



The national evaluation  
of the NIH Diversity  
Program Consortium

# Data Brief

From the DPC Coordination and Evaluation Center at UCLA

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## Self-reported effects of the climate of racial injustice on student stress levels and engagement in related protests and demonstrations from the 2021 Enhance Diversity Study, Student Annual Follow-Up Survey

**SUMMARY:** Students are plagued with a barrage of stressors that can impact their academic outcomes including but not limited to campus environment, expectations, level of resources and academic stress. These stressors are compounded by racial tensions and ineffective race relations, similar to that seen in 2020 when the country was reawakened to racial injustices following the murders of Ahmad Aubrey, Breonna Taylor, George Floyd and others. This brief describes the self-reported impacts of heightened racial injustices on students' level of stress and engagement in related protests and demonstrations in the Enhance Diversity Study (EDS) during the 2021 EDS Survey administration, shedding light on the context for BUILD programs and effects. Analyses presented in this brief highlight the high levels of stress respondents experienced as a result of racial injustice, with BUILD-involved respondents reporting significantly higher levels of stress. Analyses further showed that designated racial subgroups experienced higher levels of stress compared to their white counterparts and women experienced higher levels of stress compared to men. Findings highlight the need for further study to understand the extent to which respondents' levels of stress are related to their level of participation in social protests and demonstrations and ultimately whether protests contributed to or mitigated respondent stress levels.

### Introduction

Myriad stressors plague college students today. While environment, level of resources, expectations, and relationships have all been identified as major sources of stress for students (Hurst et al, 2012), academic stress represents a key factor influencing academic outcomes (Debrard et al., 2004; Palmer et al., 2009; Zajacova et al., 2005). All these types of stress are compounded when racial tension and poor campus race relations are present. Racial conflict has been a well-recognized and widely pervasive issue for United States (US) universities and college campuses since the 1980s (Hurtado, 1990), but it has been identified on many campuses much earlier. This is particularly troubling when considering the strong interconnection between campus racial climate and the worsening national racial climate (Mwangi et al., 2018). Marginalized students “see this racial climate reflected in social and news media, experience their

racialized identities being connected to broader systems of oppression,” which can easily blur “the lines between racial climate in the United States and on campus” (Mwangi et al., 2018).

In the spring of 2020, the United States found itself in the throes of two major events: 1) a global pandemic, which sparked panic levels unseen since the Swine Flu outbreak in 2009 and 2) a racial reawakening sparked by the murders of Ahmad Aubrey, Breonna Taylor, George Floyd, and others by active or retired police officials. According to the American Psychological Association's 2020 report on stress and mental health, adults ages 18 to 23 experienced the highest levels of stress, even prior to the pandemic. University and college administrators and health officials alike continue to search for strategies to improve the social, mental, emotional, and physical health of students with the goal of improving their overall college experience. Equally

important to this effort is identifying strategies that aid administrators and health officials in understanding the factors that shield the health of students from events that are stressful (Negga et al., 2007; Skowen et al., 2004). Clearly understanding the impact of racial injustice at the national level on stress felt by students at the individual campus level is important. Equally important is understanding the extent to which that stress is felt in light of individual campus environment and context which has direct implications on each campus's culture and overall climate (INST-1). Most importantly, information discovered can provide a viable gateway to larger, more complex conversations on strategies for creating, enhancing, and maintaining the type of inclusive and diverse research and research training environments needed for more inclusive science and science research.

In this brief we will examine the following questions using the DPC Enhance Diversity Study 2021 Student Annual Follow Up (SAFS) survey:

1. To what extent did respondents at Building Infrastructure Leading to Diversity (BUILD) institutions experience stress as a result of heightened racial injustice and associated social protests/demonstrations in the 2020-2021 academic year?

a. To what extent does stress vary between those involved with the BUILD program versus those not involved in the program?

b. To what extent does stress vary by demographic subgroups (race/ethnicity, gender identity, and campus characteristics)?

2. How often did respondents at BUILD institutions participate in social protests/demonstrations that occurred in 2020?

a. To what extent does participation in social protests/demonstrations vary between those involved in the BUILD program and those not involved?

b. To what extent does participation in social protests/demonstrations vary by demographic subgroups (race/ethnicity, gender identity, and campus characteristics)?

