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Inequities in Anticipatory Stress of Police Brutality and Depressed Mood Among Women

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Abstract

Background Police brutality towards racially minoritized populations is structural racism. Even though most of the research on the health impacts of police brutality centers the experiences of men, women are also harmed by this structural violence.
Objectives We identify factors associated with the anticipatory stress of police brutality among women and examine its relationship with depressed mood across ethno-racial categories.
Methods Data came from the cross-sectional Survey of the Health of Urban Residents in the United States ($N=2796$). Logistic regressions were used to identify factors associated with odds of always worrying about the possibility of becoming a victim of police brutality and to examine its association with depression among Latinas, Black, and White women.
Results Odds of always worrying about police brutality were greater among Black women and Latinas compared to White women. Household history of incarceration was associated with anticipation of police brutality among Black women and Latinas but not among White women. Black women and Latinas with constant anticipation of police brutality and history of incarceration of a household member during their childhood had elevated odds of depressed mood.
Conclusion Although police brutality harms all women, the stressful anticipation of police brutality does not burden all women equally. Structural racism in communities of color continues to be associated with the anticipatory stress of police brutality and it harms the mental health of women of color. Developing policies to eliminate structural racism and for the allocation of resources to persons who are strongly impacted by these injustices is important.

Keywords Police brutality · Police violence · Police brutality and mental health · Anticipatory stressors and mental health · Police brutality against women

Introduction

Police brutality is police action or inaction that dehumanizes the victim, regardless of conscious intent [1]. It includes emotional and physical abuse, verbal assault, psychological intimidation, physical and sexual violence, and neglect [1, 2]. Brutality inflicted by the police extends beyond individual victims who interact with the police directly. Communities that are disproportionately exposed to police presence also experience this brutality vicariously or indirectly through the experiences of others in their social and kin networks or in the media. These vicarious experiences also impact their health [3–6]. Policing is a social determinant of health [7, 8]. Police brutality—a form of structural violence—is socially arranged, routinized, normalizes state sanctioned anti-Black violence, and even deems this violence and anti-Black surveillance as necessary to preserve "collective" safety [9–12]. As a social determinant of health, police brutality kills [10]. It is also associated with a broad range of physical and mental impairments regardless of whether victims directly experience police brutality or are exposed vicariously [12]. Here, we examine the anticipation of police brutality and its association with depressed mood among women.

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Police brutality is not random. It is one of the oldest and most enduring forms of structural racism [13]. Structural racism refers to the myriad of ways by which the laws, policies, and practices of systems and institutions foster racial discrimination by creating and assigning privileges and resources to people who are White while simultaneously disadvantaging and oppressing those who belong to racially minoritized groups [14]. What makes racism structural is that it is embedded in multiple systems—housing, education, health care, employment, law enforcement, and so forth—and it operates in multiple ways to shape outcomes by race. Structural racism is sustained by White supremacy: investments in White social, political, economic, and cultural domination through ideologies, conditions and practices that entitle White people to more dignity, value, and resources than others [15].

Police brutality makes the connections between policing, structural racism, and White supremacy visible. The modern-day institution of policing in the United States (U.S.) is an extension of colonial oppression and the enslavement of Africans in the Americas. For example, right after their arrival to what is currently known as New England, colonizers designated "constables" and "sheriffs" among themselves to surveil and murder Indigenous Peoples, thereby facilitating the seizing of lands and domination [16]. Similarly, patrols—organized groups of armed White men—used verbal and psychological assault, and physical violence to routinely police enslaved and freed Black persons [16]. Post-emancipation, the Black Codes were instituted, laws that essentially criminalized and violently punished Black people living in accordance with their status as free [17]. During the Jim Crow era, racialized systems of surveillance persisted and ensured the mass arrest, incarceration, and terrorization of Black people for violations of Jim Crow laws and customs. A key role of law enforcement during this era was to uphold the color line [17, 18]. This same system monitored, arrested, incarcerated, and murdered Latinx persons, and encouraged White mobs to lynch Mexicans perceived to be trespassers [18, 19]. Policing in the U.S. has always been about racial domination of Black and Brown people, about racism [17].

