

The Mental Health Burden of Racial Discrimination in Young Adults in Rhode Island

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ABSTRACT

OBJECTIVES: This study examined the association between racial discrimination and depressive symptoms among Rhode Island young adults.

METHODS: The 2022 Rhode Island Young Adult Survey recruited 1,022 young adults aged 18-25 years who lived in Rhode Island for at least part of the year. Multivariable logistic regression for depressive symptoms controlled for sexual and gender identity, race/ethnicity, social status, age, employment, and student status.

RESULTS: 23.6% of young adults reported experiencing racial discrimination in childhood and/or adulthood. Odds of depressive symptoms increased for experiences of childhood racial discrimination (+70%; 95%CI: 14%, 155%) and any racial discrimination (+56%; 95%CI: 6%, 130%), but not for racial discrimination in adulthood (+38%; 95%CI: -8%, 108%).

CONCLUSIONS: Experiences of racial discrimination increase odds of depressive symptoms among young adults. Prevention measures such as universal screening for childhood adversity, incorporating antiracism education into all institutional settings, and continued nondiscrimination policy and enforcement should be employed.

KEYWORDS: discrimination, racism, mental health, depression, young adults

INTRODUCTION

In 2019, young adults aged 18–29 in the United States exhibited a depressive symptom rate of 21%, and experienced greater increases in these symptoms from the years 2017-2020 compared to any other adult age group.^{1,2} This increasing prevalence is due mostly to the disruptions to life stemming from the COVID-19 pandemic, causing psychological, emotional, and physical harm.³ In Rhode Island, 43.2% of young adults experienced depressive symptoms in 2020, more than double the national estimate of major depressive episode.^{4,5} In addition, 11.7% of Rhode Island young adults had serious thoughts of suicide during 2017–2019, where the risk of death by suicide in racial and ethnic minority populations is highest under the age of 30.^{6,7} Of

the Rhode Island young adult population, sexual and gender minorities (SGMs) suffered a disproportionate burden of depressive symptoms (68% of those who are not heterosexual, 59% who identify as neither male nor female) compared to males and females and those who identify as heterosexual (36%, 45%, and 34%, respectively).⁴

A potential risk factor for mental illness in young adults is the experience of racial discrimination. Racial discrimination typically involves injurious, negative, unfair, or hostile treatment because of behavioral manifestations of prejudice.⁸ The Black Lives Matter movement, coupled with the COVID-19 pandemic, marked 2020 as the crux of heightened racial tensions in the United States.^{9,10} The spread of COVID-19 in the United States (US) was accompanied by an increase in discrimination and racism against Asian Americans, where 31% reported that they had experienced racial slurs and insults since the pandemic began.¹¹ The use of the term “Chinese virus” by prominent politicians, including former president Donald Trump, increased xenophobia, and anti-Asian sentiment.¹² Concurrently, the Black Lives Matter movement made strides in advancing policies and practices to protect minority groups, and it also gave rise to multiple counter-movements and negative stances that generated hostile social environments toward Black people.¹³

Prior research suggests that experiencing prejudice and discrimination puts one at higher odds of experiencing depressive symptoms, and this is true for multiple racial and ethnic groups.^{14,15} For example, a scoping review reported that 81% of published studies found a clear positive association between experiencing discrimination and depressive symptoms in African Americans, and general poor mental health, depression, and anxiety were associated with experiencing racism in Aboriginal populations.^{16,17} Similar findings have been reported in individuals who identify as transgender and experiencing discrimination-related stressors was associated with suicide ideation in young adults who identify with the larger LGBT population.¹⁸

To our knowledge, no study has examined rates of racial discrimination and depressive symptoms in Rhode Island young adults, nor have they analyzed the association between racial discrimination in childhood or adulthood and depressive symptoms in this population. Therefore, the present study aims to examine the prevalence of racial discrimination among Rhode Island young adults and its

association with depressive symptoms. We hypothesize that experiencing racial discrimination increases the odds of depressive symptoms, and more so when experienced in childhood than adulthood.

