



# Discrimination and Mental Health in an Ethnically Diverse Sample of Black Youth

J'Mag Karbeah<sup>1</sup> · Hana-May Eadeh<sup>2</sup> · Eunice Areba<sup>2,3</sup> · Marla E. Eisenberg<sup>2</sup>

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## Abstract

**Background** Although a substantial body of research has documented the adverse mental health impacts of discrimination, few studies have examined these outcomes and their association with ethnicity.

**Objective** This study characterizes variation in experiences of race-related bullying and adverse mental health symptoms among a sample of ethnically diverse Black adolescents.

**Methods** We describe experiences of racially motivated bullying and associated protective factors across Black 8th, 9th, and 11th grade youth ( $n=8,201$ ) in the 2022 Minnesota Student Survey, using multivariate logistic regression.

**Results** Over a quarter of youth (29.5%) across all Black ethnic subgroups reported bullying based on their racial identity. Nigerian, Multiethnic Black, and Multiracial youth reported the highest rates of race-related bullying (40.0%, 35.2%, and 35.2%). We find that Oromo Ethiopian ( $OR=0.51$   $CI=0.36-0.72$ ;  $p<0.001$ ), non-Oromo Ethiopian ( $OR=0.69$ ;  $CI=0.50-0.95$ ;  $p<0.05$ ) and Somali ( $OR=0.63$ ;  $CI=0.53-0.75$ ;  $p<0.001$ ) identities were associated with lower reported odds of depression compared to their African American peers. Oromo ( $OR=0.60$ ;  $CI=0.43-0.85$ ;  $p<0.01$ ), Nigerian ( $OR=0.6$ ;  $CI=0.45-0.95$ ;  $p<0.05$ ), and Somali ( $OR=0.65$ ;  $CI=0.54-0.78$ ;  $p<0.001$ ) youth reported lower odds of anxiety symptoms while Multiracial youth reported greater ( $OR=1.3$ ;  $CI=1.13-1.51$ ;  $p<0.001$ ) even when controlling for race-related bullying. Similar patterns were seen for suicidal thoughts and behaviors.

**Conclusion** There exists a considerable amount of heterogeneity within Black adolescent populations, with regards to race-based bullying experience and mental health. These findings support the development of culturally or ethnically tailored interventions to address adverse mental health outcomes for Black youth.

## Introduction

Rates of reported depression and anxiety among adolescents in the United States continue to rise with nearly 30% reporting that their mental health was not good most of the time or all the time [1]. In 2023, 1 in 5 young people reported that they had seriously considered attempting suicide in the

past 12 months. Psychosocial stressors, specifically those associated with a young person's identity such as being a member of a minoritized racial or ethnic group, may contribute significantly to the incidence of anxiety and depression symptoms and increase the risk of suicidal ideation and suicide attempts—henceforth referred to as suicidal thoughts and behaviors (STBs) [2, 3].

Although the majority of Black Americans are descendants of enslaved people and the US's legacy of chattel slavery—henceforth referred to as African Americans—recent studies suggest that the ethnic diversity of Black Americans has increased significantly since the 1980s. Approximately 20% of Black Americans have recent family ancestry outside of the United States and identify as either first-generation or second-generation Americans with at least one foreign-born parent [4, 5]. The growing number of ethnically diverse Black immigrants underscores the need to understand the mental health impacts of discrimination and how its effects may differ across diverse Black ethnic subgroups.

✉ J'Mag Karbeah  
karbe001@umn.edu

<sup>1</sup> Division of Health Policy and Management, School of Public Health, University of Minnesota, 420 Delaware St. SE, MMC 729 Mayo, Minneapolis, MN 55455, USA

<sup>2</sup> Division of General Pediatrics and Adolescent Health, Medical School, University of Minnesota, Minneapolis, MN, USA

<sup>3</sup> School of Nursing, University of Minnesota, Minneapolis, MN, USA

## Mental Health Outcomes for Ethnically Diverse Black Youth in the United States

A growing body of research has examined differences in perceived vulnerability to racial discrimination across Black ethnic groups. This work has shown that the experiences of African Americans differ from the experiences of Caribbean Black Adolescents [3, 6, 7]. Some studies have found greater lifetime risk of anxiety and depression in immigrant origin Black youth [8, 9], but results are mixed [3, 6, 7]. This research has yielded conflicting results with some studies identifying lower rates of adverse mental health outcomes among first and second generation immigrants compared to their African American counterparts [10–13], while others have found that first and second generation immigrants report higher rates of anxiety and depression symptoms [6, 7].

