


Greater lifetime stressor exposure is associated with poorer mental health among sexual minority people of color

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Abstract

Background: Research has shown that sexual minority people of color experience pervasive and sometimes severe life stressors that increase their risk of experiencing mental health problems, and that can contribute to lifelong health disparities. However, no studies in this population have investigated stressor exposure occurring over the entire lifespan. Moreover, it remains unknown whether these stressor-health effects differ based on the timing or types of stressors experienced.

Purpose: The purpose of this study is to examine how cumulative lifetime stressor exposure is associated with mental health among Black, Latinx, and biracial Black-Latinx sexual minority persons.

Method: Participants were 285 ethnic/racial minority young adults ($M_{\text{age}} = 25.18$ years old, $SD = 1.94$, age range = 19–29 years), who completed the Stress and Adversity Inventory for Adults to assess for retrospective reports of lifetime stressor count and severity. The Brief Symptom Inventory was used to assess participants' symptoms of anxiety, depression, and somatization, which were the main outcomes. Most participants identified as

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cisgender male (94.7%) and gay (74.2%), with the remaining participants identifying as transgender or genderqueer/nonbinary for gender and bisexual/pansexual, queer, or another sexual orientation.

Results: Multiple regression analyses indicated that experiencing more—and more severe—stressors across the lifespan was related to greater anxiety, depressive, and somatization symptoms. These effects were robust while controlling for race/ethnicity, sexual orientation, education, and employment status, and they differed based on stressor exposure timing, type, primary life domain, and core social–psychological characteristic.

Conclusion: Greater cumulative lifetime stressor exposure is related to poorer mental health among sexual minority people of color. Screening for lifetime stressors may thus help identify at-risk persons and provide an opportunity to intervene to help mitigate or prevent mental health disparities in multiply stigmatized adults.

KEYWORDS

anxiety, depression, health disparities, life stress, minority health, somatization

1 | INTRODUCTION

Exposure to major life stressors such as interpersonal difficulties, employment insecurity, and life-threatening situations over the life course substantially increases individuals' risk for mental health problems (Benjet et al., 2010; McLaughlin et al., 2010; Shields & Slavich, 2017). Lifetime or lifespan stressors include a person's acute life events (e.g., job loss) and chronic difficulties (e.g., persistent housing insecurity) during childhood and adulthood, and such exposures have been hypothesized to have cumulative negative effects on health (Lupien et al., 2009). Indeed, both the number of lifetime stressors experienced and their severity predict a variety of behavioral and mental health disparities including anxiety and depressive disorders, and substance-use problems (Green et al., 2010; Kessler et al., 2007), as well as physical health conditions such as autoimmune and metabolic disorders (Olvera Alvarez et al., 2019; Slavich & Shields, 2018). Moreover, these stressors are relatively common in marginalized populations, with sexual minority adults in the United States experiencing an average of three potentially traumatic major life stressors before age 18 years (Blosnich et al., 2020).

Models of minority stress posit that racial/ethnic (Myers, 2009), sexual (Meyer, 2003), and gender (Hendricks & Testa, 2012) minority persons are more likely to experience pervasive and severe social stressors that can initiate and perpetuate social inequalities and health disparities. Consistent with these models, Black and Latinx¹ persons are more likely to experience barriers to healthcare access (Brown, 2008), be evicted from their homes (Desmond, 2012), and enter the criminal justice system (Kovera, 2019) as compared with White persons. They are also relatively more likely to experience more deaths in their families (Umberson et al., 2017).

In addition, Black and Latinx persons are highly exposed to adversities during childhood and those experiences have been linked to anxiety and depressive disorders in adulthood (Turner & Lloyd, 2004). In addition, cumulative lifetime stressors contribute to anxiety and somatic, depressive, and posttraumatic stress disorder symptoms among Black and Latinx adults (Myers et al., 2015). In parallel, sexual minority persons (i.e., people who self-identify as lesbian, gay, bisexual, pansexual, queer, people with nonheterosexual sexual behaviors or attractions such as men who have sex with men who may not always identify as gay or bisexual, and persons who are questioning or uncertain of their sexual orientation) and gender minority persons (i.e., person who self-identify as genderqueer, nonbinary, transgender, or non-cisgender) experience disproportionate housing and workplace discrimination (Kattari et al., 2016), and are more likely to become homeless as compared with their heterosexual and cisgender counterparts Morton et al., (2018). Among sexual and gender minority groups of people, chronic social stressors have been associated with increased risk for depression, posttraumatic stress disorder, and suicidal ideation and behaviors (Borders et al., 2014; Choi et al., 2013; Dunbar et al., 2017; Grant et al., 2011; Haas et al., 2010; Kipke et al., 2007; Mustanski et al., 2016; Reisner et al., 2016). As a whole, sexual minority young adults are about 2.5 times more likely to be diagnosed with a mental health disorder (Cochran et al., 2003), including anxiety and depression, and are three to five times more likely to attempt suicide (Russell & Fish, 2016) than their heterosexual counterparts. Within the sexual minority community, bisexual and pansexual individuals (Bostwick et al., 2014; Chan et al., 2020; Friedman et al., 2014; Ramirez & Galupo, 2019), men who have sex with men (Choi et al., 2013; Kipke et al., 2007), and persons questioning or uncertain of their sexual orientation (Borders et al., 2014; Dunbar et al., 2017) show heightened risk for mental health problems.

Although research on social and mental health disparities among racial/ethnic and sexual and gender minority people has grown substantially over several decades, these topics have rarely crossed. Consequently, very little work has focused on understanding factors affecting the mental health of diverse sexual minority people of color (e.g., biracial Black-Latinx gay men) (Balsam et al., 2010; Cyrus, 2017; DiPlacido & Fallahi, 2020; Meyer, 2010; Parra & Hastings, 2018). The limited research examining social inequalities and health disparities among sexual minority people of color indicates that sexual minority people of color report experiencing more depressive symptoms relative to their same racial/ethnic counterparts (Bostwick et al., 2014; O'Donnell et al., 2011). Experiences of stigma in treatment and health care settings, and lack of health care access and financial resources have been associated with increased depressive symptoms among Black sexual minority men (Latkin et al., 2017). Chronic financial strain also has been associated with psychological distress among Latinx sexual minority men (Díaz et al., 2001), and sexual and gender minority people of color are disproportionately discriminated and affected by stressful intrapersonal interactions linked to housing insecurities (Mallory & Sears, 2016; Robinson, 2018). Moreover, adverse early life events, such as childhood abuse, have been related to mental health problems among racially/ethnically diverse sexual minority people of color in adulthood (Balsam et al., 2010).

Theoretical models of minority stress and health have helped to advance thinking regarding the specific types of stressors that are commonly experienced by racial/ethnic and sexual and gender minority populations. Yet, the empirical literature documenting how cumulative lifetime stressors impact the mental health of diverse sexual minority people of color remains small (Bogart et al., 2011; Meyer et al., 2008). More generally, there is a dearth of studies that have assessed stressors occurring across the entire lifespan (Slavich & Shields, 2018). In addition, systematic analyses have shown that sexual minority youth and young adults experience disproportionate rates of mental health problems (King et al., 2008), but few studies have examined mental health outcomes at the intersection of sexual and gender minority and ethnic/racial minority status (Cyrus, 2017; Parra & Hastings, 2018). This lack of research has prevented the examination of within-group variability of the effects of cumulative lifetime stressors occurring across multiple life domains on mental health symptoms among multiply stigmatized persons.

