



Building a Healthy Boston

DATA BRIEF: Demographic Characteristics and Social Determinants of Health Among Boston's Lesbian, Gay, Bisexual, and Transgender Adult Residents, 2010 – 2017

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I. Introduction

Lesbian, gay, bisexual, and transgender (LGBT) individuals collectively experience elevated rates of certain poor health outcomes.¹ For example, gay and bisexual men have higher rates of HIV infection than heterosexual men in the United States.² Limited population health survey data at the state and national level indicate that lesbian adults have higher percentages of obesity, and lesbian, gay, and bisexual (LGB) adults have higher percentages of poor mental health in comparison with their heterosexual peers.³⁻⁵ Additionally, it has been shown that transgender adults have more days per month of poor physical health and poor mental health.⁶

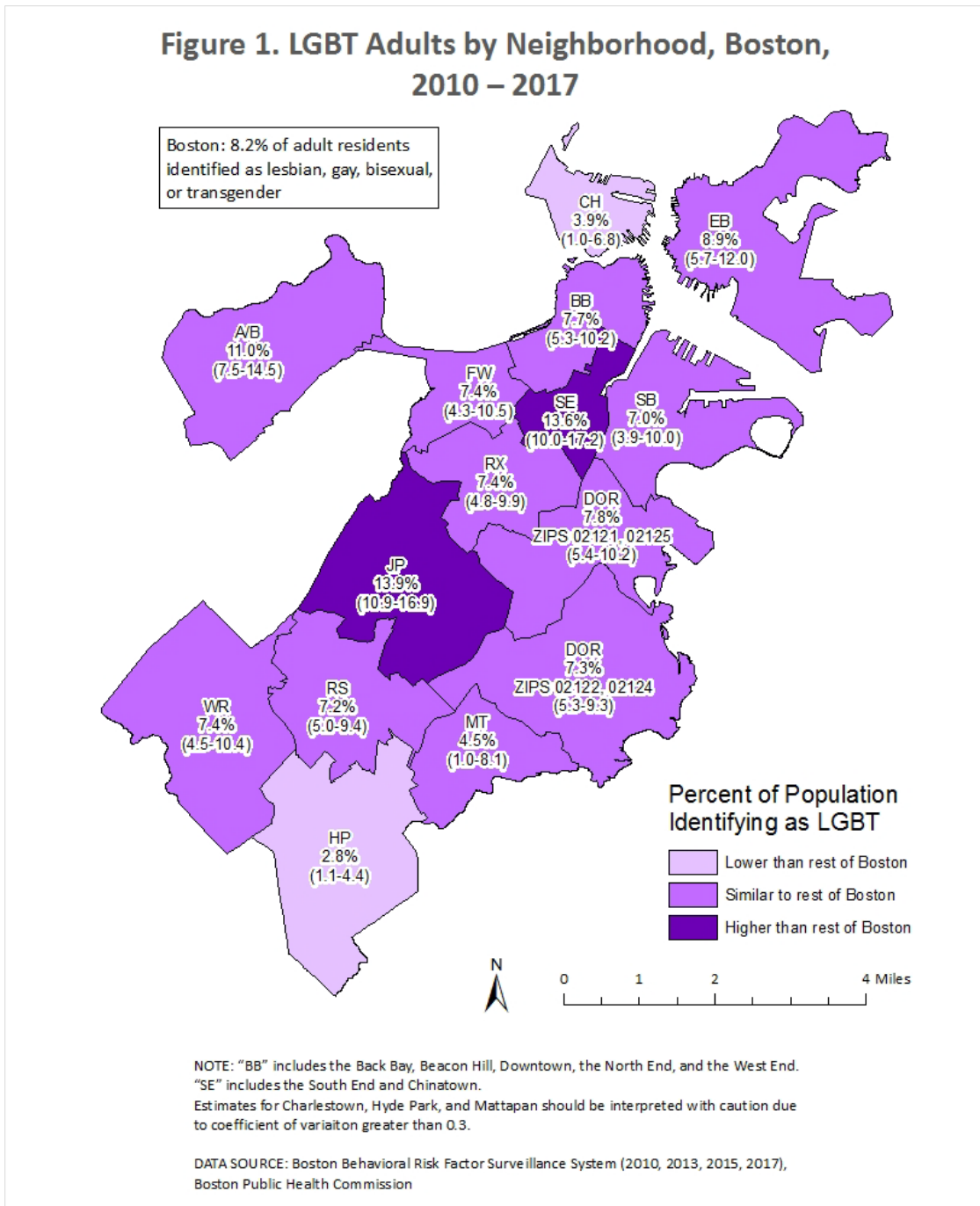
However, little is known about the differences in demographic and upstream health influencing factors (e.g., social determinants of health, or SDoH, including income and education) among the LGBT adult population in Boston and whether differences in these are associated with their health. While a number of national surveys collect sexual orientation and gender identity (SOGI) data, aggregated information is typically presented at the national or state level with limited generalizability to local or city levels and often ignores the heterogeneity within SOGI population groups.⁷ The Boston Behavioral Risk Factor Surveillance System (BBRFSS), modeled on the national BRFSS conducted by the Centers for Disease Control and Prevention allows for describing the demographic characteristics and SDoH factors among Boston's adult LGBT population living in households.⁸

This data brief is part one of a two-part series on the LGBT population in Boston and explores the demographic characteristics and SDoH among Boston's LGBT adult population as captured in BBRFSS data collected in 2010, 2013, 2015, and 2017 (see Data Source and Methods). A future brief (part two) will present identified differences in health experience as relates to stratified LGBT adult population groups in comparison to their heterosexual and cisgender peers. For this brief, data years were pooled to enhance the LGBT sample sizes and permit a more robust analysis that allows disaggregation of LGBT population groups. As sexual orientation and gender identity are distinct identities (e.g., a trans woman may identify as lesbian, bisexual, or heterosexual), data describing adults identifying as transgender are presented independent of the LGB results.