Racism is a stressor that deteriorates mental health and that shapes exposure to other stressors [20]. Exposure to stressors explains a significant proportion of racial variance in depressive symptoms [21]. It is no surprise then dipropionate and racialized direct and vicarious exposure to police brutality is associated depression, anxiety, psychological distress, suicidal ideation, and post-traumatic stress disorder [22, 23]. When stressors are grounded in racism, their effects on the mental health of populations that experience racism are amplified [24, 25], and the anticipation of these stressors, including racism, matters significantly for mental health [26–28].

Research that examines the social distribution of police brutality is consistent that people who are Black and Brown are more likely than Whites to be victims. Black, Hispanic/Latina/o/x, and Native Americans are more likely than their White peers to be stopped and arrested [16]. In 2015 and 2016, Black Americans were killed at more than twice the rate of Whites, and they were significantly more likely than White civilians to be unarmed when shot [17, 18]. In 2016, the number of years of life lost to police brutality is estimated at 54,754, with over half of these years belonging to people of color [17].

Gender also matters for exposure to police brutality. While many studies focus on the risks to Black and Brown men, women are also impacted. For example, in addition to physical violence, women experience high rates of psychological and sexual violence perpetrated by the police [19]. And, Black women are killed by the police at a rate more than double that of White women [20]. Racist stereotypes that consider Black and Brown women to be loud and aggressive expose them to police brutality [29]. In addition, the hyper criminalization of Black and Brown men has increased police stops, searches, and arrests among Latinas, Black, and Indigenous women who are perceived purveyors and drug couriers [29]. Yet, most of empirical work on the impact of police brutality on health centers the experiences of men and boys. Given that gender and race are implicated in exposure to police brutality, examining ethno-racial differences in anticipation of police brutality among women is important. We assess the relationship between anticipation of police brutality and depressed mood among women, paying attention to how this relationship might vary across ethno-racial categories.

Theoretical Framework: the Stress Process

The stress process is a sociological paradigm that posits that variation in mental health outcomes is shaped by variation in exposure to stressors [21]. Stressors are situations, conditions, and factors that impede one's ability to function by triggering harmful emotional and physiological responses [21]. Racism [20], mass incarceration [30], and the threat of deportation [31] are chronic stressors that impact health directly or by proliferation—the impact of one stressor that then causes other stressors and impacts many outcomes [30, 32]. Consistent with these conceptualizations, we view police brutality as a racialized chronic stressor given its origins in White supremacy and given the disproportionate exposure of communities of color to violent policing. Chronic stressors—the kinds of stressors that are continuous and open-ended—are particularly damaging for mental health and are nested in structural conditions and social circumstances [33]. Disproportionate police presence in Black neighborhoods and schools [11] and the privileging of White phenotypical features during routine stops and arrests [34]

are examples of structural and social conditions that increase ongoing risk of police brutality in communities of color.

Police brutality is also an anticipatory stressor. Anticipatory stressors are significant ongoing concerns about events or experiences that may occur in the future [33]. Anticipatory stressors are generated by knowledge about harmful experiences of others within one's network. This knowledge leads to awareness about the possibility that one might have similar harmful experiences [33]. Anticipatory stress triggers and sustains emotional and physiological responses that harm health [35, 36]. The anticipatory stress of police brutality is characterized by worry about a future where one might experience police brutality and is associated with depression. For example, anticipation of negative encounters between police and youth was associated with antenatal depressive symptoms among Black pregnant women in Atlanta [37]. In Washington D.C., Black men who avoid the police because they anticipated negative encounters had elevated depressive symptoms [38]. And, frequently worrying that one might become a victim of police brutality was associated with depression and anxiety among a sample of U.S. adults [39].

Rationale for Current Study

In the current study, we examine the anticipatory stress of police brutality and its association to depressed mood among women. To our knowledge, only one study has [25] examined the mental health impact of anticipation of police brutality among women, albeit, focusing on Black women and on the anticipatory stress of negative encounters between police and youth, not between women and the police. Here, we focus on the social distribution of anticipatory stress among women, answering four questions: (1) What factors are associated with anticipation of police brutality? (2) Are there differences in factors that are associated with anticipation of police brutality between White, Black, and Latina women? (3) What is the nature of the relationship between anticipation of police brutality and depressed mood? (4) Is this relationship similar for Black, White, and Latina women? Answers to these questions will expand our understanding of the impact of police brutality on the health of women, inform policies to eliminate this form of structural violence, and inform the delivery of mental health care and support for women.