METHODS

Sample

The 2022 Rhode Island Young Adult Survey (RIYAS) is a web-based, cross-sectional survey administered from May through August 2022. A full description of RIYAS methodology is in (whatever the citation is).¹⁹ The survey resulted in $N = 1,022$ young adults aged 18-25 years who lived in Rhode Island for at least part of the year, all of whom are eligible and included in this study. This study was approved by the Johnson & Wales University Institutional Review Board.

Measures

The primary outcome of the study was depressive symptoms. Depressive symptoms were measured using the Center for Epidemiological Study Short Depression Scale (CES-D10). The CES-D10 contains 10 items regarding past week experiences of symptoms related to the development of depression ($\alpha = 0.83$). For example, items include *I felt hopeful about the future*, and *I felt lonely*. The response options ranged from were rarely or none of the time, which was coded as 0, to all of the time, coded as 3. Reverse scoring was implemented for two of the items. Total continuous depressive symptom scores could range from 0 to 30 with higher scores suggesting greater severity of symptoms. Consistent with the literature, a cut-off of 10 or higher was indicative of having depressive symptoms. The CES-D10 has shown strong test-retest reliability and convergent validity in youth and adult populations.²⁰ In this sample, the inter-item correlation according to Cronbach's alpha was $\alpha = 0.85$.

The primary exposures in this study were racial discrimination in childhood, racial discrimination in adulthood, or experiencing any racial discrimination. These exposures were defined by responses to a single survey question, *were you treated badly or unfairly because of your race or ethnicity?* Response options included *Yes, in childhood*, *Yes, in adulthood*, or *No, never*. Those responding *Yes, in childhood* or *Yes, in adulthood* were considered to have experienced racial discrimination in childhood and racial discrimination in adulthood, respectively. Experiencing any racial discrimination was defined by either childhood or adulthood experiences.

Other potential confounders and covariates considered in the analysis include sexual and gender identity (cisgender heterosexual males, cisgender heterosexual females, sexual and gender minorities), race/ethnicity (White non-Hispanic, Black, Asian, Hispanic, Multiracial or something else), social status, age in years, employment (None, Part-Time, Full-Time), and student status. Social status was measured

using the MacArthur Scale of Subjective Social Status (Adler et al, 2000), which assessed a participant's perceived social rank relative to other members of the community on a scale of 1, meaning worst off, to 10, meaning best off.²¹

Statistical Analysis

Descriptive statistics, namely frequencies and percentages, were calculated to describe the total sample by all variables, as well as by all primary exposure variable: racial discrimination in childhood, racial discrimination in adulthood, and experiencing any racial discrimination. Frequency and prevalence of the primary racial discrimination exposure variables were described by racial/ethnic group in the total sample. Bivariable statistics such as chi-square tests for categorical variables and t-tests for continuous variables were applied to assess differences in depressive symptoms and all other covariates by each exposure variable. Crude odds ratios were computed using bivariable logistic regressions for the relationships between each of the primary exposures and depressive symptoms. Multivariable logistic regressions of depressive symptoms were conducted for each of the primary exposures separately while controlling for sexual and gender identity, race/ethnicity, social status, age, employment, and student status. All statistical tests were assessed at $\alpha = 0.05$. All analyses were conducted in Stata/SE 15.0.²²

RESULTS

This sample of Rhode Island young adults was predominantly White non-Hispanic (59.8%), cisgender heterosexual female (44.6%), comprised of students (70.4%), and part-time employees (45.8%). Depressive symptoms were highly prevalent with 51.0% ($N = 521$) meeting the definition (Table 1).

Racial discrimination in adulthood was less prevalent with 18.9% reporting experiences in childhood, 16.2% reporting experiences in adulthood, and 23.6% reporting an experience at all. There was variation in racial discrimination overall, in childhood, and in adulthood by race/ethnicity. Particularly, 68.5% of Black young adults reported racial discrimination, Asian young adults 62.7%, Hispanic young adults 49.5%, Multiracial or other race 45.5%, and White non-Hispanic young adults with only 3.8% (Figure 1).