II. Findings

a. Overall

For 2010, 2013, 2015, and 2017 combined, 8.2% of Boston adult residents identified as LGBT. The percentage of LGBT residents was higher in the neighborhoods of Jamaica Plain (13.9%) and South End (13.6%) compared with the rest of Boston (see Figure 1). The percentage of LGBT residents was lower in the neighborhoods of Charlestown (3.9%) and Hyde Park (2.8%) compared to the rest of Boston (note: these estimates should be interpreted with caution due to coefficients of variation greater than 0.3).



b. Transgender Identity

For 2010, 2013, 2015, and 2017 combined, transgender adult Boston residents represented 0.7% of the adult Boston population. Approximately three in five transgender residents identified as lesbian, gay, bisexual (LGB) or other sexual orientation and approximately two in five identified as heterosexual. Among transgender residents, 40.0% were White non-Latinx, 28.1% were Latinx, and 31.9% were another race/ethnicity. Among transgender residents, 34.2% were under age 30, 28.0% were ages 30-44, and 37.8% were ages 45 and over. Among transgender residents, 50.8% had a high school diploma or less. A majority (51.8%) of transgender residents had household income of less than \$25,000. A majority (51.2%) of transgender residents were employed. Transgender residents in Boston were predominantly born in the United States (US) (60.9%). Nearly 3 in 4 transgender residents were divorced, widowed, separated, or never married (74.0%). Among transgender residents, 44.7% were assisted renters. Among transgender residents, 41.6% reported that it was sometimes or often true that in the past 12 months the food they purchased didn't last and they didn't have the money to buy more. Lastly, 36.6% of transgender residents reported experiencing two to three adverse childhood experiences (ACEs).

c. Sexual Orientation

For 2010, 2013, 2015, and 2017 combined, 7.7% of Boston adult residents identified as LGB; of these, 21.0% identified as lesbian females (1.6% of total Boston adult residents), 47.2% identified as gay males (3.6% of adult residents), and 23.1% and 8.7% identified as bisexual females and males, respectively (combined equaling 2.4% of adult residents) (see Figures 2 and 3). Though 7.7% of adult residents reported LGB orientation, the percentage increased from 6.2% to 9.1% across the survey years between 2010 and 2017 (see Figure 4). This increase appears driven by an increase in the percentage of Boston residents identifying as bisexual (see Figure 5).