Methods

Data

Data were obtained from the 2018 Survey of the Health of Urban Residents (SHUR), which uses a cross-sectional quota sample with a 58.5%.resoonse rate. SHUR assesses experiences and conditions that are relevant in the lives of non-institutionalized adults living in urban areas in the contiguous United States [40] and was approved by the Lehigh University Institutional Review Board. Our analytic sample is limited to respondents who identify as women ($N=2796$). Respondents were recruited from several national databases of individuals who have opted to participate in online surveys [40].

Measures

The main measures are depressed mood, anticipation of police brutality and race/ethnicity. Depressed mood was assessed using the 2-item Patient Health Questionnaire (PHQ-2), an initial screening instrument for depression usually used in primary care settings [41]. The first item assesses how often, in the past 2 weeks, respondents have been bothered by little interest or pleasure in doing things. The second item assesses how often, in the past 2 weeks, respondents have been feeling down, depressed, or hopeless. Response options are not at all (coded 0), several days (1), more than half the time (2), or nearly every day (3). The score for both items range from 0 to 6. A score of 3 or more on the PHQ-2 indicates a depressed mood with 83% sensitivity and 90% specificity [41]. For anticipation of police brutality, respondents were asked how often they worry that they would become a victim of police maltreatment or brutality. Response categories were "never," "sometimes," and "always." We combined race and ethnicity into one variable with ethnicity assigned first. Categories are non-Hispanic White, non-Hispanic Black/African American, and Hispanic/Latina.

Other central variables include (1) exposure to everyday discrimination assessed using the 5-item everyday discrimination scale that captures routine experiences of unfair treatment [42]. Discrimination scores ranged from 0 to 25 (Cronbach = 0.87, mean = 6.41, standard deviation 6.21). Higher scores reflect more frequent experiences of discrimination. (2) History of incarceration of a household member assessed by asking respondents if before they turned 18, they lived with anyone who served time in prison or went to jail (no/yes). (3) Personal negative encounters with the police coded "yes" if respondent reported at least one of the following experiences: police cursing at and threatening to arrest the respondent; frisking, searching or handcuffing the respondent; hitting, kicking, or shoving the respondent; spraying respondent with pepper spray or other chemicals; using an electroshock weapon such as a stun gun; or pointing a gun at respondent.

We controlled for self-rated health (excellent, very good, or good versus fair or poor), age (18–24, 25–34, 35–44, 45–54, and 65 +), sexual orientation (straight, bisexual,

lesbian, other), level of education (no high school, high school/GED, some college/associate degree/vocational school, and bachelor's degree or higher), and work status (not in the labor force, unemployed/looking for work, employed part time, and employed full time).

Analysis

We describe ethno-racial differences in anticipation of police brutality, depressed mood, everyday discrimination, household history of incarceration, negative encounters with police, and sociodemographic covariates. Significant differences between White and Black women and between White women and Latinas are assessed using chi-square and *t* tests. We then identify factors associated with anticipation of police brutality for the entire sample and disaggregated by the ethno-racial group using ordered logistic regression models. Finally, the relationship between anticipation of police brutality and depressed mood is assessed for the full sample and disaggregated by the ethno-racial group using binary logistic regression, controlling for all other variables.

Results

Sample characteristics are shown on Table 1. The sample is 71% White ($n=1989$), 16% Black ($n=440$), and 13% Latina ($n=367$). As shown in column 1 (full sample), a third of the respondents meet criteria for depressed mood (33.3%). Nearly one-third of the sample anticipate police brutality (31.8%), about one in two report at least one negative encounter with the police (55.3%) and one in five report that when they were under the age of 18, someone in their household was incarcerated (23.3%). The second, third, and fourth columns show that the proportion of Black women who always worried about police brutality is about five times greater than White women, and the proportion of Latinas who always worried about police brutality is three times greater than White women. Compared to White women, Black women and Latinas have more frequent experiences of discrimination, and significantly greater proportions of them report negative encounters with the police, as well as incarceration of a household member when they were children.