## Data

The Coordination and Evaluation Center (CEC) analyzed responses to the 2021 SAFS from each of the 10 BUILD programs. Survey respondents were asked to complete two items related to racial injustice.

Item 1: How often did you participate in any of the various social protests/demonstrations that have occurred in 2020?

Response Options: Frequently, Occasionally, Not at all, I choose not to answer

Item 2: How much has the heightened attention to issues of racial injustice and the associated social protests/demonstrations been a source of stress for you?

Response Options: Not at all (1), 2, Somewhat (3), 4, Extensive (5), Can't Rate (6)

Of the 8,561 respondents that participated, 7,869 answered these items. Approximately 16.2% were Black, 25.2% Hispanic, 21.7% Asian, 19.2% White, and 17% Other. For the latter category, we chose to combine American Indian (0.5%), Native Hawaiian (0.2%), Middle Eastern/North African (3.4%), and those indicating a multi-racial makeup of two or more races (12.7%) with those reporting "Other" into a single category due to their low numbers relative to other larger racial/ethnic categories. Among the participants, 30.2% identified as male, 65.3% as female, and 4.5% as other. We chose to combine Transmen (0.5%), Transwomen (0.1%), Gender queer/ Gender non-conforming (2.0%), those claiming a different identity (0.4%), and those choosing not to answer (1.6%) into the "Other" category due to their low numbers relative to the other larger categories.

Participants were also classified by campus type based on data from the US Department of Education: Historically Black College and University (HBCU); Hispanic-Serving Institution (HSI); and "Other Campus Type", a combination of Asian American and Native American Pacific Islander-Serving Institutions (AANAPISI) and institutions with a student demographic makeup that did not meet the minority-serving institution classifications (National Academies of Sciences, Engineering, and Medicine, 2019). Approximately 12.1% of students attended HBCUs, 51% of

students attended HSIs, and 36.9% of students attended institutions designated as “Other Campus Type”.

Lastly, we characterized “BUILD” students as those participating in BUILD programs as either a Scholar, the most intensely treated and supported group with intervention supports; Associate, less intensely treated group of students often participating in a subset of intervention supports; and/or those participating in an undergraduate research experience (URE), BUILD-affiliated student-directed research, or a mentored undergraduate research experience. BUILD students comprised 11% of the total respondents.

Frequency distributions were examined overall. We elected to include the “Can’t Rate” responses because there were reasonable numbers of respondents who chose this option. Differences by subgroups were examined using Chi-square analyses, excluding the “Can’t Rate” responses.

As shown in the first row of Table 1, overall 69.5% of students reported that racial injustice issues and associated protests were at least somewhat a source of stress (categories “Somewhat”, “4” and “Extensive” combined), including 21.9% who reported that they were an extensive source of stress. BUILD-involved participants reported significantly higher stress responses than non-BUILD students. Black students had the highest reported levels of stress with 55.4% of black students reporting feeling more than somewhat stressed due to racial injustice and the associated protests/demonstrations. Gender comparisons indicated that women were nearly twice as likely as men to report elevated levels of stress due to issues related to racial injustice and the associated protests. Across campus types, students attending HBCUs had the highest reported levels of stress with 55.7% of these students reporting extensive to moderate levels of stress due to racial injustice issues.

As shown in Table 2, nearly 30% of respondents indicated participating in protests and demonstrations in some capacity, with just 4.4% reporting frequent participation. Analyzing the data across subgroups revealed significant differences by race, gender, and BUILD participation. Black students reported the highest level of participation

in social protests and demonstrations with 40.3% indicating frequent or occasional engagement. Respondents identifying with a gender identity other than man or woman reported the highest level of engagement in protests at 37%. HBCU students reported far more frequent participation in protests as compared to students attending HSIs or other types of institutions. BUILD-involved students reported somewhat higher levels of participation in protests than those not involved with the program.