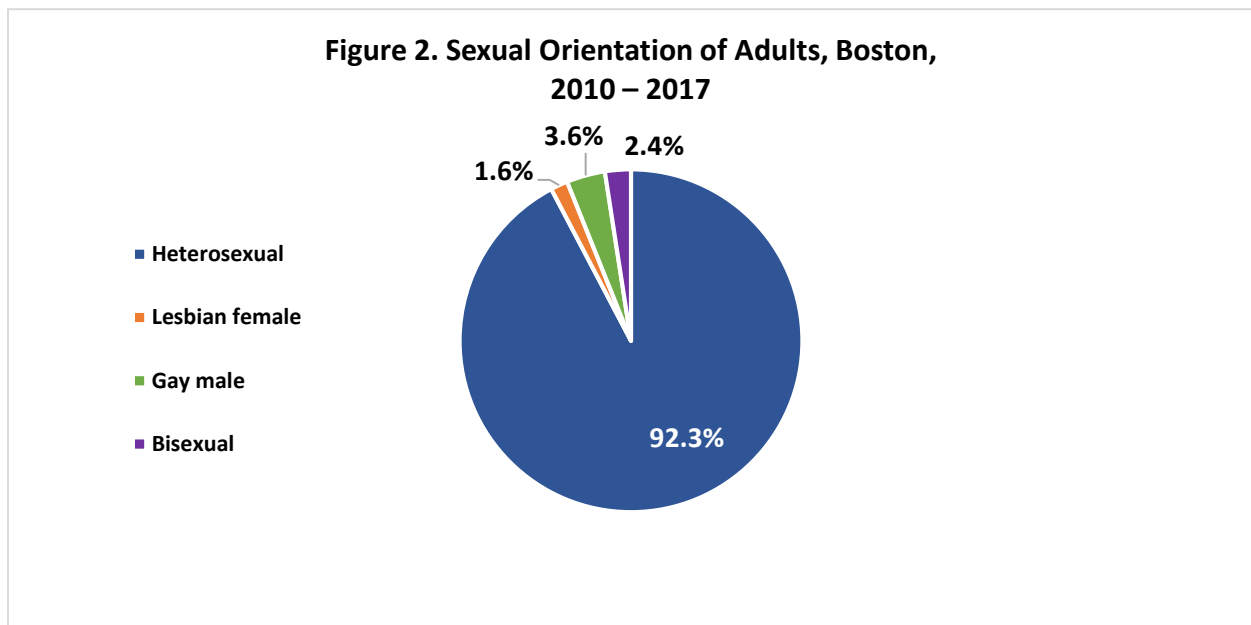


Figure 3. Sexual Orientation of LGB Adults, Boston, 2010 – 2017

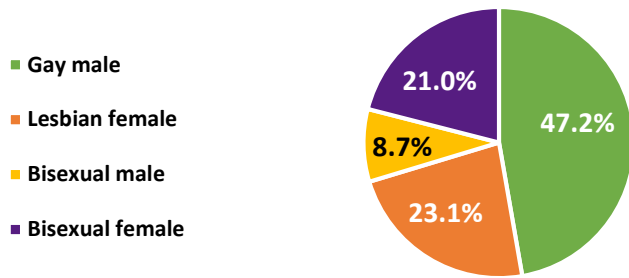


Figure 4. Percentage of Adults Who Identify as LGB in Boston by Year

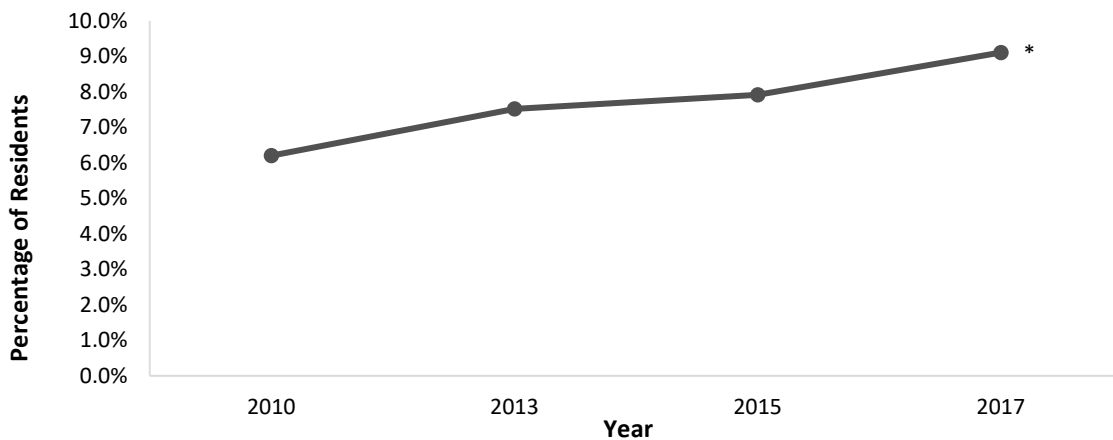
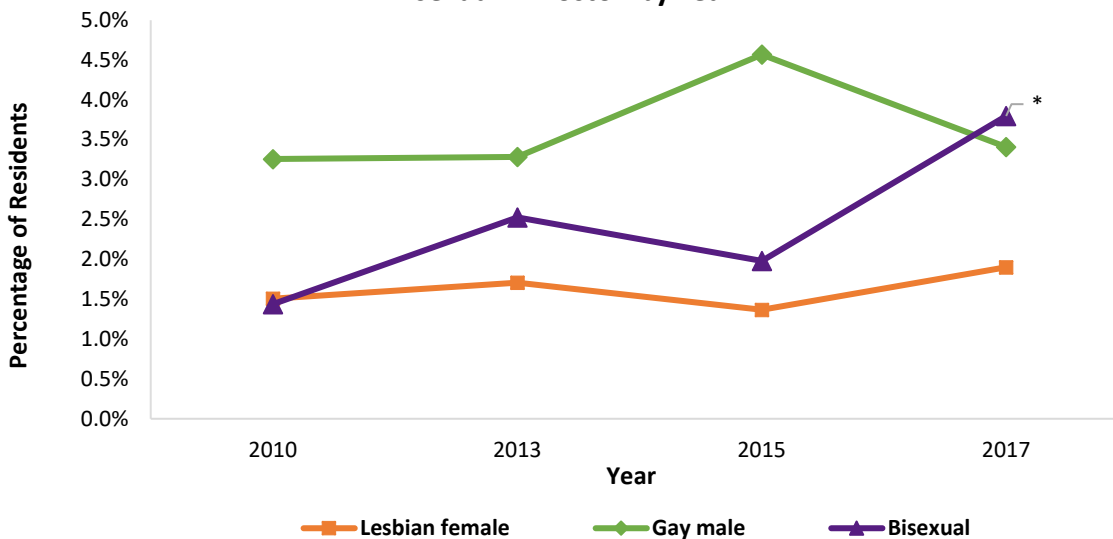


Figure 5. Percentage of Adults Who Identify as Lesbian, Gay, and Bisexual in Boston by Year



* Indicates significant increase over time.

d. Demographics & Social Determinants of Health among Lesbian/Gay and Bisexual Adults

Table 1 shows for 2010, 2013, 2015, and 2017 combined, lesbian and gay adult Boston residents, as a group were predominantly male (69.2%), White non-Latinx (76.2%), US-born (86.4%), and either never married (49.9%) or a member of an unmarried couple living together (21.1%). In general, Boston lesbian and gay adults reported experiencing relatively high socioeconomic status. Compared with heterosexual adult residents, higher percentages of lesbian and gay adults were employed (71.8%), owned their homes (48.8%), had attained a bachelor's degree or higher education (68.5%), and had household incomes of \$50,000 or more (62.7%; see Table 1). Higher percentages of lesbian and gay adults experienced one to three ACEs (23.5% experienced 1 ACE and 24.0% experienced two to three ACEs) and violence as an adult (15.9%) compared with heterosexual residents (19.1% and 12.7%; 11.4%, respectively).