Any racial discrimination, racial discrimination in childhood, and discrimination in adulthood all varied significantly by race/ethnicity ($p < 0.001$), social status ($p < 0.01$), and depressive symptoms ($p < 0.015$). Racial discrimination in childhood was also significantly different by sexual and gender identity ($p = 0.013$) and employment status ($p = 0.033$). Similarly, experiences of any racial discrimination were different by employment status ($p = 0.032$). Racial discrimination in adulthood did not vary by sexual and gender identity ($p = 0.326$) nor employment status ($p = 0.383$; Table 1). From crude logistic regression models, odds of depressive symptoms increased for each primary exposure: racial

Table 1. Sociodemographic Characteristics of Rhode Island Young Adults by Any Race Discrimination, in Childhood, or Adulthood

	TOTAL N=1022 (%)	Racial Discrimination in Childhood N = 193 (18.9%)	p-value	Racial Discrimination in Adulthood N = 166 (16.2%)	p-value	Any Racial Discrimination N = 241 (23.6%)	p-value
Sexual and Gender Identity			0.013		0.326		0.117
Cisgender Heterosexual Males	133 (13.0)	20 (10.4)		19 (11.5)		28 (11.6)	
Cisgender Heterosexual Females	456 (44.6)	73 (37.8)		68 (41.0)		97 (40.3)	
Sexual and Gender Minorities	433 (42.4)	100 (51.8)		79 (47.6)		116 (48.1)	
Race/Ethnicity			<0.001		<0.001		<0.001
White, non-Hispanic	611 (59.8)	15 (7.8)		17 (10.2)		23 (9.5)	
Black	54 (5.3)	28 (14.5)		27 (16.3)		37 (15.4)	
Asian	59 (5.8)	32 (16.6)		21 (12.7)		37 (15.4)	
Hispanic	210 (20.6)	81 (42.0)		76 (45.8)		104 (43.2)	
Multiracial or Something Else	88 (8.6)	37 (19.2)		25 (15.1)		40 (16.6)	
Social Status [mean (SE)]	6.00 (0.05)	5.71 (0.13)	0.010	5.54 (0.15)	<0.001	5.65 (0.11)	<0.001
Age [mean (SE)]	21.32 (0.07)	21.16	0.237	21.3 (0.15)	0.925	21.21 (0.13)	0.378
Employment			0.033		0.383		0.032
No	216 (21.1)	53 (27.5)		40 (24.1)		65 (27.0)	
Yes, Part-Time	468 (45.8)	87 (45.1)		78 (47.0)		106 (44.0)	
Yes, Full-Time	338 (33.1)	53 (27.5)		48 (28.9)		70 (29.1)	
Student			0.206		0.550		0.298
No	303 (29.7)	50 (25.9)		46 (27.7)		65 (27.0)	
Yes	719 (70.4)	143 (74.1)		120 (72.3)		176 (73.0)	
Depressive Symptoms			0.001		0.015		0.003
No	501 (49.0)	74 (38.3)		67 (40.4)		98 (40.7)	
Yes	521 (51.0)	119 (61.7)		99 (59.6)		143 (59.3)	

NOTE: Bivariable tests conducted were chi-square for categorical variables and t-tests for continuous variables

Figure 1. Prevalence (%) of Racial Discrimination by Race/Ethnicity among Rhode Island Young Adults