**Table 1: Percent of respondents reporting the extent to which racial injustice and associated social protests/demonstrations was a source of stress, overall and by subgroups**

	n	Not at All	2	Somewhat	4	Extensive	Can't Rate
<b>Overall</b>							
	7,868	12.2	11	29	18	22	8
<b>BUILD / Non-BUILD*</b>							
Non-BUILD <sup>a</sup>	7,006	12.5	11	30	18	21	8
BUILD <sup>a</sup>	862	9.5	9	27	22	27	7
<b>Race / Ethnicity*</b>							
Asian	1,707	11	11	31	20	20	7
Black <sup>b</sup>	1,315	8	6	25	18	38	6
Hispanic	1,980	14	9	31	18	20	9
Other	1,358	11	11	28	19	22	9
White <sup>b</sup>	1,508	16	16	31	16	13	9
<b>Gender*</b>							
Men <sup>c</sup>	2,308	20	14	30	14	13	9
Women	5,135	9	9	30	20	26	7
Other Identity <sup>c</sup>	352	8	7	24	16	28	18
<b>Campus Type*</b>							
HBCU <sup>d</sup>	950	7	6	24	18	38	7
HSI <sup>d</sup>	4,012	14	10	30	18	20	8
Other	2,906	12	12	30	18	20	8

\*p-value <0.0001 for sub-group differences by Chi-square, excluding the “Can’t Rate” responses.

**Table 2: Percent of respondents reporting frequency of participation in social protests/ demonstrations, overall and by subgroups**

	n	Frequently	Occasionally	Not at all	I chose not to answer
<b>Overall</b>					
	7,868	4	25	60	12
<b>BUILD / Non-BUILD*</b>					
Non-BUILD <sup>a</sup>	7,006	4	25	60	12
BUILD <sup>a</sup>	862	6	26	56	12
<b>Race*</b>					
Asian <sup>b</sup>	1,707	2	20	66	13
Black <sup>b</sup>	1,315	7	33	48	12
Hispanic	1,980	4	21	65	11
Other	1,358	5	27	56	12
White	1,508	4	26	59	11
<b>Gender*</b>					
Men <sup>c</sup>	2,380	3	19	68	10
Women	5,135	5	27	57	11
Other Identity <sup>c</sup>	353	10	27	35	28
<b>Campus Type*</b>					
HBCU <sup>d</sup>	950	6	34	47	12
HSI <sup>d</sup>	4,012	4	22	64	11
Other	2,906	5	26	58	12

\*p-value <0.0001 for sub-group differences by Chi-square, excluding the “Can’t Rate” responses.

## Conclusion

This brief reports on analyses of self-reported stress associated with racial injustice issues and related protest participation. Results highlight the high levels of stress respondents have experienced as a result of the heightened recent attention to racial injustice and related protests. BUILD-involved respondents reported significantly higher levels of stress at both extensive and moderate levels. Among racial groups, black respondents reported the highest levels of stress

with nearly 60% indicating extensive or moderate levels. All racial subgroups reported higher levels of extensive or moderate stress compared to white students. Paralleling these findings, respondents from HBCUs reported the highest levels of stress compared to students attending HSIs or other types of institutions. Communities of color have experienced a dramatic uptick in incidents of violence and harm in the past few years which would give credence to these results. Women also

experienced greater levels of stress related to racial injustice and protests, but only slightly higher than respondents that fell into the gender designations of “Other”. These latter respondents also reported extensive stress levels at a rate of over 40%.

Among the more notable findings from reviewed data is the pervasive high levels of reported stress with over 20% of respondents in nearly all subgroups reporting extensive stress and 50% or more reporting being somewhat or more stressed by heightened attention to racial injustice issues. Further study on the extent to which respondents’ levels of stress are related to their level of participation in social protests/demonstrations would help clarify whether protests contributed to or mitigated respondent stress levels. Further exploration is also needed to better understand the root causes of reported stress, identify potential factors that can mitigate or relieve stress, and determine what critical resources and campus infrastructure adaptations may be needed to better support students in this area. Additional studies may also be helpful in exploring the connections between student stress and campus response particularly as it pertains to institutional hallmark STU-11 (evidence of creating, enhancing and/or maintaining diverse, inclusive and culturally appropriate research and research training environments).

## About BUILD

Building Infrastructure Leading to Diversity (BUILD) consists of a set of 10 linked awards granted to primarily undergraduate institutions, each of which developed approaches intended to determine the most effective ways to engage and retain students from diverse backgrounds in biomedical research, and to prepare students to become future contributors to the NIH-funded research enterprise.

BUILD is one of three initiatives within the Diversity Program Consortium (DPC). Further information can be found here: <https://www.diversityprogramconsortium.org/pages/nih>

## Publication and Contact Information

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