To address these important issues, we investigated how cumulative lifetime stressor exposure was related to and mental health problems among Black, Latinx, and biracial Black-Latinx sexual minority persons. First, we

examined differences in both the total lifetime count and severity of stressors occurring across the life course and across different primary life domains and core social-psychological characteristics—as well as differences in anxiety, depressive, and somatization symptoms—and whether any differences were patterned by race/ethnicity or sexual orientation. Second, we investigated whether total lifetime stressor count or severity were related to participants' anxiety, depressive, or somatization symptoms, while controlling for race/ethnicity, sexual orientation, employment, and education status. Based on the research summarized above, we hypothesized that lifetime stressor burden would be relatively high in this sample and, in addition, that greater lifetime stressor exposure and severity would be related to experiencing more anxiety, depressive, and somatization symptoms.

2 | METHOD

2.1 | Participants and procedures

Data were drawn from the Healthy Young Men's Cohort Study (Kipke et al., 2019). Participants were recruited using advertisements posted in community locations and on social media, and from participant and health clinic referrals. Participants were eligible if they were (a) between 16 and 24 years old at recruitment; (b) assigned male sex at birth; (c) identified as gay, bisexual, or uncertain about their sexual orientation; (d) reported a sexual encounter with a man in the previous 12 months; (e) self-identified as African American/Black, Latinx, or biracial Black-Latinx; and (f) were living in Los Angeles County at the time of recruitment. The present analysis used data collected at Wave 6 in 2020, 3 years into the prospective study ($N = 393$, ages 19–29 years, $M = 25.07$ years, $SD = 2.00$; 94.7% male designated at birth, and 73.7% self-identified as gay), which included the Stress and Adversity Inventory (STRAIN; Slavich & Shields, 2018) for assessing lifetime stressor exposure. Only participants who completed the STRAIN ($n = 285$; $M = 25.18$ years, $SD = 1.94$) were included in the present analysis (see Table 1 for complete sample demographics). This study was pre-approved by the Children's Hospital Los Angeles Institutional Review Board and all participants provided written consent before participating.

2.2 | Measures

2.2.1 | Lifetime stressor count and severity

The cumulative count and severity of stressors that participants experienced across their life course was assessed using the STRAIN (Slavich & Shields, 2018). The STRAIN is a dynamic, personalized online stress assessment system that assesses 55 acute life events and chronic difficulties that participants could have experienced during childhood (e.g., childhood maltreatment or neglect, parental loss/separation) or adulthood (e.g., death of a relative, job loss, robbery, persistent financial, housing, or criminal stressors) (see <https://www.strainsetup.com>). If a participant says that they have experienced a particular stressor, they are further asked to report how many times they have experienced the stressor and how stressful or threatening it was on a 1–5 scale, with higher numbers indicating greater severity. Participants' responses were summed to create overall indices of total lifetime stressor count and severity. These scores were then further broken down into different primary life domains (e.g., marital/partner, housing) and core social-psychological characteristics (e.g., physical danger, humiliation, interpersonal loss), and for stressor occurring in early life versus adulthood. The primary STRAIN predictors are cumulative lifetime stressor count (possible range: 0–166) and cumulative lifetime stressor severity (possible range: 0–265), both of which have been extensively validated against social, cognitive, clinical, and behavioral outcomes (e.g., Allison et al., 2021; Brady et al., 2022; Cazassa et al., 2020; Slavich & Shields, 2018; Sturmbauer et al., 2019).

TABLE 1 Sample demographic characteristics

Demographic information	<i>n</i>	%
Race/Ethnicity		
Black	63	22.1
Latinx	165	57.9
Biracial Black-Latinx	57	20.0
Sexual orientation		
Gay	210	73.7
Bisexual/pansexual	39	13.7
Queer	22	7.7
Another sexuality	14	4.9
Gender		
Cisgender male	270	94.7
Genderqueer/nonbinary	13	4.6
Transgender	2	0.7
Education completed		
≤High school	59	20.7
>High school	224	78.6
Missing	2	0.7
Employment		
Employed	227	79.6
Unemployed	55	19.3
Missing	2	1.1

2.2.2 | Anxiety, depressive, and somatization symptoms

Anxiety, depressive, and somatization symptoms were measured using the 18-item Brief Symptom Inventory (BSI-18) (Derogatis, 2001). The BSI includes three 6-item subscales assessing anxiety symptoms (e.g., “Feeling tense or keyed up”), depressive symptoms (e.g., “Feeling no interest in things”), and somatization symptoms (e.g., “Faintness or dizziness”). Participants were asked to rate their symptoms during the past 7 days on a scale ranging from 0 (*Not at all*) to 4 (*Extremely*). Items pertaining to each subscale were *t* scored, with higher scores indicating more symptoms. The *t* scores for each subscale ranged from 0 to 24. In the present study, the calculated Cronbach's α for each subscale were as follows: anxiety symptoms ($\alpha = 0.83$), depressive symptoms ($\alpha = 0.83$), and somatization symptoms ($\alpha = 0.78$).

2.3 | Covariates

Covariates included participants' race/ethnicity, sexual orientation, education, and employment status.² Race/ethnicity included three categories of Black (not Latinx), Latinx (not Black), and biracial Black-Latinx. In the

subsequent models, participants who identified as Latinx were the referent group. Given the smaller proportion of bisexual/pansexual, queer, and other sexual minority persons enrolled in the study, sexual orientation was coded as 0 (*Gay*) or 1 (*Another sexual minority identity*) in efforts to retain a larger sample in the subsequent analyses. Education was coded as 0 (*High school or less*) or 1 (*More than high school*). Similarly, employment status was coded as 0 (*Not employed*) or 1 (*Employed*). These covariates were included because people of color (Balsam et al., 2010; Consolacion et al., 2004), persons who identify as bisexual, pansexual, queer, or with other sexual minority identities (Ramirez & Galupo, 2019), and who are socioeconomically disadvantaged (Diaz et al., 2001) report worse mental health than their White, monosexual (i.e., gay), and more affluent counterparts.

2.4 | Analytical strategy

First, we examined correlations among total lifetime stressor count and severity, anxiety, depressive, and somatization symptoms. We used the Benjamini–Hochberg test (Thissen et al., 2002) with a false discovery rate of 0.05 and 0.01, to account for error inflation with repeated testing. Then, we examined whether stressor count and severity and mental health symptoms differed by race/ethnicity and sexual orientation group. Finally, two sets of multiple regressions—each including covariates—were conducted to examine how total count and severity of lifetime stressors experienced across timing, type, primary life domains, and core social–psychological characteristics related to anxiety, depressive, and somatization symptoms.

All regression models were fitted using path modeling in the lavaan package Version 0.6-5 (Rosseel, 2012) in R Version 3.6.2. Confidence intervals (CIs) were obtained for model estimates using maximum likelihood estimation with robust standard errors. Model fit was assessed with the comparative fit index (CFI), root mean square error of approximation (RMSEA), and standardized root mean residual (SRMR). Model fit was considered acceptable if CFI values were $>.95$, RMSEA values were $<.08$, and SRMR values were $<.06$ (Hu & Bentler, 1999).

