (24.8)	5027 (47.6)	31 (15.2)
Missing	65 (0.5)	11 (0.5)	44 (0.4)	10 (4.9)
Income				
$0-19999	1734 (13.3)	741 (32.1)	952 (9.0)	41 (20.1)
$20000-39999	2611 (20.0)	800 (34.6)	1775 (16.8)	36 (17.7)
$40000-74999	3091 (23.6)	411 (17.8)	2646 (25.0)	34 (16.7)
$75000 or more	4383 (33.5)	186 (8.1)	4180 (39.6)	17 (8.3)
Missing	1262 (9.7)	172 (7.5)	1014 (9.6)	76 (37.3)
Job loss during COVID-19				
No	4945 (37.8)	606 (26.2)	4289 (40.6)	50 (24.5)
Yes, because of COVID	1371 (10.5)	430 (18.6)	920 (8.7)	21 (10.3)
Yes, because of something other than COVID	318 (2.4)	92 (4.0)	218 (2.1)	8 (3.9)
Missing	6447 (49.3)	1182 (51.2)	5140 (48.6)	125 (61.3)
Sexuality				
Heterosexual/Straight	129 (1.0)	19 (0.8)	107 (1.0)	3 (1.5)
Homosexual/Gay	9826 (75.1)	1695 (73.4)	7985 (75.6)	146 (71.6)
Bisexual	2792 (21.3)	503 (21.8)	2244 (21.2)	45 (22.1)
Another Sexual Identity	157 (1.2)	57 (2.5)	95 (0.9)	5 (2.5)
Missing	177 (1.4)	36 (1.6)	136 (1.3)	5 (2.5)

Table 2. Prevalence of food insecurity by demographic characteristics of MSM in AMIS, 2020, log binomial regression

Characteristic	Total N	Food Insecurity Yes (%)	PR (CI 95%)
Race/ethnicity			
American Indian/Alaska Native	94	29 (30.9)	2.1 (1.5, 2.8)
Asian/Native Hawaiian/Other Pacific Islander	381	40 (10.5)	0.7 (0.5, 1.0)[1]
Black	1598	345 (21.6)	1.5 (1.3, 1.6)
Hispanic/Latino	2568	548 (21.3)	1.5 (1.3, 1.6)
White	7663	1137 (14.8)	Reference
Other/Multiple	511	140 (27.4)	1.9 (1.6, 2.2)
Age			
15-24	5426	1059 (19.5)	1.6 (1.5, 1.8)
25-29	3202	621 (19.4)	1.6 (1.4, 1.8)
30-39	1380	257 (18.6)	1.5 (1.3, 1.8)
40 or older	3073	373 (12.1)	Reference
Region			
Northeast	2215	321 (14.5)	Reference
Midwest	2639	492 (18.6)	1.3 (1.1, 1.5)
South	5246	990 (18.9)	1.3 (1.2, 1.5)
West	2948	501 (17.0)	1.2 (1.0, 1.3)[1]
U.S. dependent areas	33	6 (18.2)	1.2 (0.6, 2.6)
Sexual Identity			
Heterosexual/Straight	129	19 (14.7)	0.9 (0.6, 1.3)
Homosexual/Gay	9826	1695 (17.3)	Reference
Bisexual	2792	503 (18.0)	1.0 (1.0, 1.1)
Another Sexual Identity	157	57 (36.3)	2.1 (1.7, 2.6)

[1]Without rounding, confidence intervals do not contain null

Table 3. Association between job loss during COVID-19 and demographic characteristics among MSM in AMIS, 2020, Chi-square test

Category	Job Loss Sample Total N = 6634	Job loss due to COVID-19	Job loss NOT due to COVID-19	χ^2	p-value
Race/ethnicity				64.2	< 0.01
American Indian/Alaska Native	36	7 (19.4)	3 (8.3)		
Asian/Native Hawaiian/Other Pacific Islander	191	29 (15.2)	13 (6.8)		
Black	733	182 (24.8)	37 (5.1)		
Hispanic/Latino	1117	297 (26.6)	65 (5.8)		
White	4200	766 (18.2)	180 (4.3)		
Other/Multiple	249	60 (24.1)	14 (5.6)		
Age				102.8	<0.01
15-24	2236	588 (25.0)	145 (6.5)		
25-29	1508	309 (20.5)	81 (5.4)		
30-39	782	177 (22.6)	27 (3.5)		
40 or older	2108	327 (15.5)	65 (3.1)		
Region				12.3	0.1
Northeast	1164	274 (23.5)	52 (4.5)		
Midwest	1379	262 (19.0)	67 (4.9)		
South	2597	510 (19.6)	127 (4.9)		
West	1476	320 (21.7)	72 (4.9)		
U.S. dependent areas	18	5 (27.8)	0 (0)		
Education				101.4	<0.01
< HS diploma	135	34 (25.2)	8 (5.9)		
HS diploma or equivalent	912	231 (25.3)	63 (6.9)		
Some college or technical degree	2230	542 (24.3)	130 (5.8)		
College degree or postgraduate education	3339	560 (16.8)	115 (3.4)		
Income				211.8	<0.01
$0-19999	812	269 (33.1)	67 (8.3)		
$20000-39999	1267	324 (25.6)	76 (6.0)		
$40000-74999	1630	310 (19.0)	59 (3.6)		
$75000 or more	2444	355 (14.5)	90 (3.7)		
Sexual Identity				17.0	<0.01
Heterosexual/Straight	48	6 (12.5)	2 (4.2)		
Homosexual/Gay	5204	1041 (20.0)	252 (4.8)		
Bisexual	1234	280 (22.7)	55 (4.5)		
Another Sexual Identity	69	25 (36.2)	2 (2.9)		

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