Factors associated with the anticipatory stress of police brutality are shown on Table 2. In the text, we only report the variables associated with greater odds of always anticipating police brutality. Controlling for confounders, odds of always worrying about becoming a victim of police brutality (compared to sometimes or never worrying) were significantly greater among Black and Latina respondents compared to Whites (O.R. = 5.66, C.I. = 4.51–7.09 and O.R. = 3.24, C.I. = 2.55–4.12, respectively). Each unit increase in everyday discrimination scores was associated with greater odds of always worrying about becoming a victim of police brutality (O.R. = 1.18, C.I. = 1.09–1.33). Experiencing a negative encounter with the police was associated with more than two times greater odds of anticipating police brutality (O.R. = 2.26, C.I. = 1.87–2.75). Similarly, respondents who have a history of incarceration of a household member during childhood had significantly greater odds of always worrying about police brutality than respondents with no history of household member incarceration (O.R. = 1.21, C.I. = 1.04–1.49).

Among White women (model 2), everyday discrimination (O.R. 1.13, C.I. = 1.11–1.16) and negative encounters with the police (O.R. = 2.30, C.I. = 1.77–2.98) were associated with greater odds of anticipation of police brutality. However, there was no relationship between household history of incarceration and anticipation of police brutality.

Factors associated with anticipation of police brutality among Black women are shown in model 3. Each unit increase in discrimination scores was associated with 20% higher odds of always worrying about police brutality (O.R. = 1.20, C.I. = 1.01–1.39). Black women who report negative encounters with the police had greater odds of anticipating police brutality than their peers without past negative encounters with the police (O.R. = 2.26, C.I. = 1.51–3.39). History of household member incarceration (O.R. = 1.28, C.I. = 1.17–1.64) was also associated with greater odds of always worrying about police brutality among Black women. Moreover, compared to those without a high school education, Black women with a bachelor's degree or higher had greater odds of always anticipating police brutality (O.R. = 1.19, C.I. = 1.05–1.74).

Among Latinas, higher everyday discrimination scores (O.R. = 1.13, C.I. 1.10–1.17), past negative encounters with the police (O.R. = 3.27, C.I. = 2.00–5.34), and growing up in a household where a household member was incarcerated (O.R. = 1.64.C.I. = 1.09–2.70) were each associated with greater odds of always worrying about police brutality.

Controlling for all variables, the associations between anticipation of police brutality and depressed mood are shown on Table 3. In text, we only report associations (or lack thereof) between central variables (anticipation of police brutality, past negative encounters with the police, everyday discrimination, and household history of incarceration) and depressed mood. In the full sample (model 1), women who always worried that they would become victims of police brutality had 45% greater odds of depressed mood compared to women who never worried about police brutality (O.R. = 1.45, C.I. = 1.05–2.00). Each unit increase in everyday discrimination was associated with slightly higher odds of depression (O.R. = 1.06, C.I. = 1.04–1.08). Negative encounters with the police and history of household incarceration were also associated