3 | RESULTS

3.1 | Descriptive analyses

As expected, total lifetime stressor count and severity were highly correlated ($r = 0.94$, $p < 0.001$). Tables 2 and 3 display the means (M), SD , ranges, skewness, and zero-order correlations between stressor count and stressor severity (respectively) and mental health variables. Anxiety, depressive, and somatization symptoms were positively correlated with all categories of lifetime stressor counts, except for stressors involving education, marital/partner, legal/crime, death, possessions, and interpersonal loss. Anxiety, depressive, and somatization symptoms were positively correlated with all categories of lifetime stressor severity, except for stressors involving death and possessions. Anxiety, depressive, and somatization symptoms were all positively intercorrelated and were covaried in the main regression models.

3.2 | Racial/ethnic differences in STRAIN count and severity and mental health

Table 4 displays the descriptives and analysis of variance results for total lifetime stressor count and severity and mental health by race/ethnicity. There were significant racial/ethnic group differences in participants' total early life stressor severity, $F(2,282) = 3.56$, $p = 0.030$, $\eta^2 = 0.025$. Posthoc Tukey honestly significant difference results indicated that Latinx participants ($M = 14.40$, $SD = 12.70$; $p = 0.049$) and biracial Black-Latinx

TABLE 2 Descriptive statistics and zero-order correlations among participants' STRAIN stressor count scores and mental health symptoms

	<i>M</i>	<i>SD</i>	<i>Range</i>	<i>Skew-</i>	<i>Mental health</i>	<i>STRAIN counts</i>																							
	<i>ness</i>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
1	3.51	4.69	0-22	1.69	-																								
2	2.91	4.20	0-19	1.84	0.79**	-																							
3	1.96	3.25	0-18	2.55	0.72**0.60**	-																							
4	21.75	16.03	0-95	1.24	0.25**0.25**	0.23**	-																						
5	4.77	4.64	0-37	2.31	0.13* 0.10	0.07	0.68**	-																					
6	16.00	12.64	0-71	1.42	0.26**0.26**	0.26**	0.96**	0.46**	-																				
7	12.49	10.63	0-62	1.51	0.19**0.18*	0.22**	0.96**	0.62**	0.93**	-																			
8	9.26	6.60	0-33	0.65	0.31**0.31**	0.21**	0.89**	0.66**	0.83* 0.72**	-																			
9	2.81	3.69	0-16	1.52	0.19**0.19**	0.22**	0.75**	0.56**	0.71**	0.76**	0.61**	-																	
10	0.47	0.85	0-5	2.25	0.10	0.08	0.05	0.26**	0.08	0.28*	0.26**	0.21**	0.20**	-															
11	1.66	1.64	0-8	1.14	0.22**0.22**	0.21**	0.50**	0.17**	0.54**	0.46**	0.46**	0.35**	0.17**	-															
12	2.16	2.67	0-14	1.83	0.38**0.33**	0.32**	0.64**	0.34**	0.66**	0.57**	0.64**	0.39**	0.12	0.29**	-														
13	3.05	3.25	0-13	1.20	0.08	0.07	0.08	0.64**	0.36**	0.65**	0.67**	0.47**	0.37**	0.12	0.23**	0.31**	-												
14	0.94	1.05	0-6	1.93	0.10	0.13*	0.14*	0.52**	0.46**	0.45**	0.49**	0.47**	0.48**	0.06	0.29**	0.30**	0.26**	-											
15	0.32	0.77	0-5	3.04	0.03	0.02	0.04	0.31**	0.10	0.34**	0.35**	0.17**	0.15*	0.07	0.22**	0.20**	0.16*	0.11	-										
16	3.56	3.19	0-15	0.79	0.18**0.20**	0.11	0.74**	0.60**	0.67**	0.58**	0.86**	0.44**	0.15*	0.26**	0.41**	0.33**	0.35**	0.14*	-										
17	1.24	1.51	0-6	1.37	-0.04	0.01	-0.01	0.39**	0.27**	0.38**	0.44**	0.24**	0.26**	0.05	0.17**	0.11	0.15*	0.16*	0.06	0.24**	-								
18	2.71	3.46	0-23	1.97	0.16**0.13*	0.16*	0.77**	0.57**	0.74**	0.77**	0.63**	0.44**	0.11	0.28**	0.43**	0.46**	0.23**	0.26**	0.52**	0.31**	-								
19	0.16	0.60	0-5	5.39	0.08	0.10	0.07	0.34**	0.18**	0.36**	0.36**	0.25**	0.20**	0.004	0.10	0.26**	0.12	0.14*	0.31**	0.21**	0.06	0.34**	-						
20	4.10	3.29	0-16	1.09	0.09	0.11	0.11	0.74**	0.53**	0.71**	0.76**	0.58**	0.47**	0.11	0.27**	0.35**	0.58**	0.31**	0.17**	0.59**	0.62**	0.56**	0.25**	-					
21	4.22	4.78	0-27	1.61	0.27**0.22**	0.27**	0.83**	0.52**	0.83**	0.83**	0.68**	0.51**	0.15*	0.33**	0.69**	0.59**	0.28**	0.37**	0.49**	0.23**	0.85**	0.43**	0.54**	-					

(Continues)

TABLE 2 (Continued)

M	SD	Range	Skewness	STRAIN counts																								
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
22	4.41	3.57	0-16	0.84	0.18**	0.17**	0.13*	0.77**	0.47**	0.75**	0.69**	0.75**	0.48**	0.43**	0.57**	0.38**	0.58**	0.36**	0.18**	0.72**	0.23**	0.48**	0.17**	0.47**	0.52**	-		
23	2.05	1.46	0-5	0.19	0.24**	0.26**	0.18**	0.68**	0.46**	0.65**	0.56**	0.75**	0.62**	0.21**	0.48**	0.44**	0.30**	0.56**	0.13*	0.58**	0.19**	0.37**	0.15*	0.44**	0.41**	0.51**	-	
24	4.95	5.06	0-28	1.59	0.23**	0.23**	0.22**	0.88**	0.65**	0.83**	0.85**	0.76**	0.89**	0.15**	0.43**	0.59**	0.43**	0.60**	0.30**	0.58**	0.31**	0.62**	0.29**	0.48**	0.64**	0.55**	0.64**	-

Note: N = 285. 1, Anxiety symptoms; 2, Depressive symptoms; 3, Somatization symptoms; 4, Total lifetime stressor count; 5, Early life stressor count; 6, Adulthood stressor count; 7, Acute life events count; 8, Chronic difficulties count; 9, Housing stressor count; 10, Education stressor count; 11, Work stressor count; 12, Treatment/health stressor count; 13, Marital/partner stressor count; 14, Financial Stressor count; 15, Legal/crime stressor count; 16, Other relationships stressor count; 17, Death stressor count; 18, Life-threatening situations stressor count; 19, Possessions stressor count; 20, Interpersonal loss stressor count; 21, Physical danger stressor count; 22, Humiliation stressor count; 23, Entrapment stressor count; 24, Role change/disruption stressor count.

Abbreviation: STRAIN, Stress and Adversity Inventory.

* $p < 0.05$; ** $p < 0.01$ (all tests were two-tailed).