Bisexual adult residents were predominantly female (72.7%), younger (i.e., of ages under 30; 56.4%), US-born (84.4%), and had never been married (56.6%). In general, Boston bisexual adults reported socioeconomic status that reflected their younger ages with higher percentages reporting household incomes of less than \$25,000 (45.9%), being unassisted renters (53.8%), and having attained some college education (34.8%) compared with heterosexual adults (30.4%, 41.8%, and 23.4%, respectively). A higher percentage of bisexual adults reported some food insecurity (i.e., "food they bought didn't last and they didn't have the money to buy more;" 31.7%) compared with heterosexual adults (21.9%). Higher percentages of bisexual adults reported experiencing at two to three ACEs (21.3%) and having experienced violence as an adult (35.1%) compared with heterosexual adults (12.7%, and 11.4%, respectively). Despite their younger ages, more than one in three bisexual adults had experienced physical and/or sexual violence compared with one in ten heterosexual adults.

Table 1. Demographic Characteristics of Boston Adults by Sexual Orientation, BBRFSS 2010 – 2017

Demographics Population Estimate (%)	Lesbian/Gay			Bisexual			Heterosexual (Reference)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
Overall (row percent)	5.3	4.7	5.8	2.4	2.0	2.9	92.3	91.6	93.0
Sex									
Female	30.8	26.0	35.7	72.7	64.0	81.4	52.9	51.5	54.3
Male	69.2	64.3	74.0	27.3	18.6	36.0	47.1	45.7	48.5
Race/Ethnicity									
White non-Latinx (nL)	76.2	71.4	81.1	54.0	44.5	63.5	49.2	47.9	50.6
Black nL	8.4	5.4	11.4	23.0	15.6	30.4	23.1	22.0	24.1
Latinx	8.3	5.4	11.3	14.2	8.3	20.1	16.6	15.6	17.6
Other nL	7.0	3.7	10.3	8.8	4.2	13.5	11.1	10.2	12.1
Age									
<i>Mean Age (years)</i>	41.8	40.1	43.6	32.5	30.4	34.6	41.6	41.2	42.1
18-29	26.7	20.7	32.8	56.4	47.2	65.7	32.0	30.6	33.5
30-44	29.3	24.2	34.4	23.7	15.7	31.7	28.9	27.7	30.2
45-59	30.1	26.0	34.3	13.3	8.5	18.0	20.5	19.6	21.4
60+	13.8	11.1	16.5	6.6	4.1	9.1	18.6	17.8	19.3
Education									
<HS or HS grad	16.7	12.1	21.3	30.1	21.1	39.1	34.1	32.8	35.4
Some college	14.8	11.1	18.6	34.8	25.3	44.4	23.4	22.2	24.6
College grad+	68.5	63.2	73.7	35.1	26.1	44.0	42.6	41.2	43.9
Household Income									
<\$25,000	19.4	14.5	24.2	45.9	35.8	56.1	30.4	29.0	31.7
\$25K-<\$50K	17.9	13.7	22.1	16.5	9.2	23.7	22.0	20.7	23.3
\$50,000+	62.7	57.2	68.3	37.6	28.2	47.0	47.6	46.2	49.1
Employment									
Employed	71.8	66.9	76.7	55.3	45.6	65.0	62.0	60.6	63.3
Out of work/Other	28.2	23.3	33.1	44.7	35.0	54.4	38.0	36.7	39.4
Place of Birth									
US	86.4	82.3	90.4	84.4	78.1	90.6	67.4	66.1	68.7
All Others	13.6	9.6	17.7	15.6	9.4	21.9	32.6	31.3	33.9
Marital Status									
Married	23.4	19.3	27.5	13.1	7.9	18.3	33.5	32.3	34.7
Divorced/Widowed/Separated	5.7	3.8	7.5	10.8	5.9	15.8	16.3	15.5	17.1
Never married	49.9	44.4	55.4	56.6	47.0	66.1	42.4	41.0	43.8
Member of unmarried couple	21.1	16.4	25.8	19.5	11.2	27.9	7.8	6.9	8.6
Housing									
Assisted Renter [†]	8.6	5.6	11.7	14.0	8.0	20.0	15.0	14.1	16.0
Unassisted Renter	38.2	32.3	44.0	53.8	44.1	63.5	41.8	40.4	43.2
Non-Renter Non-Owner	4.4	1.9	6.8	12.8	6.0	19.7	8.0	7.1	8.9
Homeowner	48.8	43.3	54.3	19.4	12.4	26.4	35.2	34.0	36.4

Demographics Population Estimate (%)	Lesbian/Gay			Bisexual			Heterosexual (Reference)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
Food purchased didn't last, no money to buy more	15.2	10.7	19.7	31.7	22.4	40.9	21.9	20.8	23.1
Hungry but didn't eat because couldn't afford enough food	8.2	4.9	11.4	14.5	7.5	21.5	10.8	9.9	11.6
ACEs[‡]									
0	52.5	47.0	58.0	55.8	46.0	65.5	68.1	66.8	69.4
1	23.5	19.2	27.9	22.9	14.4	31.3	19.1	18.0	20.2
2-3	24.0	19.5	28.5	21.3	13.7	29.0	12.7	11.8	13.7
[Adult] Lifetime Physical or Sexual Violence	15.9	12.4	19.5	35.1	25.5	44.6	11.4	10.5	12.3

Shading indicates statistically significant difference from reference group.

[†] Assisted renter indicates a Boston Housing Authority resident or a Section 8 recipient

[‡] ACEs measures include three measures of household dysfunction: (1) lived with a parent/caregiver who was depressed, mentally ill or suicidal; (2) lived with a parent/caregiver who was a problem drinker/alcoholic, or used drugs; (3) parents/adults who were physically violent towards each other.