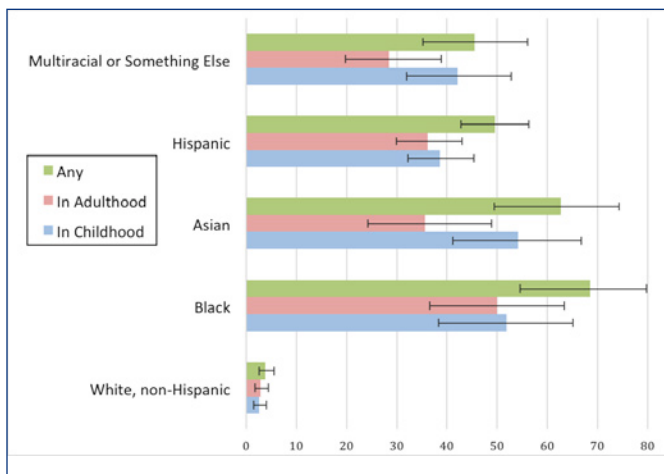
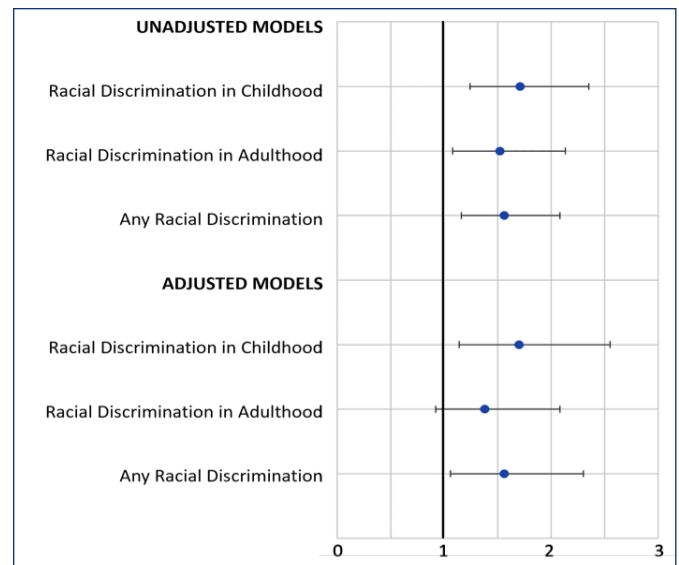


Figure 2. Odds of Depressive Symptoms among Rhode Island Young Adults



NOTE: AORs control for sexual and gender identity, race/ethnicity, social status, age, employment, and student status

discrimination in childhood by 71% (95%CI: 24%, 135%), in adulthood by 52% (95%CI: 8%, 113%), or at all by 56% (95%CI: 16%, 108%). Findings from the multivariable logistic regressions were consistent with crude results for childhood racial discrimination (70%; 95%CI: 14%, 155%) and any racial discrimination (56%; 95%CI: 6%, 130%), but the association with racial discrimination in adulthood (38%; 95%CI: -8%, 108%) was no longer significant (**Figure 2**).

DISCUSSION

This study aimed to explore and highlight the disproportionate prevalence of racial discrimination among young adults in Rhode Island as well as examine the relationship between racial discrimination and depressive symptoms. More than 1 in 5 Rhode Island young adults reported experiencing racial discrimination, with Black and Asian young adults reporting the highest prevalence. Yet, all young adult persons of color reported much higher rates of racial discrimination compared to White non-Hispanic young adults. Interestingly, Asian young adults had the highest prevalence of racial discrimination in childhood, while Black young adults reported the highest prevalence in adulthood. A nationally-representative sample of US adults from 2016 suggests a prevalence of 44% for lifetime race discrimination experiences, with people of color reporting much higher rates (63%), including high rates for the Asian population (57%) – consistent with our study findings. The lower overall rate of race discrimination in our study was likely due to having a younger sample, and having a White, non-Hispanic population much less likely to report racial discrimination than in the national study (4% versus 30%, respectively).²³

