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Inequities in chronic stress exposure at the intersection of race, gender, and sexual identity in a nationally representative sample of US adults



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Background

Overlapping systems of oppression, such as racism, sexism, and heterosexism, can increase exposure to stressors for individuals with multiple marginalized identities.¹

While research has explored the relationship between sexual identity alone and C-reactive protein (CRP)^{2,3} an upstream biological marker of chronic stress exposure, the evidence has been inconsistent.

Purpose

To examine whether race/ethnicity, gender, and sexual identity interact to produce unequal levels of CRP.

Methods

Data: 10,372 participants who contributed biospecimen data in the National Health and Nutrition Examination Survey (NHANES; 2003-2010)

Intersectional Identities: Self-reported race, gender, and sexual identity

Outcome: Log-transformed C-reactive protein (CRP) as measured from blood specimen samples.

Analysis: Descriptive (weighted percents and means) and unadjusted linear regression (referent: heterosexual, non-Hispanic White men).

Results

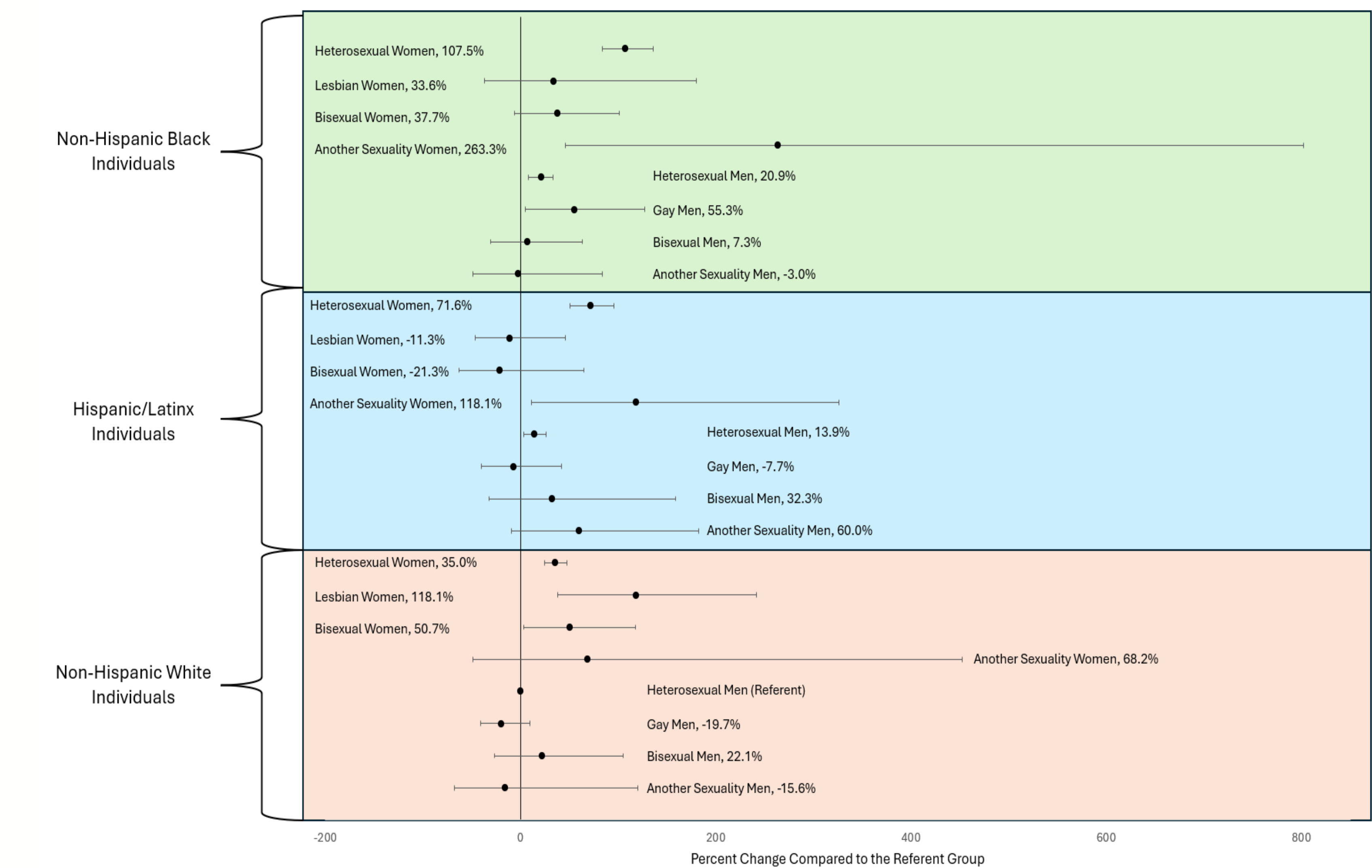
Tables 1-3: Income, education, and marital status differed considerably by intersectional identity.