Table 2. Demographic Characteristics of Boston Adults by Sex and Sexual Orientation, BBRFSS 2010 – 2017

Demographics	Lesbian Females			Bisexual Females			Heterosexual Females (Reference for Females)			Gay Males			Bisexual Males			Heterosexual Males (Reference for Males)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
Overall (row percent)	1.6	1.3	1.9	1.8	1.4	2.2	48.8	47.5	50.1	3.6	3.1	4.1	0.7	0.4	0.9	43.5	42.1	44.8
Race/Ethnicity																		
White nL	72.2	64.4	79.9	53.3	42.1	64.6	48.0	46.2	49.8	78.1	72.0	84.1	55.7	38.0	73.5	50.7	48.5	52.8
Black nL	11.9	7.0	16.9	22.5	13.7	31.3	25.2	23.8	26.6	6.9	3.0	10.7	24.4	10.5	38.3	20.6	19.1	22.2
Latinx	10.7	5.6	15.7	14.9	7.6	22.2	16.3	15.0	17.5	7.3	3.6	10.9	*			16.9	15.3	18.5
Other nL	*			*			10.5	9.3	11.7	7.8	3.6	12.0	*			11.9	10.4	13.3
Age																		
<i>Mean Age (years)</i>	40.8	38.3	43.2	30.6	28.6	32.7	42.7	42.1	43.3	42.3	40.0	44.6	37.4	31.9	42.8	40.5	39.8	41.2
18-29	30.1	20.4	39.7	60.6	50.2	71.0	30.0	28.1	31.9	25.3	17.6	32.9	45.4	26.3	64.5	34.3	32.0	36.6
30-44	28.9	20.0	37.7	25.6	16.3	34.8	28.8	27.1	30.4	29.5	23.3	35.8	*			29.2	27.2	31.1
45-59	28.3	21.8	34.7	9.3	5.0	13.6	21.3	20.1	22.5	31.0	25.7	36.3	23.9	10.9	36.9	19.6	18.2	21.0
60+	12.8	8.8	16.8	4.5	2.4	6.7	20.0	19.0	21.0	14.2	10.7	17.7	*			17.0	15.8	18.1
Education																		
<HS or HS grad	14.5	7.7	21.2	30.8	20.0	41.7	31.6	29.9	33.3	17.7	11.8	23.6	28.2	12.3	44.1	36.9	34.8	38.9
Some college	14.3	8.1	20.4	28.0	17.8	38.3	24.6	23.1	26.2	15.1	10.4	19.7	53.0	34.7	71.2	22.0	20.2	23.8
College grad+	71.3	63.0	79.6	41.1	30.0	52.2	43.8	42.0	45.6	67.2	60.6	73.9	18.9	8.9	28.9	41.2	39.1	43.2
Household Income																		
<\$25,000	20.7	12.7	28.8	44.0	31.9	56.0	31.1	29.3	32.8	18.7	12.7	24.7	50.9	31.9	69.8	29.6	27.5	31.7
\$25K-<\$50K	17.7	10.9	24.5	17.9	8.4	27.3	23.1	21.4	24.7	18.0	12.8	23.2	*			20.8	18.9	22.7
\$50,000+	61.6	52.4	70.7	38.2	27.3	49.1	45.8	43.9	47.7	63.3	56.4	70.1	36.1	17.8	54.4	49.6	47.4	51.9
Employment																		
Employed	71.0	62.5	79.4	55.6	44.2	67.1	58.1	56.4	59.9	72.2	66.2	78.2	54.4	35.9	73.0	66.2	64.2	68.3
Out of work/Other	29.0	20.6	37.5	44.4	32.9	55.8	41.9	40.1	43.6	27.8	21.8	33.8	45.6	27.0	64.1	33.8	31.7	35.8
Place of Birth																		
US	89.0	83.3	94.7	86.7	79.5	93.9	69.3	67.7	71.0	85.2	80.0	90.4	78.2	65.4	91.0	65.2	63.2	67.3
All Others	11.0	5.3	16.7	13.3	6.1	20.5	30.7	29.0	32.3	14.8	9.6	20.0	21.8	9.0	34.6	34.8	32.7	36.8