Despite this mixed evidence, scholars agree that experiences of race or ethnicity-based discrimination can shape the mental health trajectories of Black immigrant youth [13]. These differences may be due to the fact that some individuals may more strongly identify with their ethnic group or an entire geographical region where subgroups have some similar cultural practices (e.g., horn of Africa, Caribbean) as opposed to a pan-ethnic term such as African American, and therefore have different responses to race or ethnicity-related discriminatory experiences [14]. Additionally, external factors such as how immigrants are viewed, immigration policy, and religious affiliation may also contribute to observed differences in mental health status across groups. As such, more nuanced research is needed to understand potential differences in experiences of race or ethnicity-related discrimination across ethnically diverse subgroups of Black youth and whether ethnic identity modifies the relationship between discrimination and adverse mental health outcomes in these populations.

### Why Disaggregate?

In this study, we used a very large survey of Minnesota youth, which provided a unique opportunity to compare nine distinct Black youth subgroups: African American, Oromo Ethiopian, Other non-Oromo Ethiopian, Liberian, Nigerian, Somali, Other Black, Multiethnic Black, and Multiracial Black. Each of these groups have distinct migration and cultural histories that inform their processes of socialization and the development of Black racial identity within the United States [15]. The rich geographic, cultural, religious, and political diversity across these groups impacts how youth

develop their Black identity, and how their cultural identity relates to broader categorizations of Blackness within the United States. Although not a comprehensive discussion of the myriad of ways that these groups differ, below we offer brief descriptions of each group's immigration, cultural, and political history that may influence how youth are socialized and how they respond to race related discrimination.

The importance of disaggregating Black youth becomes evident upon closer examination of the differences that exist between cultural and ethnic groups from the African continent and even between groups from within the same national boundaries. For example, despite their shared geographic origin in East Africa, Somali, Oromo Ethiopian, and non-Oromo Ethiopian youth exhibit distinct cultural, demographic, and religious differences that may shape their experiences of race-related bullying and its associated mental health impacts. The Somali population in the United States is largely comprised of refugees who have been resettled in the country for over 30 years beginning in the early 1990s during the Somali civil war—with Minnesota hosting the largest Somali population in the United States [16]. In 2023, an estimated 39,000 children under 18 in Minnesota reported Somali identity [17]. In addition to their refugee status, studies show that religious identity — specifically Muslim identity — is highly salient among second generation Somali individuals and is often used as a way to distinguish themselves from African Americans [18]. Comparatively, there are an estimated 16,000 children under 18 in Minnesota who report Ethiopian identity. Ethiopians immigrated to the United States in notable numbers beginning in the 1960s and 1970s with many coming as students. Later, as Ethiopia was impacted by the spread of communism and the cold war, the US supported the resettlement of Ethiopian refugees out of communist-backed Ethiopia [19]. Unlike Somali refugees who were resettled in large numbers in Minnesota, the largest Ethiopian immigrant communities can be found in the Washington DC area and parts of the south [20]. Extant literature shows that first and second generation Ethiopian youth often see their identity as different from that of their Black/African American peers [21, 22]. This study further disaggregates Ethiopian identity by examining differences between youth who identify as Oromo Ethiopian and those who identify as non-Oromo Ethiopian. The Oromo, the largest of more than 80 ethnic groups in Ethiopia are approximately 40% of the country's population, are believed to have lived in the Southwestern highlands of Ethiopia before migrating to the north and eastern parts of the country during the mid-16th century [23]. Today, the most common socioeconomic activity