TABLE 3 Descriptive statistics and zero-order correlations among participants' STRAIN stressor severity scores and mental health symptoms

	M	SD	Range	Skew- ness	STRAIN severity																																	
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
1	3.51	4.69	0-22	1.69	-																																	
2	2.91	4.20	0-19	1.84	0.79**	-																																
3	1.96	3.25	0-18	2.55	0.72**	0.60**	-																															
4	48.15	34.93	0-185	0.97	0.27**	0.26**	0.21**	-																														
5	13.65	12.60	0-75	1.49	0.12	0.11	0.03	0.75**	-																													
6	34.5	26.80	0-131	1.10	0.29**	0.28**	0.26**	0.95**	0.51**	-																												
7	21.51	16.53	0-85	0.99	0.19**	0.20**	0.18**	0.93**	0.65**	0.90**	-																											
8	26.65	20.53	0-100	0.83	0.30**	0.28**	0.21**	0.95**	0.75**	0.89**	0.77**	-																										
9	5.59	6.46	0-25	1.18	0.21**	0.23**	0.22**	0.76**	0.56**	0.73**	0.76**	0.69**	-																									
10	0.96	1.65	0-5	1.43	0.12	0.12	0.03	0.33**	0.18**	0.34**	0.36**	0.27**	0.26**	-																								
11	4.69	4.97	0-20	1.16	0.20**	0.18**	0.17**	0.63**	0.31**	0.68**	0.54**	0.64**	0.45**	0.29**	-																							
12	6.12	7.11	0-31	1.39	0.37**	0.32**	0.27**	0.72**	0.42**	0.74**	0.61**	0.74**	0.47**	0.18**	0.41**	-																						
13	7.00	6.53	0-25	0.85	0.13*	0.13*	0.07	0.75**	0.50**	0.74**	0.74**	0.68**	0.45**	0.19**	0.43**	0.44**	-																					
14	2.98	2.94	0-10	0.74	0.19**	0.21**	0.16**	0.62**	0.49**	0.57**	0.57**	0.59**	0.55**	0.19**	0.47**	0.33**	0.39**	-																				
15	0.81	1.77	0-10	2.27	0.11	0.10	0.12	0.31**	0.16**	0.32**	0.37**	0.22*	0.18**	0.12	0.11	0.20**	0.17**	0.18**	-																			
16	9.85	8.07	0-35	0.57	0.16**	0.16*	0.08	0.80**	0.78**	0.68**	0.63**	0.85**	0.51**	0.20**	0.41**	0.50**	0.55**	0.46**	0.15*	-																		
17	2.26	2.67	0-15	1.18	-0.04	0.01	-0.02	0.34**	0.23**	0.33**	0.44**	0.22*	0.28**	0.11	0.16**	0.11	0.28**	0.18**	0.04	0.17**	-																	
18	5.77	6.29	0-34	1.25	0.18**	0.14*	0.17**	0.78**	0.65**	0.71**	0.77**	0.71**	0.51**	0.16**	0.36**	0.49**	0.56**	0.34**	0.29**	0.61**	0.24**	-																
19	0.38	1.20	0-5	3.12	0.06	0.07	0.02	0.35**	0.30**	0.31**	0.36**	0.31**	0.21**	0.05	0.15*	0.29**	0.20**	0.17**	0.32**	0.26**	-0.03	0.29**	-															
20	10.07	7.72	0-35	0.77	0.09	0.12*	0.05	0.80**	0.63**	0.74**	0.81**	0.71**	0.53**	0.21**	0.37**	0.45**	0.79**	0.42**	0.20**	0.63**	0.56**	0.59**	0.22**	-														
21	9.59	9.94	0-54	1.38	0.27**	0.23**	0.25**	0.85**	0.59**	0.83**	0.81**	0.78**	0.60**	0.25**	0.44**	0.76**	0.61**	0.36**	0.35**	0.57**	0.20**	0.84**	0.42**	0.60**	-													
22	9.77	7.59	0-33	0.80	0.20**	0.17**	0.12	0.82**	0.63**	0.77**	0.72**	0.81**	0.54**	0.48**	0.68**	0.49**	0.68**	0.47**	0.16**	0.78**	0.22**	0.56**	0.23**	0.57**	0.61**	-												

(Continues)

TABLE 3 (Continued)

M	SD	Range	Skewness	STRAIN severity																							
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
7.39	5.92	0–23	0.45	0.24**	0.26**	0.16**	0.80**	0.62**	0.75**	0.66**	0.82**	0.73**	0.28**	0.63**	0.50**	0.49**	0.71**	0.17**	0.69**	0.20**	0.47**	0.23**	0.57**	0.53**	0.63**	–	
11.33	10.55	0–59	1.24	0.28**	0.28**	0.23**	0.90**	0.67**	0.85**	0.82**	0.86**	0.77**	0.20**	0.57**	0.70**	0.56**	0.65**	0.32**	0.71**	0.24**	0.68**	0.32**	0.61**	0.69**	0.65**	0.71**	–

Note: N = 285. 1, Anxiety symptoms; 2, Depressive symptoms; 3, Somatization symptoms; 4, Total lifetime stressor severity; 5, Early life stressor severity; 6, Adulthood stressor severity; 7, Acute life events stressor severity; 8, Chronic difficulties stressor severity; 9, Housing stressor severity; 10, Education stressor severity; 11, Work stressor severity; 12, Treatment/health stressor severity; 13, Marital/partner stressor severity; 14, Financial stressor severity; 15, Legal/crime stressor severity; 16, Other relationships stressor severity; 17, Death stressor severity; 18, Life-threatening situations stressor severity; 19, Possessions stressor severity; 20, Interpersonal loss stressor severity; 21, Physical danger stressor severity; 22, Humiliation stressor severity; 23, Entrapment stressor severity; 24, Role change/disruption stressor severity.

Abbreviation: STRAIN, Stress and Adversity Inventory.

* $p < 0.05$; ** $p < 0.01$ (all tests were two-tailed).

TABLE 4 Differences in STRAIN stressor count and severity scores and mental health symptoms by race/ethnicity

Variable	Racial/Ethnic group			ANOVA	η^2 (95% CI)
	Black (n = 63)	Latinx (n = 165)	Biracial Black-Latinx (n = 57)		
Mental health					
Anxiety symptoms	2.70 ± 3.81	3.12 ± 4.44	2.53 ± 3.91	F(2282) = 0.53, p = 0.592	0.004 (0.00, 0.02)
Depressive symptoms	3.06 ± 4.50	3.81 ± 4.93	3.14 ± 4.16	F(2282) = 0.79, p = 0.455	0.006 (0.00, 0.03)
Somatization symptoms	1.92 ± 3.56	2.02 ± 3.31	1.82 ± 2.71	F(2282) = 0.09, p = 0.918	0.001 (0.00, 0.01)
Total lifetime stressor outcomes					
Total lifetime count	19.25 ± 14.62	22.42 ± 16.50	22.60 ± 16.52	F(2282) = 0.97, p = 0.374	0.007 (0.00, 0.03)
Total lifetime severity	41.79 ± 32.90	49.43 ± 35.03	51.49 ± 37.51	F(2282) = 1.42, p = 0.244	0.010 (0.00, 0.04)
Acute life events count	11.32 ± 9.56	12.84 ± 10.92	12.77 ± 10.98	F(2282) = 0.49, p = 0.612	0.003 (0.00, 0.02)
Acute life events severity	18.97 ± 14.96	22.14 ± 16.15	22.49 ± 19.12	F(2282) = 0.96, p = 0.383	0.007 (0.00, 0.03)
Chronic difficulties count	7.94 ± 6.15	9.58 ± 6.75	9.82 ± 6.57	F(2282) = 1.67, p = 0.190	0.012 (0.00, 0.04)
Chronic difficulties severity	22.83 ± 19.09	27.29 ± 20.97	29.00 ± 20.59	F(2282) = 1.55, p = 0.214	0.011 (0.00, 0.04)
Timing of stressor					
Early life count	3.63 ± 3.56	5.19 ± 5.05	4.81 ± 4.30	F(2282) = 2.58, p = 0.077	0.018 (0.00, 0.06)
Early life severity	10.03 ± 9.77	14.40 ± 12.70	15.49 ± 14.42	F(2282) = 3.56, p = 0.030	0.025 (0.00, 0.07)
Adulthood count	14.73 ± 11.20	16.19 ± 12.83	16.82 ± 13.65	F(2282) = 0.46, p = 0.634	0.003 (0.00, 0.02)
Adulthood severity	31.76 ± 25.31	35.03 ± 26.89	36.00 ± 28.37	F(2282) = 0.45, p = 0.639	0.003 (0.00, 0.02)
Primary life domains					
Housing count	2.44 ± 3.34	2.79 ± 3.71	3.28 ± 3.99	F(2282) = 0.77, p = 0.462	0.005 (0.00, 0.03)
Housing severity	5.22 ± 6.28	5.59 ± 6.44	6.02 ± 6.77	F(2282) = 0.23, p = 0.798	0.002 (0.00, 0.02)
Education count	.35 ± 0.90	.52 ± 0.85	.46 ± 0.76	F(2282) = 0.88, p = 0.415	0.006 (0.00, 0.03)
Education severity	.56 ± 1.33	1.13 ± 1.75	.95 ± 1.61	F(2282) = 2.79, p = 0.063	0.019 (0.00, 0.06)