Demographics	Lesbian Females			Bisexual Females			Heterosexual Females (Reference for Females)			Gay Males			Bisexual Males			Heterosexual Males (Reference for Males)		
	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI	Estimate	Lower CI	Upper CI
Population Estimate (%)																		
Marital Status																		
Married	36.1	27.7	44.5	15.2	8.4	22.0	31.2	29.7	32.8	17.7	13.3	22.1	*			36.0	34.1	38.0
Divorced/Widowed/Separated	6.5	3.7	9.3	*			20.5	19.3	21.6	5.3	2.9	7.7	*			11.7	10.6	12.8
Never married	37.6	28.7	46.4	54.9	43.6	66.2	40.9	39.0	42.7	55.3	48.7	62.0	61.1	43.9	78.2	44.2	42.0	46.4
Member of unmarried couple	19.9	11.5	28.2	22.4	12.1	32.6	7.5	6.3	8.6	21.6	16.0	27.3	*			8.1	6.9	9.4
Housing																		
Assisted Renter [†]	9.7	4.4	15.1	15.6	7.9	23.4	17.7	16.4	19.0	8.2	4.5	11.8	*			12.0	10.6	13.4
Unassisted Renter	39.4	29.6	49.2	51.9	40.5	63.4	38.6	36.8	40.5	37.6	30.4	44.9	58.6	40.6	76.7	45.4	43.2	47.5
Non-Renter Non-Owner	*			15.0	6.2	23.7	7.8	6.6	8.9	*			*			8.2	6.9	9.6
Homeowner	45.5	36.7	54.4	17.5	10.3	24.7	35.9	34.3	37.5	50.2	43.3	57.1	*			34.4	32.5	36.3
Food purchased didn't last, no money to buy more	17.9	10.4	25.3	32.2	21.3	43.1	23.4	21.9	24.9	14.1	8.5	19.6	30.2	13.2	47.3	20.2	18.4	22.0
Hungry but didn't eat because couldn't afford enough food	10.4	4.9	15.8	14.2	5.9	22.5	10.9	9.8	12.0	7.2	3.1	11.2	*			10.6	9.2	11.9
ACEs[‡]																		
0	47.8	38.5	57.1	50.1	38.5	61.6	66.6	64.9	68.4	54.5	47.8	61.3	71.0	56.6	85.4	69.8	67.8	71.9
1	23.6	16.6	30.6	26.0	15.3	36.7	19.8	18.3	21.2	23.5	18.1	28.9	*			18.4	16.7	20.1
2-3	28.6	20.4	36.7	24.0	14.2	33.7	13.6	12.4	14.9	22.0	16.6	27.3	*			11.7	10.3	13.1
[Adult] Lifetime Physical or Sexual Violence	18.2	11.9	24.5	39.8	28.1	51.4	15.7	14.4	16.9	15.0	10.7	19.3	*			6.5	5.4	7.7

Shading indicates statistically significant difference from reference group.

*Data not presented due to insufficient sample size.

[†] Assisted renter indicates a Boston Housing Authority resident or a Section 8 recipient

[‡] ACEs measures include three measures of household dysfunction: (1) lived with a parent/caregiver who was depressed, mentally ill or suicidal; (2) lived with a parent/caregiver who was a problem drinker/alcoholic, or used drugs; (3) parents/adults who were physically violent towards each other.

i. Lesbians

As shown in Table 2, for 2010, 2013, 2015, and 2017 combined, lesbian female adult Boston residents were predominately White non-Latinx, US-born, and married or cohabitating (i.e., a member of an unmarried couple living together). A higher percentage of lesbian females were White non-Latinx (72.2%) compared with heterosexual females (48.0%), and a lower percentage of lesbian females were Black non-Latinx (11.9%) compared with heterosexual females (25.2%). While the percentages of other age ranges were similar with heterosexual females, a higher percentage of lesbian females were ages 45-59 (28.3%) compared with heterosexual females (21.3%), and a lower percentage of lesbian females were ages 60 and above (12.8%) compared with heterosexual females (20.0%). A higher percentage of lesbian females were born in the US (89.0%) compared with heterosexual females (69.3%). While percentages of other categories of marital status were similar for lesbian females compared with heterosexual females, a higher percentage of lesbian females were cohabitating (19.9%) compared with heterosexual females (7.5%), and a lower percentage of lesbian females were divorced, widowed, or separated (6.5%) compared with heterosexual females (20.5%).

Of the SDoH, lesbian female adult Boston residents were predominately employed, homeowners, food secure; and had a bachelor's degree or higher, and household income of \$50,000 or more. A higher percentage of lesbian females were employed (71.0%) compared with heterosexual females (58.1%). A higher percentage of lesbian females had a bachelor's degree or higher (71.3%) compared with heterosexual females (43.8%), and lower percentages of lesbian females had only some college (14.3%) education or a high school diploma or less (14.5%) compared with heterosexual females (24.6% and 31.6%, respectively). A higher percentage of lesbian females had household income of \$50,000 or more (61.6%) compared with heterosexual females (45.8%), and a lower percentage of lesbian females had household income of less than \$25,000 (20.7%) compared with heterosexual females (31.1%). A higher percentage of lesbian females were homeowners (45.5%) compared with heterosexual females (35.9%), and a lower percentage of lesbian females were assisted renters (9.7%) compared with heterosexual females (17.7%). A higher percentage of lesbian females reported experiencing two to three ACEs (28.6%) compared with heterosexual females (13.6%), and a lower percentage of lesbian females reported experiencing no ACEs (47.8%) compared with heterosexual females (66.6%).

ii. Bisexual Females

For 2010, 2013, 2015, and 2017 combined, bisexual female adult Boston residents were predominately younger – ages under 30, US-born, and have never been married. A higher percentage of bisexual females were ages 18-29 (60.6%) compared with heterosexual females (30.0%), and lower percentages of bisexual females were ages 45-59 (9.3%) or ages 60 and above (4.5%) compared with heterosexual females (21.3% and 20.0%, respectively). A higher percentage of bisexual females were US-born (86.7%) compared with heterosexual females (69.3%). Higher percentages of bisexual females were never married (54.9%) or cohabitating (22.4%) compared with heterosexual females (40.9% and 7.5%, respectively), and a lower percentage of bisexual females were married (15.2%) compared with heterosexual females (31.2%). Bisexual females were similar with heterosexual females in terms of race/ethnicity.