Non-Hispanic Black	Women Sexual Identity				Men Sexual Identity			
	Heterosexual (N = 1030)	Gay/Lesbian (N = 16)	Bisexual (N = 43)	Another Sexual Identity (N = 8)	Heterosexual (N = 1083)	Gay (N = 17)	Bisexual (N = 22)	Another Sexual Identity (N = 5)
	Total Percent	93.9	1.5	3.9	0.8	96.1	1.6	2
Age^b								
20-59	39.62 ± 0.38	31.82 ± 2.00	31.57 ± 1.75	40.32 ± 3.29	38.57 ± 0.40	31.68 ± 2.15	36.52 ± 2.07	40.75 ± 5.06
Marital Status^c								
Married/Living with Partner	40.6	38.7	27.3	47.4	55.5	11.9	27.2	82.8
Used to be Married/Never Married	59.4	61.3	72.7	52.6	44.5	88.1	72.8	17.2
Education^c								
High school graduate or less than HS	41.1	32	53.5	47.5	52.2	39.2	50.6	59.6
Some College/ College Graduate or Above	58.9	68	46.5	52.5	47.8	60.8	49.4	40.4
FPL^b								
0-5.00	2.39 ± 0.07	2.14 ± 0.44	1.93 ± 0.18	1.97 ± 0.31	2.58 ± 0.06	2.63 ± 0.19	2.68 ± 0.27	2.61 ± 0.82

Hispanic/Latinx	Women Sexual Identity				Men Sexual Identity			
	Heterosexual (N = 1387)	Gay/Lesbian (N = 12)	Bisexual (N = 26)	Another Sexual Identity (N = 16)	Heterosexual (N = 1495)	Gay (N = 26)	Bisexual (N = 23)	Another Sexual Identity (N = 11)
	Total Percent	95.7	1.1	2	1.2	96.3	1.6	1.6
Age^b								
20-59	37.41 ± 0.30	34.73 ± 4.11	27.45 ± 1.96	40.71 ± 2.51	35.96 ± 0.31	36.02 ± 1.75	38.29 ± 1.82	37.91 ± 3.33
Marital Status^c								
Married/Living with Partner	65.1	8.8	22.5	65.4	69.3	26.4	14.9	82.5
Used to be Married/Never Married	34.9	91.2	77.5	34.6	30.7	73.6	85.1	17.5
Education^c								
High school graduate or less than HS	58	63.9	36.4	63.6	70.5	11.7	45.9	82.2
Some College/ College Graduate or Above	42	36.1	63.6	36.4	29.5	88.3	54.1	17.8
FPL^b								
0-5.00	2.09 ± 0.06	1.71 ± 0.47	1.99 ± 0.28	1.47 ± 0.36	2.06 ± 0.05	2.92 ± 0.42	2.24 ± 0.41	1.84 ± 0.31

Non-Hispanic White	Women Sexual Identity				Men Sexual Identity			
	Heterosexual (N = 2370)	Gay/Lesbian (N = 39)	Bisexual (N = 101)	Another Sexual Identity (N = 7)	Heterosexual (N = 2556)	Gay (N = 39)	Bisexual (N = 35)	Another Sexual Identity (N = 5)
	Total Percent	94.9	1.4	3.5	0.3	96.4	2.3	11
Age^b								
20-59	41.14 ± 0.24	39.23 ± 1.77	34.87 ± 1.13	31.59 ± 4.98	40.18 ± 0.27	42.87 ± 1.45	40.13 ± 1.84	45.67 ± 4.91
Marital Status^c								
Married/Living with Partner	69.5	28.9	50.7	21.9	70.4	44.8	38.9	69.8
Used to be Married/Never Married	30.5	71.1	49.3	78.1	29.6	55.2	61.1	30.2
Education^c								
High school graduate or less than HS	32.1	29.2	40.1	28.6	36.9	5.1	36.1	0
Some College/ College Graduate or Above	67.9	70.8	59.9	71.4	63.1	94.9	63.9	100
FPL^b								
0-5.00	3.42 ± 0.07	2.89 ± 0.26	2.47 ± 0.19	1.76 ± 0.43	3.52 ± 0.06	3.88 ± 0.25	2.69 ± 0.35	3.56 ± 0.68

Figure 1. Compared to non-Hispanic White, heterosexual men, women generally had higher log-CRP levels, regardless of race and sexual identity. Black women of another sexuality had the highest percent change in log-CRP. Among men, those reporting another sexuality had the highest percent change in log-CRP.



Discussion

We observed the highest CRP values among those holding multiply marginalized identities.

Variations in both socioeconomic attributes and CRP levels by subgroups emphasize the importance of considering intersectional gender, race and ethnicity, and sexual identity in health research.

We recommend NHANES consults with experts from marginalized communities to enhance data collection practices related to sexual orientation and gender identity.

References

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