(Continues)

TABLE 4 (Continued)

Variable	Racial/Ethnic group		ANOVA	η^2 (95% CI)	
	Black (n = 63)	Latinx (n = 165)			
Work count	1.89 ± 1.65	1.52 ± 1.56	1.81 ± 1.82	F(2282) = 1.44, p = 0.238	0.010 (0.00, 0.04)
Work severity	4.52 ± 4.35	4.56 ± 5.08	5.23 ± 5.31	F(2282) = 0.42, p = 0.657	0.003 (0.00, 0.02)
Treatment/Health count	1.76 ± 2.32	2.37 ± 2.88	2.02 ± 2.34	F(2282) = 1.30, p = 0.275	0.009 (0.00, 0.04)
Treatment/Health severity	4.81 ± 5.87	6.58 ± 7.48	6.23 ± 7.21	F(2282) = 1.42, p = 0.244	0.010 (0.00, 0.04)
Marital/Partner count	2.79 ± 3.24	3.21 ± 3.36	2.89 ± 2.96	F(2282) = 0.45, p = 0.639	0.003 (0.00, 0.02)
Marital/Partner severity	5.79 ± 5.61	7.42 ± 6.72	7.14 ± 6.84	F(2282) = 1.43, p = 0.241	0.010 (0.00, 0.04)
Financial count	.86 ± 0.80	.96 ± 1.15	.96 ± 0.98	F(2282) = 0.25, p = 0.776	0.002 (0.00, 0.02)
Financial severity	2.98 ± 2.94	2.92 ± 2.91	3.18 ± 3.07	F(2282) = 0.17, p = 0.848	0.001 (0.00, 0.01)
Legal/Crime count	.35 ± 0.83	.34 ± 0.76	.25 ± 0.76	F(2282) = 0.36, p = 0.701	0.003 (0.00, 0.02)
Legal/Crime severity	.83 ± 1.92	.88 ± 1.81	.60 ± 1.49	F(2282) = 0.54, p = 0.584	0.004 (0.00, 0.03)
Other relationships count	2.98 ± 2.96	7.73 ± 3.28	3.74 ± 3.17	F(2282) = 1.24, p = 0.263	0.009 (0.00, 0.04)
Other relationships severity	8.52 ± 8.38	10.12 ± 7.75	10.54 ± 8.60	F(2282) = 1.16, p = 0.316	0.008 (0.00, 0.04)
Death count	1.59 ± 1.79	1.10 ± 1.38	1.26 ± 1.49	F(2282) = 2.37, p = 0.095	0.017 (0.00, 0.05)
Death severity	2.78 ± 2.95	2.05 ± 2.50	2.32 ± 2.78	F(2282) = 1.73, p = 0.179	0.012 (0.00, 0.04)
Life-threatening situations count	1.86 ± 2.42	2.90 ± 3.67	3.11 ± 3.70	F(2282) = 2.55, p = 0.080	0.018 (0.00, 0.06)
Life-threatening situations severity	4.33 ± 5.05	5.97 ± 6.43	6.79 ± 6.90	F(2282) = 2.50, p = 0.084	0.017 (0.00, 0.05)
Possessions count	.13 ± 0.66	.18 ± 0.60	.16 ± 0.49	F(2282) = 0.15, p = 0.858	0.001 (0.00, 0.01)
Possessions severity	.25 ± 1.02	.38 ± 1.19	.51 ± 1.40	F(2282) = 0.68, p = 0.509	0.005 (0.00, 0.03)

TABLE 4 (Continued)

Variable	Racial/Ethnic group			ANOVA	η^2 (95% CI)
	Black (n = 63)	Latinx (n = 165)	Biracial Black-Latinx (n = 57)		
Core social-psychological characteristics					
Interpersonal loss count	4.10 ± 3.14	4.05 ± 3.45	4.23 ± 1.01	F(2282) = 0.06, p = 0.943	0.000 (0.00, 0.01)
Interpersonal loss severity	9.30 ± 7.11	10.11 ± 7.77	10.81 ± 8.26	F(2282) = 0.57, p = 0.565	0.004 (0.00, 0.03)
Physical danger count	3.19 ± 3.86	4.55 ± 5.03	4.42 ± 4.85	F(2282) = 1.91, p = 0.150	0.013 (0.00, 0.05)
Physical danger severity	7.51 ± 7.92	9.96 ± 10.26	10.82 ± 10.78	F(2282) = 1.95, p = 0.144	0.014 (0.00, 0.05)
Humiliation count	4.02 ± 3.65	4.55 ± 3.48	4.46 ± 3.76	F(2282) = 0.51, p = 0.603	0.004 (0.00, 0.02)
Humiliation severity	8.29 ± 7.48	10.19 ± 7.37	10.21 ± 8.25	F(2282) = 1.56, p = 0.213	0.011 (0.00, 0.04)
Entrapment count	1.86 ± 1.38	2.10 ± 1.48	2.14 ± 1.51	F(2282) = 0.74, p = 0.479	0.005 (0.00, 0.03)
Entrapment severity	6.60 ± 5.60	7.52 ± 5.98	7.88 ± 6.11	F(2282) = 0.79, p = 0.455	0.006 (0.00, 0.03)
Role change/Disruption count	4.40 ± 4.26	5.02 ± 5.26	5.35 ± 5.33	F(2282) = 0.57, p = 0.566	0.004 (0.00, 0.03)
Role change/Disruption severity	10.10 ± 9.67	11.65 ± 10.73	11.77 ± 10.99	F(2282) = 0.56, p = 0.573	0.004 (0.00, 0.03)

Note: N = 285. Descriptives represented by mean ± SD.

Abbreviations: ANOVA, analysis of variance; CI, confidence interval; STRAIN, Stress and Adversity Inventory.

participants ($M = 15.49$, $SD = 14.42$; $p = 0.046$) experienced early life stressors that were significantly more severe as compared with Black participants ($M = 10.03$, $SD = 9.77$). There were no other significant racial/ethnic differences observed in the STRAIN total lifetime stressor count or severity variables or mental health outcomes.