Our study findings also suggest experiences of racial discrimination are associated with depressive symptoms – consistent with current knowledge and confirming our hypothesis.^{14,15} The physiological effects of discrimination are extensive, a few of which being anxiety, cardiovascular irregularities, heightened inflammation, depressive symptoms (as supported by the current study), and even shortened telomere length leading to early aging.²⁴ Research suggests that people of color experience stress and/or trauma from individual, institutional, and cultural experiences of racism. This concept is supported by the Race-Based Traumatic Stress Injury Model. This model suggests that experiences of racism result in emotional injury or traumatic stress, much like symptomatic responses from post-traumatic stress. The extent of this emotional injury is dependent upon the individual facing racism, the extent and severity of the experience, their perception of the experience, and their ability to cope. Race-based traumatic stress injury can lead to symptoms of psychopathology and can be particularly harmful to children who tend to lack the necessary coping strategies.^{24,25}

This study found that those who experienced racial discrimination during childhood may have even higher odds of

depressive symptoms than those who experienced discrimination in adulthood – also consistent with our hypothesis. Those who experience adversity during childhood are at an increased risk for abnormal variations in brain development that can result in physical, psychological, and behavioral consequences.^{26,27} This can be explained through biological embedding, whereby early life stress creates pro-inflammatory tendencies at the cellular level, hypervigilant responses to challenge, and decreased sensitivity to inhibitory signaling, all of which can be carried into adulthood.²⁸ Increases in inflammation due to adverse childhood experiences can serve as a pathway to depression later in life.²⁹ Adults are less vulnerable to the effects of adversity because the brain's neural networks are well established and unlikely to become altered as significantly as a child's brain when experiencing stress.³⁰

Limitations

Despite its novelty, this study has some limitations. First, self-reported racial discrimination is a subjective metric, and each person's perception of discrimination, whether structural, institutional, or individual, may vary. Also, the measures of racial discrimination were lifetime experience, but did not account for severity or frequency, which likely has a dose-response relationship with poor mental health which could not be examined in this study.³¹ Second, this is a cross-sectional study and a causal relationship between discrimination and depressive symptoms cannot be inferred. Finally, despite using a valid and reliable assessment for depressive symptoms, individuals meeting the definition cannot be assumed to meet the threshold for diagnosis.

Implications

Racism is a significant social determinant of health and an adverse childhood experience. To improve health equity for all, it is imperative that society comes together to combat it.³² In order to prevent racism, changes must be made at all social-ecological levels including public policy, institutional, community, and individual. Racism prevention can likely never be absolute; therefore, we must implement measures by which the plausible causal pathway from experiences of racial discrimination, particularly in childhood, to depressive symptoms can be disrupted. Interventions on the public policy level should encourage positive youth engagement. This can be accomplished by creating strong relationships and dialogue between practitioners, policy makers, and youth to fostering stronger and healthier communities.³³⁻³⁵ Increased awareness and ratification of the United Nations Convention on the Rights of the Child (UNCRC), the “gold standard” for children's rights, will help ensure that every child has the right to protection from violence, an education that enables them to fulfill their potential, a healthy relationship with their parents, and the ability to express their opinions. While the United States signed the

UNCRC, it remains the only United Nations member state to have not ratified it. Children should be informed, through their teachers, parents, doctors, or other adult figures, that they have a right to advocate for themselves against racial discrimination by reporting these experiences directly to the UNCRC, and systems should be in place to make this process more accessible.³⁶

Implementing antiracism education into all institutional settings by hiring educators and workplace administrators with equity-based abilities, or the ability to identify, respond to, and remedy inequities in their subtlest forms, can help sustain environments less prone to race discrimination.³⁷ Efforts at the clinical level should include training in culturally competent care, universal screening for childhood adversity and racism-related social determinants of health, as well as the early application of trauma-informed mental healthcare.³⁸⁻⁴⁰ Community-level interventions should include peer and authority engagement when witnessing or experiencing racial discrimination. Programs meant to promote bystander responses to discrimination, such as “Speak Out Against Racism” (SOAR), should be applied in schools and community-based initiatives to educate on appropriate response strategies to witnessing racism.^{41,42} Evidence-based practices should be implemented at the individual level to improve the individual trauma response, such as interventions to cultivate social connectedness and self-compassion, mindfulness, and resiliency.⁴³⁻⁴⁵

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