Table 1 Sample characteristics by ethno-racial category

	Full sample ($N=2796$)		Non-Hispanic White ($N=1989$)		Non-Hispanic Black ($N=440$)		Hispanic/Latina ($N=367$)	
	%	*n*	%	*n*	%	*n*	%	*n*
Depressed mood	33.83	946	33.33	663	34.32	151	35.97**	132
Anticipation of police brutality								
Never	68.22	1906	78.53	1562	38.58***	169	47.68***	175
Sometimes	23.19	648	16.74	333	40.41***	177	37.6***	138
Always	8.59	240	4.73	94	21.00***	92	14.71***	54
Discrimination score (mean)	$\bar{x}=6.41$	2796	$\bar{x}=5.76$	1989	$\bar{x}=7.77$***	440	$\bar{x}=8.24$***	367
Negative police encounters	55.29	1546	54.05	1075	58.86***	259	57.77***	212
Household incarceration	23.34	652	19.66	391	31.51***	138	33.51***	123
Sexual orientation								
Heterosexual	86.41	2416	87.68	1744	83.18	366	83.38	306
Bisexual	9.69	271	9.50	189	11.36	50	8.72	32
Lesbian	2.50	70	1.61	32	4.77	21	4.63	17
Other	1.39	39	1.21	24	0.68	3	3.27	12
Age category								
18–24	20.21	565	15.33	305	30.23**	133	34.60***	127
25–24	28.54	798	27.50	547	28.64	126	34.06	125
35–44	21.32	596	21.87	435	21.59	95	17.98	66
45–54	14.34	401	16.34	325	10.45	46	8.17	30
55–64	10.37	290	12.32	245	6.59	29	4.36	16
65 and older	5.22	146	6.64	132	2.50	11	0.82	3
Level of education								
No high school (H.S.)	7.15	200	6.94	138	5.91	26	9.81	36
High school or GED	26.68	746	26.34	524	25.68	113	29.70	109
Associate degree or vocational school	47.89	1339	46.76	930	53.41*	235	47.41	174
Bachelor's degree & higher	18.28	511	19.96	397	15.00	66	13.08	48
Work status								
Not in labor force	35.01	979	39.12	778	25.23**	111	24.52**	90
Unemployed	11.80	330	9.85	196	16.36	72	16.89	62
Employed part time	16.45	460	14.53	289	21.59	95	20.71	76
Employed full time	36.73	1027	36.50	726	36.82	162	37.87	139
Good self-rated health	73.64	2059	72.30	1438	76.82	338	77.11	283

*$p \leq 0.05$; **$p \leq 0.01$; ***$p \leq 0.001$, significantly different from non-Hispanic White Women

with greater odds of depressed mood (O.R. = 1.30, C.I. = 1.09–1.57 and OR = 1.36, C.I. = 1.11–1.68, respectively).

When we stratified by ethno-racial group, discrimination was the only central variable associated with higher odds of depressed mood among White women (model 2). Among Black women (model 3) and Latinas (model 4), always worrying about police brutality, everyday discrimination, and history of household incarceration were all significantly associated with depressed mood. Controlling for chronic discrimination, negative encounters with the police, and history of household incarceration, always worrying about police brutality was associated with 28% greater odds of depressed mood among Black women (O.R. = 1.28, C.I. = 1.09–2.02) and 10% greater odds of depression among Latinas (O.R. = 1.10, C.I. = 1.01–2.06).

Discussion

Anticipation of police brutality, negative experiences with the police, and childhood exposure to household member incarceration are each strikingly common exposures for Black women and Latinas, among whom more than 30% were exposed to childhood household member incarceration, more than 57% have had negative police encounters, and more than half routinely worry about police brutality. Constant worry about police brutality is markedly higher

Table 2 Odds of always worrying about police brutality

	Model 1			Model 2			Model 3			Model 4		
	Full sample			Non-Hispanic White			Non-Hispanic Black			Hispanic/Latina		
	O.R	95% C.I		O.R	95% C.I		O.R	95% C.I		O.R	95% C.I	
		LL	UL		LL	UL		LL	UL		LL	UL
Race (Ref: White)												
Black	5.66**	4.51	7.09									
Latina	3.24***	2.55	4.12									
Discrimination	1.18***	1.09	1.33	1.13***	1.11	1.16	1.20**	1.01	1.39	1.13***	1.10	1.17
Negative police encounters	2.26***	1.87	2.75	2.30***	1.77	2.98	2.26***	1.51	3.39	3.27***	2.00	5.34
Household incarceration	1.21*	1.04	1.49	1.26	0.97	1.66	1.28**	1.17	1.65	1.64***	1.09	2.70
Sex. Or. (Ref: Het)												
Bisexual	0.94	0.71	1.25	0.97	0.68	1.40	1.10	0.60	2.01	0.69	0.31	1.55
Lesbian	1.25	0.75	2.09	1.71	0.75	3.91	1.17	0.51	2.71	0.56	0.20	1.60
Other	1.53	0.77	3.05	1.22	0.46	3.23	2.15	0.25	18.43	1.59	0.45	5.67
Age (Ref: 18–24)												
25–24	1.02	0.81	1.31	1.37	0.96	1.96	0.75	0.46	1.20	0.63	0.37	1.08
35–44	1.16	0.89	1.51	1.22	0.97	2.07	0.88	0.52	1.51	0.96	0.50	1.82
45–54	0.73	0.52	1.00	0.92	0.59	1.43	0.68	0.34	1.35	0.35	0.24	1.09
55–64	0.69*	0.47	0.91	0.78	0.46	1.33	0.73	0.32	1.65	0.74	0.24	2.28
65 and older	0.39**	0.20	0.77	0.43*	0.18	0.91	0.56	0.14	2.21	0.85	0.06	11.27
Education (Ref: no HS)												
H.S. or GED	0.92	0.66	1.30	0.95	0.62	1.46	1.24	0.55	2.82	0.66	0.30	1.44
Some college, associate degree or vocational school	0.68	0.48	0.96	0.66	0.43	1.03	0.95	0.42	2.17	0.66	0.29	1.49
Bachelor's degree +	0.82	0.55	1.21	0.81	0.49	1.34	1.19**	1.05	1.74	0.88	0.33	2.29
Work status (Ref: not in labor force)												
Unemployed	0.86	0.65	1.16	0.89	0.60	1.33	1.24	0.47	1.55	0.77	0.38	1.55
Employed part time	0.94	0.70	1.27	0.79	0.53	1.20	0.95	0.59	1.95	0.93	0.42	2.07
Employed full time	0.74	0.59	0.94	0.78	0.58	1.04	1.09	0.47	1.29	0.56	0.30	1.04
Good, V. good, excellent health	0.95	0.78	1.17	0.85	0.66	1.11	1.40	0.91	2.18	0.97	0.57	1.62