3.3 | Sexual orientation differences in STRAIN count and severity and mental health

Table 5 displays the descriptive and *t*-test results for total lifetime stressor count and severity and mental health by sexual orientation. Participants who self-identified as a member of another sexual minority group (e.g., bisexual, queer) reported experiencing more anxiety ($M = 4.22$, $SD = 4.94$) and depressive symptoms ($M = 5.44$, $SD = 5.97$) than gay self-identified participants (Anxiety: $M = 2.48$, $SD = 3.83$, $t(281) = -3.10$, $p = 0.002$; Depressive: $M = 2.87$, $SD = 3.97$, $t(281) = -4.14$, $p < 0.001$). Those participants categorized as another sexual minority group also reported more total lifetime chronic difficulties ($M = 10.81$, $SD = 7.25$) relative to gay self-identified participants ($M = 8.80$, $SD = 6.27$), $t(281) = -2.26$, $p = 0.025$). There were no other significant sexual orientation differences observed in the STRAIN total lifetime stressor count or severity variables or mental health outcomes.

3.4 | Associations between lifetime stressor count and anxiety, depressive, and somatization symptoms

The multiple regression linear models for the total count of lifetime stressors experienced across timing, type, primary life domains, and core social-psychological characteristics—along with their respective fit indices and proportion of variance explained—are presented in Supporting Information: Table S1. All models were a good fit for the data (CFIs > 0.95 , RMSEAs < 0.08 , SRMRs < 0.06). The results are summarized below by mental health outcome.

3.4.1 | Anxiety symptoms

As hypothesized, experiencing more total lifetime stressors, early life and adulthood stressors, total acute life events, and total chronic difficulties were each associated with having more anxiety symptoms. In terms of primary life domains, experiencing more stressors involving housing, work, treatment/health, other relationships, and life-threatening situations were each related to greater anxiety symptoms. Finally, as for core social-psychological characteristics, stressors involving physical danger, humiliation, entrapment, and role change/disruption were each associated with greater anxiety symptoms. These stressors accounted for 6.9%–14.9% of the total variability in anxiety symptoms, depending on stressor type.

3.4.2 | Depressive symptoms

As expected, experiencing more total lifetime stressors, early life stressors, adulthood stressors, and chronic difficulties were each associated with having more depressive symptoms. In terms of primary life domains, experiencing more stressors involving housing, work, treatment/health, financial, and other relationships were associated with more depressive symptoms. Finally, as for core social-psychological characteristics, stressors involving physical danger, humiliation, entrapment, and role change/disruption were each related to greater depressive symptoms. These models accounted for 5.9%–16% of the total variability in depressive symptoms, depending on stressor type.

TABLE 5 Differences in STRAIN stressor count and severity and mental health symptoms by sexual orientation

Variable	Sexual orientation		t test	Cohen's <i>d</i> (CI)
	Gay (n = 210)	Another SM identity (n = 73)		
Mental health				
Anxiety symptoms	2.48 ± 3.83	4.22 ± 4.94	t(281) = -3.10, p = 0.002	-0.42 (-0.69, -0.15)
Depressive symptoms	2.87 ± 3.97	5.44 ± 5.97	t(281) = -4.14, p < 0.001	-0.56 (-0.83, -0.29)
Somatization symptoms	1.77 ± 3.02	2.56 ± 3.82	t(281) = -1.79, p = 0.074	-0.24 (-0.51, 0.02)
Total lifetime stressor outcomes				
Total stressor count	21.22 ± 15.86	23.82 ± 16.37	t(281) = -1.20, p = 0.233	-0.16 (-0.43, 0.10)
Total stressor severity	46.67 ± 33.66	53.59 ± 37.92	t(281) = -1.46, p = 0.144	-0.20 (-0.47, 0.07)
Acute life events count	12.42 ± 10.71	13.01 ± 10.43	t(281) = -.41, p = 0.681	-0.06 (-0.32, 0.21)
Acute life events severity	21.18 ± 16.28	22.97 ± 17.22	t(281) = -0.80, p = 0.426	-0.12 (-0.38, 0.16)
Chronic difficulties count	8.80 ± 6.27	10.81 ± 7.25	t(281) = -2.26, p = 0.025	-0.31 (-0.57, -0.04)
Chronic difficulties severity	25.49 ± 19.46	30.61 ± 22.99	t(281) = -1.85, p = 0.066	-0.31 (-0.57, -0.04)
Timing of stressor				
Early life count	4.63 ± 4.69	5.29 ± 4.50	t(281) = -1.05, p = 0.297	-0.14 (-0.41, 0.14)
Early life severity	13.35 ± 12.50	14.83 ± 12.96	t(281) = -0.87, p = 0.386	-0.12 (-0.38, 0.15)
Adulthood count	15.64 ± 12.49	17.42 ± 12.96	t(281) = -1.04, p = 0.299	-0.14 (-0.41, 0.13)
Adulthood severity	33.32 ± 25.54	38.75 ± 29.83	t(281) = -1.50, p = 0.135	-0.20 (-0.47, 0.06)
Primary life domains				
Housing count	2.79 ± 3.73	2.96 ± 3.60	t(281) = -0.34, p = 0.738	-0.05 (-0.31, 0.22)
Housing severity	5.32 ± 6.23	6.53 ± 7.06	t(281) = -1.39, p = 0.167	-0.19 (-0.46, 0.08)
Education count	0.44 ± 0.78	0.55 ± 1.01	t(281) = -0.91, p = 0.362	-0.12 (-0.39, 0.14)
Education severity	0.93 ± 1.63	1.08 ± 1.72	t(281) = -0.66, p = 0.508	-0.09 (-0.36, 0.18)

(Continues)

TABLE 5 (Continued)

Variable	Sexual orientation		t test	Cohen's <i>d</i> (CI)
	Gay (<i>n</i> = 210)	Another SM identity (<i>n</i> = 73)		
Work count	1.57 ± 1.60	1.97 ± 1.72	$t(281) = -1.83, p = 0.068$	-0.25 (-0.52, 0.02)
Work severity	4.50 ± 4.99	5.36 ± 4.90	$t(281) = -1.27, p = 0.205$	-0.17 (-0.44, 0.09)
Treatment/Health count	2.05 ± 2.71	2.53 ± 2.55	$t(281) = -1.33, p = 0.185$	-0.18 (-0.45, 0.09)
Treatment/Health severity	5.68 ± 6.90	7.48 ± 7.63	$t(281) = -1.87, p = 0.063$	-0.25 (-0.52, 0.01)
Marital/Partner count	3.09 ± 3.38	3.03 ± 2.90	$t(281) = 0.14, p = 0.887$	0.02 (-0.25, 0.29)
Marital/Partner severity	6.81 ± 6.54	7.75 ± 6.49	$t(281) = -1.07, p = 0.288$	-0.15 (-0.41, 0.12)
Financial count	0.90 ± 1.02	1.08 ± 1.13	$t(281) = -1.28, p = 0.202$	-0.17 (-0.44, 0.09)
Financial severity	2.84 ± 2.89	3.47 ± 3.05	$t(281) = -1.56, p = 0.119$	-0.21 (-0.48, 0.06)
Legal/Crime count	0.28 ± 0.73	0.44 ± 0.88	$t(281) = -1.50, p = 0.136$	-0.20 (-0.47, 0.06)
Legal/Crime severity	0.75 ± 1.72	0.97 ± 1.92	$t(281) = -0.93, p = 0.351$	-0.13 (-0.39, 0.14)
Other relationships count	3.42 ± 3.09	4.08 ± 3.45	$t(281) = -1.53, p = 0.126$	-0.21 (-0.48, 0.06)
Other relationships severity	9.69 ± 7.78	10.60 ± 8.83	$t(281) = -0.84, p = 0.403$	-0.11 (-0.38, 0.15)
Death count	1.26 ± 1.54	1.22 ± 1.44	$t(281) = 0.18, p = 0.854$	0.03 (-0.24, 0.29)
Death severity	2.25 ± 2.72	2.29 ± 2.54	$t(281) = -0.10, p = 0.923$	-0.01 (-0.28, 0.25)
Life-threatening situations count	2.65 ± 3.16	2.95 ± 4.23	$t(281) = -0.62, p = 0.535$	-0.08 (-0.35, 0.18)
Life-threatening situations severity	5.84 ± 6.08	5.74 ± 6.90	$t(281) = 0.12, p = 0.909$	0.02 (-0.25, 0.28)
Possessions count	0.15 ± 0.61	0.21 ± 0.55	$t(281) = -0.71, p = 0.477$	-0.10 (-0.36, 0.17)
Possessions severity	0.32 ± 1.10	0.55 ± 1.44	$t(281) = -1.38, p = 0.170$	-0.19 (-0.45, 0.08)
Core social-psychological characteristics				
Interpersonal loss count	4.06 ± 3.36	4.31 ± 3.10	$t(281) = -0.58, p = 0.565$	-0.08 (-0.35, 0.19)
Interpersonal loss severity	9.80 ± 7.60	11.04 ± 8.02	$t(281) = -1.18, p = 0.239$	-0.16 (-0.43, 0.11)