Bisexual female adult Boston residents were predominately unassisted renters and food secure. Higher percentages of bisexual females were unassisted renters (51.9%) or had other housing arrangements (non-renter, non-owner; 15.0%) compared with heterosexual females (38.6% and 7.8%, respectively), and a lower percentage of bisexual females were homeowners (17.5%) compared with heterosexual females (35.9%). A higher percentage of bisexual females reported experiencing two to three ACEs (24.0%) compared with heterosexual females (13.6%), and a lower percentage of bisexual females reported experiencing no ACEs (50.1%) compared with heterosexual females (66.6%). A higher percentage of bisexual females reported experiencing physical or sexual violence in their adult lifetimes (39.8%) compared with heterosexual females (15.7%). Bisexual females in Boston were similar with heterosexual females in terms of education, employment, and household income.

iii. Gay Males

For 2010, 2013, 2015, and 2017 combined, gay male adult Boston residents were predominately White non-Latinx, US-born, and never married. A higher percentage of gay males were White non-Latinx (78.1%) compared with heterosexual males (50.7%). Lower percentages of gay males were Black non-Latinx (6.9%) or Latinx (7.3%) compared with heterosexual males (20.6% and 16.9%, respectively). A higher percentage of gay males were ages 45-59 (31.0%) compared with heterosexual males (19.6%), and a lower percentage of gay males were ages 18-29 (25.3%) compared with heterosexual males (34.3%). A higher percentage of gay males were US-born (85.2%) compared with heterosexual males (65.2%). Higher percentages of gay males were never married (55.3%) or cohabitating (21.6%) compared with heterosexual males (44.2% and 8.1%, respectively), and lower percentages of gay males were married (17.7%) or divorced, widowed or separated (5.3%) compared with heterosexual males (36.0% and 11.7%, respectively).

Gay male adult Boston residents were predominately employed, homeowners, food secure, had a bachelor's degree or higher, and had household income of \$50,000 or more. A higher percentage of gay males had a bachelor's degree or higher (67.2%) compared with heterosexual males (41.2%), and lower percentages of gay males had only some college (15.1%) education or a high school diploma or less (17.7%) compared with heterosexual males (22.0% and 36.9%, respectively). A higher percentage of gay males had household income of \$50,000 or more (63.3%) compared with heterosexual males (49.6%), and a lower percentage of gay males had household income of less than \$25,000 (18.7%) compared with heterosexual males (29.6%). A higher percentage of gay males were homeowners (50.2%) compared with heterosexual males (34.4%), and a lower percentage of gay males were assisted renters (8.2%) compared with heterosexual males (12.0%). A higher percentage of gay males reported experiencing two to three ACEs (22.0%) compared with heterosexual males (11.7%), and a lower percentage of gay males reported experiencing no ACEs (54.5%) compared with heterosexual males (69.8%). A higher percentage of gay males reported experiencing physical or sexual violence in their adult lifetimes (15.0%) compared with heterosexual males (6.5%). Gay males were similar with heterosexual males in terms of employment status.

iv. Bisexual Males

Due to the small sample size of the bisexual male adult population in Boston (0.7% of Boston's overall population for 2010, 2013, 2015 and 2017 combined), there were limited comparisons to be made between bisexual and heterosexual male adult Boston residents. Bisexual males were predominantly White non-Latinx, younger, ages under 30, US-born, and never married. Bisexual male adult Boston residents were similar with heterosexual males in terms of place of birth.

Bisexual males were predominantly unassisted renters and reported experiencing no ACEs. A higher percentage of bisexual males had some college education (53.0%) compared with heterosexual males (22.0%), and a lower percentage had a bachelor's degree or higher (18.9%) compared with heterosexual males (41.2%). Bisexual males in Boston were similar with heterosexual males in terms of employment.

III. Summary

Boston's LGBT population is diverse demographically and presents with varying levels of social determinants of health. Data that speak for all LGBT residents may reinforce an image of Boston's LGBT population as a homogenous group and miss important differences that exist among and between LGBT sub-population groups and their heterosexual and cisgender peers. Data from the BBRFSS reveal transgender adult residents living in Boston were relatively heterogenous with respect to race/ethnicity and age but had relatively low socioeconomic status with respect to household income, educational attainment, and receiving rental assistance. Lesbian and gay adult residents were predominantly male, White non-Latinx, US-born, and living with relatively high social economic status with respect to household income, educational attainment, and home ownership. Bisexual adult residents were predominantly female, young, unmarried, and with socioeconomic status reflecting their age. Overall, bisexual adult residents shared similar demographic and SDoH patterns with heterosexual adult residents than with lesbian/gay male adult residents. Further stratification of LGB status by sex reinforced these patterns. These population characteristics provide useful insight for future public health research and policy supporting LGBT adult Bostonians. Given the heterogeneity within Boston's LGBT population described in this brief, future analyses should consider lesbian, gay male, bisexual, and transgender identity separately as data permits to provide more thorough descriptions of the health and risk factor experiences of these population groups.

IV. Data Source and Methods

Data from the 2010, 2013, 2015, and 2017 BBRFSS was used for this analysis. BBRFSS data for these years was collected via stratified random sampling with a probability of selection related to the number of adults and telephone lines in a given household. One adult from each eligible household contacted is randomly selected for an interview. In the 2010, 2013, 2015, and 2017 survey years, respectively, 9%, 39%, 36%, and 71% of the sample consisted of cell phone-only households. Data were post-stratified to age, sex, race/ethnicity, education, and marital status population parameters for Boston and subsequently scaled to produce weighting proportionate to the noninstitutionalized adult population size across years.