O.R., odds ratio; *C.I.*, confidence interval; *LL*, lower limit; *UL*, upper limit; *Ref*, reference category; *Sex. Or.*, sexual orientation; *Het.*, heterosexual; *H.S.*, high school

*$p \leq 0.05$; **$p \leq 0.01$; ***$p \leq 0.001$

among Black women and Latinas, compared to Whites: Black women have nearly sixfold greater odds and Latinas have over threefold greater odds of always worrying about police brutality.

These findings highlight some of the ways by which structural racism shapes the experiences of Black women and Latinas in the U.S. We know that people of color only make up about 30% of the U.S. population but account for over 60% of those currently incarcerated [43]. And, about 50% of Black women have a close or extended family member who is currently serving a prison sentence [44]. It is no surprise that, as children, women of color in our sample were more likely than White women to have had a member of their household incarcerated.

We also found that factors associated with elevated odds of always worrying about police brutality in the aggregated sample include higher levels of everyday discrimination, negative experiences with the police, and childhood exposure to the incarceration of a household member. However, stratifying by race revealed important differences in these aggregate-level associations. For example, although for each group, higher levels of everyday discrimination and negative encounters with the police are each associated with higher odds of always worrying about police brutality, for only Black women and Latinas was childhood exposure to household member incarceration also associated with higher odds of always worrying about police brutality. One reason for this variation might be that