TABLE 5 (Continued)

Variable	Sexual orientation		t test	Cohen's <i>d</i> (CI)
	Gay (<i>n</i> = 210)	Another SM identity (<i>n</i> = 73)		
Physical danger count	4.24 ± 4.82	4.29 ± 4.71	$t(281) = -0.08, p = 0.939$	-0.01 (-0.28, 0.26)
Physical danger severity	9.52 ± 9.89	10.04 ± 10.16	$t(281) = -0.38, p = 0.702$	-0.05 (-0.32, 0.21)
Humiliation count	4.21 ± 3.46	5.11 ± 3.76	$t(281) = -1.87, p = 0.063$	-0.25 (-0.52, 0.01)
Humiliation severity	9.52 ± 7.43	10.75 ± 7.94	$t(281) = -1.20, p = 0.233$	-0.16 (-0.43, 0.10)
Entrapment count	1.98 ± 1.42	2.33 ± 1.54	$t(281) = -1.79, p = 0.075$	-0.24 (-0.51, 0.03)
Entrapment severity	7.12 ± 5.72	8.37 ± 6.36	$t(281) = -1.56, p = 0.119$	-0.21 (-0.48, 0.06)
Role change/Disruption count	4.76 ± 4.89	5.62 ± 5.55	$t(281) = -1.25, p = 0.213$	-0.17 (-0.44, 0.10)
Role change/Disruption severity	10.70 ± 9.93	13.38 ± 12.05	$t(281) = -1.88, p = 0.061$	-0.26 (-0.52, 0.01)

Abbreviation: STRAIN, Stress and Adversity Inventory.

3.4.3 | Somatization symptoms

In line with our predictions, experiencing more total lifetime stressors, chronic difficulties, early life stressors, and adulthood stressors were each related to having more somatization symptoms. In terms of primary life domains, experiencing more stressors involving housing, work, treatment/health, financial, and life-threatening situations were each related to greater somatization symptoms. Finally, as for core social–psychological characteristics, stressors involving physical danger, humiliation, entrapment, and role change/disruption were each related to more somatization symptoms. These models accounted for 5.3%–11.5% of the total variability in somatization symptoms, depending on stressor type.

3.5 | Associations between the severity of lifetime stressors and anxiety, depressive, and somatization symptoms

The multiple regression linear models for the total severity of lifetime stressors experienced across timing, type, primary life domains, and core social–psychological characteristics—along with their respective fit indices and proportion of variance explained—are presented in Supporting Information: Table S2. All models were a good fit for the data (CFIs > 0.95, RMSEAs < 0.08, SRMRs < 0.06). The results are summarized below by mental health outcome.

3.5.1 | Anxiety symptoms

As expected, experiencing greater stressor severity across the life course was related to having more anxiety symptoms, as was experiencing greater stressor severity in early life, adulthood, and for chronic difficulties. With regard to primary life domains, greater severity for stressors involving housing, work, treatment/health, financial, other relationships, and life-threatening situations were each related to more anxiety symptoms. Finally, as for core social–psychological characteristics, stressor severity involving interpersonal loss, physical danger, humiliation, entrapment, and role change/disruption were each associated with more anxiety symptoms. These models accounted for 7.2%–13.8% of the total variability in anxiety symptoms, depending on stressor type.

3.5.2 | Depressive symptoms

As hypothesized, experiencing greater total stressor severity across the life course was related to having more depressive symptoms, as was experiencing greater stressor severity in early life, adulthood, and for chronic difficulties. With regard to primary life domains, greater severity for stressors involving housing, work, treatment/health, financial, other relationships, and life-threatening situations were each related to more depressive symptoms. Finally, as for core social–psychological characteristics, greater severity for stressors involving interpersonal loss, physical danger, humiliation, entrapment, and role change/disruption were each associated with more depressive symptoms. These models accounted for 5.5%–15.2% of the variability in depressive symptoms, depending on stressor type.

3.5.3 | Somatization symptoms

Finally, experiencing greater total stressor severity across the life course was related to having more somatization symptoms, as was experiencing greater stressor severity across early life, adulthood, and for chronic difficulties.

Within primary life domains, greater severity for stressors occurring in the life domains of housing, work, treatment/health, financial, and life-threatening situations were each related to more somatization symptoms. Lastly, greater total lifetime severity for stressors involving the core social-psychological characteristics of interpersonal loss, physical danger, entrapment, and role change/disruption were associated with more somatization symptoms. These models accounted for 4.2%–9.1% of the variability in somatization symptoms, depending on stressor type.

4 | DISCUSSION

Although research has examined specific forms of stress such as racist and heterosexist discrimination among racial/ethnic and sexual minority populations, the effects of cumulative lifetime stressors on the mental health of sexual minority people of color remains understudied (Meyer et al., 2008). We addressed this important issue by examining how the total lifetime count and severity of acute and chronic stressors occurring across different exposure time periods, primary life domains, and core social-psychological characteristics were associated with key mental health symptoms in a group of Black, Latinx, and biracial Black-Latinx sexual minority adults. Consistent with hypotheses, experiencing more total lifetime stressors, as well as a greater total lifetime stressor severity burden, were both related to experiencing more anxiety, depressive, and somatization symptoms. In addition, we found that these associations differed across the different types of stressors assessed by the STRAIN, with associations for each symptom type being present for early life and adulthood stressors; chronic difficulties; stressors occurring in the primary life domains of housing, work, treatment/health, financial, and life-threatening situations; and for stressors involving the social-psychological characteristics of interpersonal loss, physical danger, humiliation, entrapment, and role change/disruption. These findings thus advance our understanding of how specific types of acute and chronic life stressors may lead to mental health disparities among multiply marginalized groups of people at the intersections of race/ethnicity and sexual orientation.