The percentages of adults identifying as LGBT stated in this brief assumes that no additional bias was incurred as a result of post-stratification to these five population parameters. If in practice, adults identifying as LGBT participated in the survey at differential rates relative to their heterosexual and cisgender peers across these dimensions, such differences would not have been captured during post-stratification and would have had a distorting influence on the sexual orientation and gender identity percent distribution presented in this brief. The pooled data were analyzed by lesbian, gay, bisexual, transgender, heterosexual and cisgender self-identification. There were 263 lesbian, 563 gay male, 150 bisexual female, 73 bisexual male, and 66 transgender resident respondents across the combined years. Collectively, LGB adult residents comprised 8.0% of the unweighted sample and 7.7% of the weighted population data used for the analysis. In general, post-stratification resulted in weighting the lesbian and gay respondent samples lower and the female and male bisexual respondent samples higher due mainly to age differences between the sample and population data. Transgender adult resident respondents were analyzed separately due to gender identity and sexual orientation being distinct characteristics.

a. Definitions

Disaggregating data (e.g., race, ethnicity, gender, sexuality, etc.) is required to understand differences in experiences that can inform ways to improve public health approaches. When analyzing and reporting health data, it is important to describe the known and potential limitations of that data, particularly when it comes to the evolving intersectionality between sex and gender.⁹ BPHC acknowledges the difference between *sex* and *gender*. Informed by the Fenway Institute's shared definitions:

- Sex is assigned at birth (female, male or intersex), and is most often based on the child's external anatomy
- Gender is a person's inner sense of being a boy/man/male, girl/woman/female, another gender, or no gender (other terms used to describe a person who identifies as another or no gender include gender diverse, gender expansive, gender fluid, gender queer, gender non-conforming, and gender variant).¹⁰

Additionally, gender, like race, is a socially constructed variable, resulting from a mixture of behaviors, expectations, cultural norms, and attitudes.^{11,9}

In analyzing and reporting on health indicators and outcomes by sex, gender, or both, BPHC makes every effort to distinguish between sex and gender as the data permits. However, many times these two terms are used interchangeably on surveys, forms, and in data analysis (e.g., some data sources do not clarify whether a question about gender or sex was asked).¹²

It is necessary to acknowledge that improved methods to measure gender are still developing and to understand that both sex and gender exists on a continuum and can shift over time.¹³ BPHC is continuously working to improve its data collection, analysis, and reporting to include experiences of transgender and gender nonconforming individuals and to increase accuracy of sex and gender data variables.

Sexual orientation refers to “how a person characterizes their emotional and sexual attraction to others.”¹⁰ This data brief presents data by lesbian, gay (male), bisexual, and heterosexual orientations:

Lesbian female: a respondent who indicated female sex and “gay, lesbian, or homosexual” sexual orientation.

Gay male: a respondent who indicated male sex and “gay, lesbian, or homosexual” sexual orientation.

Bisexual: a respondent who indicated “bisexual” sexual orientation.

Heterosexual: a respondent who indicated “straight or heterosexual” sexual orientation.

Gender identity refers to a person’s inner sense of self; a person can identify as a man, woman, something else, or no gender.¹⁰ This data brief presents data by transgender and cisgender identities:

Transgender: a respondent who indicated that they considered themselves to be transgender, including “male-to-female,” “female-to-male,” or “gender nonconforming.”¹⁰ A transgender person is someone whose “gender identity and assigned sex at birth do not correspond.”¹⁰

Cisgender: a respondent who indicated that they do not identify as transgender; i.e., they identify with the sex they were assigned at birth.¹⁰

b. Measures

Housing Status: Two variables were leveraged to generate a four-level housing status variable. One variable assesses receipt of housing assistance as a resident of a building owned by the Boston Housing Authority (BHA), a household receiving rental assistance including Section 8, or no assistance. The second variable assesses homeownership as owning, renting or another housing arrangement. Together, these variables were used to create a housing variable with four categories: assisted renter (includes BHA and Section 8 renters), unassisted renter, homeowner, and some other arrangement.

Food Security: Two variables are related to low food security but are the same measures established by the United States Department of Agriculture.¹⁴ A response of often true or sometimes true to the statement “the food we bought just didn’t last, and we didn’t have money to get more” in the past 12 months was considered the risk response. A response of often true or sometimes true to the statement “we were hungry but didn’t eat because we couldn’t afford enough food” in the past 12 months was considered the risk response.

Lifetime Violence: Physical or sexual violence experienced by the respondent during their adult life (i.e., since turning age 18) was assessed as a yes/no response.

ACEs: The cumulative ACEs score (0-3) included the three ACEs measures asked during the 2010, 2013, 2015, and 2017 survey years. These three variables assess household dysfunction during the respondent’s childhood: (1) lived with a parent/caregiver who was depressed, mentally ill or suicidal; (2)

lived with a parent/caregiver who was a problem drinker/alcoholic, or used drugs; (3) parents/adults who were physically violent towards each other.

c. Statistical Analysis

All statistical procedures involved a design-based approach accounting for the disproportionate probability of selection among survey respondents and subsequent poststratification to Boston's population. The percentages of missing values for the primary variables in this analysis ranged from 0.5% (educational attainment) to 13.8% (household income). This analysis conservatively treated missing responses as not missing completely at random by invoking the SAS NOMCAR option.

Point estimates and confidence intervals were calculated from weighted data. Unless otherwise noted, data were suppressed for cell counts less than 5, unweighted sample denominators less than 50, or when the coefficient of variation was 0.3 or greater. Chi-square and t-tests were used to assess statistically significant differences in prevalence and the mean of demographic and SDoH variables between sexual minority categories and heterosexual categories. Trends in the overall LGB population and sexual minority categories over time were tested with logistic regression. All data analysis was performed in SAS® version 9.4.

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