Table 3 Odds of depressed mood

	Full sample			Non-Hispanic White			Non-Hispanic Black			Hispanic/Latina		
	O.R	95% C.I		O.R	95% C.I		O.R	95% C.I		O.R	95% C.I	
		LL	UL		LL	UL		LL	UL		LL	UL
Anticipation of PB (Ref: never)												
Sometimes	1.04	0.83	1.29	1.30	0.98	1.71	0.73	0.32	1.09	0.78	0.44	1.40
Always	1.45**	1.05	2.00	1.42	0.88	2.29	1.28***	1.09	2.02	1.10**	1.01	2.06
Race (Ref: White)												
Black	0.80	0.62	1.03									
Latinx	0.85	0.65	1.10									
Discrimination	1.06***	1.04	1.08	1.06**	1.05	1.09	1.10*	1.02	1.08	1.06*	1.02	1.09
Negative police encounters	1.30***	1.09	1.57	1.04	0.84	1.29	1.88**	1.15	3.10	2.94***	1.66	5.22
Household incarceration	1.36***	1.11	1.68	1.25	0.96	1.62	1.68**	1.03	2.74	1.65*	1.10	2.89
Sex.Or. (Ref: Het.)												
Bisexual	1.52**	1.15	2.02	1.45*	1.03	2.05	0.98	0.48	1.97	3.46***	1.43	8.38
Lesbian	1.39	0.82	2.35	1.55	0.70	3.41	0.82	0.30	2.22	1.97	0.61	6.31
Other	2.14*	1.07	4.28	1.82	0.76	4.35	1.58	0.11	23.65	3.86	0.98	15.11
Age (Ref: 18–24)												
25–24	0.94	0.73	1.21	1.06	0.76	1.47	0.66	0.38	1.17	0.96	0.52	1.76
35–44	1.12	0.86	1.47	1.36	0.96	1.91	0.65	0.34	1.22	0.96	0.46	2.01
45–54	1.09	0.80	1.48	1.24	0.85	1.80	0.35**	0.15	0.85	2.68	1.05	6.85
55–64	0.67	0.47	0.97	0.77	0.50	1.18	0.42**	0.15	1.21	0.40	0.08	2.04
65 and older	0.42**	0.25	0.73	0.52*	0.29	0.94	0.10*	0.01	0.93	1.00		
Education (Ref: no H.S.)												
High school or GED	0.89	0.63	1.25	0.86	0.57	1.29	0.74	0.28	1.94	1.21	0.49	3.01
Some college, associate degree, or vocational	0.86	0.61	1.22	0.84	0.55	1.26	0.86	0.33	2.24	1.05	0.40	2.72
Bachelor's degree +	0.70	0.47	1.04	0.66	0.41	1.05	0.82	0.28	2.42	0.85	0.27	2.71
Work status (Ref: not in labor force)												
Unemployed	1.39**	1.05	1.86	1.69**	1.18	2.41	1.00	0.49	2.03	1.22	0.56	2.65
Employed part time	0.74*	0.56	1.00	0.73	0.51	1.04	0.68	0.33	1.40	0.89	0.35	2.24
Employed full time	0.76**	0.61	0.96	0.76*	0.59	0.99	0.72	0.39	1.31	0.80	0.39	1.63
Good, V. good, excellent health	0.33***	0.28	0.41	0.32***	0.26	0.40	0.38***	0.23	0.64	0.40***	0.22	0.72

P.B., police brutality; *O.R.*, odds ratio; *C.I.*, confidence interval; *LL*, lower limit; *UL*, upper limit; *Ref*, reference category; *Sex. Or.*, sexual orientation; *Het.*, heterosexual

*$p \leq 0.05$; **$p \leq 0.01$; ***$p \leq 0.001$

Black and Latinx households are more likely to experience incarceration [43].

Exposure to household member incarceration is a significant stressor for children. A key concept in the stress process framework is stress proliferation—whereby a stressor in a particular period and domain of a person's life leads to additional stressors in other domains or periods in their lives [45]. For example, it is possible that, in our sample, household incarceration might lead to and exacerbate economic uncertainty, which might mean living in impoverished and racially segregated neighborhoods or attending underresourced schools. These neighborhoods and schools are usually overpoliced [11], increasing the likelihood of always worrying about being victims of police brutality. One implication of stress proliferation in this context is that exposure to racialized stressors in childhood such as mass incarceration, can over time, leads to exposure to racism and racialized stressors within different systems such as education and policing. Consideration that racism proliferates should inform research that examines the impact of structural racism on the well-being of minoritized communities, as well as policies that seek to eliminate structural racism.

The finding that having a bachelor's degree or higher was associated with greater odds of always worrying about police brutality among Black women might be explained by elevated exposure to racism (hence the anticipation of racism) among Black Americans who are in socio-economic positions and jobs that are White dominated, where they

might be the only Black person and have little social support [46]. That post-baccalaureate education does not protect Black women from the chronic stress of anticipating police brutality suggests that individual attributes and achievements are not enough to prevent exposure to racism. Investments in broad structural change—eliminating racism across systems—is critical.

Significant in our findings is that always worrying about police brutality was associated with greater odds of depressed mood among Black women and Latinas, but not White women. Similarly, for Black women and Latinas, but not White women, past negative experiences with the police and childhood household member incarceration were each associated with elevated odds of depressed mood. Not only are Black women and Latinas at higher risk of exposure to these toxic racialized stressors, but exposure increased the risk of depression for Black women and Latinas, but not for White women. Racialized stressors do not only proliferate, causing other stressors, they also independently impact mental health. This pattern of findings is a critical addition to the existing research. It further underscores that the harms of police violence are not limited to men, which organizers and interdisciplinary researchers have continually demonstrated [29]. We also know now not just that women of color routinely experience direct police violence and that their exposure to vicarious forms of police violence like residence in areas with high levels of police violence are risk factors for poor birth outcomes [47, 48], but also that Black women and Latinas also routinely experience chronic worrying about police violence, which itself adversely impacts mental health.