At the univariate level, within-group differences emerged, indicating that Latinx and Black-Latinx participants reported more severe early life stressors than Black participants. At the bivariate level, participants categorized as a member of another sexual minority (e.g., bisexual, pansexual, queer) reported greater anxiety and depressive symptoms than self-identified gay respondents. This group also experienced more total lifetime stressors and rated those stressors as being more severe than participants who self-identified as gay. These associations held across both the total lifetime stressor count and severity path models. Black, Latinx, and biracial Black-Latinx persons who identified with a sexual minority identity categorized as other than gay reported elevated anxiety and depressive symptoms compared with gay Black, Latinx, and biracial Black-Latinx respondents. These findings are consistent with research indicating that individuals who identify as bisexual/pansexual, queer, or another sexual minority report elevated mental health problems relative to gay self-identified persons (monosexual) (Ramirez & Galupo, 2019). These results also corroborate existing research indicating that sexual minority people of color are highly affected by general life stressors (Meyer et al., 2008).

Moreover, results from the present study indicate that unemployed participants reported elevated somatization symptoms. This finding underscores how unemployment contributes to mental health disparities (Brand, 2015). Results from this study may thus inform socioeconomic interventions aimed at helping individuals create and secure jobs, as well as worker protections to alleviate mental health disparities. As our results suggest, this is a critical point of prevention and intervention for sexual minority people of color who are likely to experience financial strain and housing insecurity (Durso & Gates, 2012), which were linked to worse mental health symptoms in the present study.

This study has several strengths. First, we focused on diverse sexual minority people of color who experience substantial stress burden and mental health problems but are rarely studied in the more general stress literature. Second, in contrast with most life stress studies, we assessed stressors occurring from childhood through young adulthood, which is crucial for understanding how stressors may combine to cumulatively impact health. Finally,

consistent with a stressor characteristics perspective on stress and health (Slavich et al., 2010; Slavich, 2020), we examined whether associations between life stressors and health differed by exposure timing, primary life domain, and core social-psychological characteristics, which is critical to developing a more complete and nuanced understanding of how different types of stressors impact health (Slavich & Shields, 2018).

Several limitations are also worth noting. First, the use of cross-sectional data prevents claims of directionality and causality, and prospective studies are needed to better understand how stressors occurring across the lifespan have lasting, cumulative effects on health. Second, the study relied on retrospective reports of life stressors from young adults ages 19–29 years, which can be biased by participants' concurrent mood at the time of data collection (Baddeley, 1990), although the STRAIN has been shown to be insensitive to mood effects and social desirability (Shields & Slavich, 2017). Relatedly, there is a tendency for young Black and Latinx (Nishina & Parra, 2019) and sexual minority (Olweus, 2013; Rivers et al., 2018) people to under or over report stressful life experiences, which is a limitation of all stress and health studies in this population. Third, focusing on a young adult group of sexual minority people of color prevents our ability to examine the known structural effects of lifetime stressor experiences related to employment and housing discrimination on mental health among older sexual minority people of color (Kum, 2017).

Fourth, participants who self-identified as non-cisgender, who are two times more likely to be diagnosed with psychiatric disorder, including anxiety and depression, than their cisgender counterparts (Hanna et al., 2019), were unrepresented in the study. We also had underrepresentation of bisexual, pansexual, queer, and additional sexual orientation groups, which inhibited finer inquiries into known mental health disparities relative to gay self-identified individuals (Ramirez & Galupo, 2019). Therefore, we aggregated bisexual/pansexual, queer, and other sexual minority persons in a single sexual orientation group, retained data from non-cisgender participants and were unable to examine within-group variability among bisexual/pansexual and queer, participants or within transgender, genderqueer, and nonbinary persons. In the future, stratified sampling recruitment efforts will be critical for understanding and addressing social and mental health disparities among these members of the sexual and gender minority communities of color.

Fifth, we did not assess participants' experiences of being perceived as heterosexual/straight or cisgender, including possible efforts to conceal their own sexual minority status, which are behaviors implicated with psychosocial adjustment and mental health. For example, research has suggested that sexual minority persons who are perceived as straight/heterosexual experience fewer sexuality-based social stressors, and that sexual minority persons who perform hegemonic masculinity to "pass" as straight often do so to avoid being stigmatized (Yoshino, 2002). However, too often, this "passing privilege" comes at the cost of experiencing heightened psychological distress (Mahalik et al., 2003; Sánchez, 2016). This may be particularly true for sexual minority persons of color, who often contend with navigating multiple stigmatized identities (e.g., Hunter, 2010; Parra & Hastings, 2018). Moreover, sexual minority women are subset of the population who also experience disproportionate rates of sexual and gender discrimination, and evidence high risk for mental health disparities (Lehavot & Simoni, 2011; Lewis et al., 2012), but were not included in the current study. Lastly, the data used were from respondents residing only within Los Angeles County, which may limit the generalizability of these findings to sexual minority persons living in other areas.

In closing, future studies assessing the effects of general cumulative life stressors on health for sexual minority people of color should consider the central role of oppression and inequalities and emphasize the interconnectedness between diverse forms of oppression. We used an instrument for assessing general major stressors occurring across the lifespan to examine their effects on mental health disparities across domains and we did not specifically link these general stressors and poor health outcomes in the context of systemic racism and heterosexism. Applying a more critical intersectionality lens could advance this work considerably. For example, experiences of racism and heterosexism are pervasive and severe forms of stress that are considered fundamental causes of disease (Hatzenbuehler et al., 2013; Link & Phelan, 1995), which can lead to poor mental health outcomes (Hastings

et al., 2022; Lick et al., 2013; Meyer, 2003; Myers, 2009; Paradies et al., 2015; Parra & Hastings, 2018; Slavich, 2020, 2022).

Additional research examining the effects of lifetime stressor exposure specific to racism and heterosexism on internalized stigma and mental health is also warranted. Sexual minority persons of color internalize society's negative attitudes and beliefs about their racial/ethnic and sexual minority social group memberships often leading to negative views about the self which are linked to poor mental health outcomes (Velez et al., 2019). This work would also include stressor exposure in nonaffirming religious contexts, which can heighten risk for internalized stigma and mental health problems among Latinx and Black sexual minorities (Barnes & Meyer, 2012). Moreover, a greater focus on how sexual and gender minority persons of color display resiliency in the context of lifetime adversities is necessary to inform prevention and intervention efforts to diminish mental health disparities (Alessi, 2016; Meyer, 2010).

Notwithstanding these points, the present results demonstrate that multiple stressor types are strongly related to anxiety, depressive, and somatization symptoms in multiply stigmatized adults. The findings thus highlight social-environmental risk factors for poor mental health in this population. They may also highlight opportunity for prevention and intervention efforts aimed at reducing mental health disparities caused by lifetime stressor exposure.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ETHICS STATEMENT

The work was approved by the Institutional Review Board at the host institution, and participants provided written informed consent before beginning the study.

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ENDNOTES

- ¹ The term Latinx represents a conscientious effort to transcend the male/female masculine/feminine sex-gender binary that is inherent in the Spanish language and to bring visibility to the existence of all sexual and gender minority persons of Latin American descent (Scharrón-del Río & Aja, 2015).
- ² There was a total of 15 participants who identified their gender as other than cisgender male (see Table 1). We retained these participants in the main regression analyses, because the main pattern of results did not change while controlling for gender or excluding non-cisgender participants. Therefore, to be inclusive of our diverse sample, retain as much data as possible, and conduct parsimonious analyses, we retained the data for these 15 participants without controlling for gender.

PEER REVIEW

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