Limitations

Findings from this study should be interpreted considering limitations. First, SHUR is a non-probability quota sample, subject to selection bias. People who responded to the survey might be different from those who do not respond to the survey—a difference that might matter for the relationships we explore. However, our analyses examined relationships between variables in the data rather than approximate point estimates generalizable to urban populations. These relationships are likely to be similar in probability samples if the sample composition of the non-probability sample matches the composition of the population from which the sample is drawn [49]. Given the similarity of our sample to the population of interest, the relationships observed in this study are likely to be replicable in probability samples of similar populations. Second, due to sample size limitations, we could not run analyses for Native American and Indigenous women, as well as Asian women who are also severely impacted by structural racism and police brutality. One area for more research is to examine the relationships that we explore among White, Black, and Latina women among non-White racialized women. Third, we do not have data on the onset of anticipating police brutality, the timing and frequency of past negative encounters with police, and multidimensional or multi-item measures of anticipation of negative police encounters. These data would have strengthened our analyses. Fourth, a wide range of negative encounters—from police cursing at the respondent to police hitting or using a weapon on the respondent—fall under the broad category of police brutality. The specific nature of the encounters experienced might vary by race and might also have implications for mental health. We did not disaggregate these in our analyses. Finally, our data are cross-sectional. It is possible that pre-existing depression might increase the frequency of worrying about becoming a victim of police brutality. Longitudinal data are needed to examine any causal relationships between anticipation of and exposure to police brutality and mental health.

Implications

The harms of mass incarceration and police violence reverberate across Black and Brown communities, impacting whole networks and neighborhoods. How these forms of structural violence increase stress and affect the health of people indirectly impacted, especially women, matters for the development of policies to eliminate structural racism and police brutality, and to allocate resources to persons who may not have personally experienced police brutality or incarceration but are nonetheless strongly impacted. The harms to health that are caused by exposure to racialized chronic stressors—anticipation of police brutality, incarceration of a household member, negative encounters with the police—are preventable through shifting the policies, practices, and social conditions that demand and normalize police violence. And, we must focus on preventing them, even if focusing on structural changes like these may feel much more overwhelming than more narrowly focusing on how to help highly policed communities cope with police violence in order to mitigate its immediate health consequences. Towards this end, we must closely collaborate with social movement organizations, which are skilled at building and amplifying the community power necessary to shift local budgets away from the criminal legal system—which was founded in white supremacy and racist violence and continues to perpetuate them through police violence and its anticipation—and instead investing in the social determinants of health like living wage jobs and affordable, high-quality housing. Humbly pursuing these respectful collaborations can help us build upon the wisdom of participatory action research and movement lawyering and to cultivate structural interventions rooted in human rights. The policy platforms of many Black-led social movement organizations, including

the Movement for Black Lives (M4BL), and the Brooklyn Movement Center (BMC) focus on the social determinants of health. Modeling this movement-led approach to eliminating police violence and its sources, the authors of this article recently partnered with Brooklyn Movement Center and its wider coalition of organizers and human rights organizations to write a report entitled Invest in Black Futures [50] which advocates for access to the social determinants of health within Black and Latinx NYC communities. Eliminating police violence and the carceral system requires these types of collaborations and the leadership of social movements in order to build the community power necessary to create the change we so desperately need.

Author Contribution Sirry Alang conceptualized the study and conducted the analyses. Rahwa Haile and Sirry Alang wrote the first draft of the manuscript. Mary Mitsdarffer and Cortney VanHook assisted with writing the background and framing context and the relevance of the article. All authors commented on previous versions of the manuscript. All authors approved the final manuscript.

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Declarations

Ethics Approval The Lehigh University Institutional Review Board reviewed and determined the study as exempt.

Consent to Participate Informed consent was obtained from all respondents in the Survey of the Health of Urban residents.

Conflict of Interest The authors declare no competing interests

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