of the Oromo people is mixed farming [24]. Oromos speak *Afaan Oromo*, a language that is widely spoken throughout Africa and most notably spoken by other Ormo tribes located in Kenya [25]. Christianity and Islam are the major religions among Oromos although some still engage in traditional religious practices [24]. This group has become, increasingly mobilized in recent years to advocate for expanded rights and freedoms [26]. The identities of Oromo immigrants in the United States continue to be deeply impacted by the politics of their homeland. Thus, Oromo marginalization in Ethiopia has led many Oromo to prefer to identify as Oromo rather than identify with a unified Ethiopian identity or with dominant Black American identity [27].

Considering the marked differences among groups within the same national boundaries, the differences between East African origin communities (i.e. Somali and Ethiopian) and West African origin communities (i.e. Liberian and Nigerian) also warrant disaggregation. These West African immigrant groups also differ significantly in size, with less than 9,000 Minnesotan children under age 18 identifying as Liberian in 2023 and 5,500 identifying as Nigerian [17].

Although, both Somalis and Liberians arrived in the United States as refugees, these groups differ significantly in cultural, historical and social contexts. There is a large body of literature that has examined how Somali religious identity allows first and second generation immigrants to differentiate themselves from African American peers (e.g. religious dress for women and girls, the practice of praying five times a day known as *salah*, and fasting during Ramadan) [28, 29]. Although their religious identity aligns them more firmly with African Americans, practices within African churches may still constitute another avenue for which Liberian and Nigerian immigrants see their identities as different from African Americans [18, 30, 31]. Extant research also suggests differences in socioeconomic status and economic mobility across these distinct ethnic groups, which are often due to immigration histories. For example, compared to Liberian origin youth, Ethiopian- and Nigerian-origin youth are more likely to have parents who have a college degree and have the most education themselves [19, 32].

Youth who identify as “Other Black or African” may have different experiences from the other groups mentioned not only because they come from much smaller immigrant communities, but perhaps because they come from cultural backgrounds (i.e. Jamaican) communities with unique sets of cultural traditions and values that shape ethnic identity, perception of racial identity and responses to racial discrimination [33]. Similarly, being of Multiracial heritage shapes youth identity and experiences of racial discrimination in novel ways that warrant the disaggregation of these youth [34].

## Present Study

The primary research questions in this study were: (1) How common are experiences of race-related bias bullying in an ethnically diverse sample of African American and Black youth with ethnic ancestry across the African diaspora? (2) Is there an association between experiences of race-related bias bullying and adverse mental health outcomes, including anxiety symptoms, depressive symptoms, and STBs? and (3) Does this relationship differ for African American and Black youth with ethnic ancestry across the African diaspora? The current study builds upon extant research by considering the unique experiences of Black youth from various ethnic backgrounds to better understand variation in experience of discriminatory experiences and adverse mental health outcomes.

## Methods

### Data

This study uses data from the 2022 Minnesota Student Survey (MSS), a statewide survey that is administered triennially to fifth, eighth, ninth, and eleventh grade students across Minnesota. Our analytic sample excludes fifth grade students because they were not asked about suicidal thoughts and behaviors (STBs). In 2022, 70% of school districts completed the survey, and 100,836 students provided data, which represented 56% of all enrolled 8th graders, 51% of 9th graders, and 41% of 11th graders statewide. Participating schools notified parents of the MSS administration and allowed parents to opt their child out of participation. Student assent was provided before the survey was administered. Surveys were administered online in English. The analytic sample included 8,201 8th, 9th, and 11th grade students who indicated Black, African, or African American identity (with or without additional races) and provided data on their ethnic identities, race-related bullying experiences, mental health outcomes, and covariates, as defined below. The University of Minnesota Institutional Review Board exempted the study from review because data were anonymous.

### Measures

Two items on race and ethnic heritage were used to create a total of 9 racial/ethnic groups. First, respondents were asked to select any of seven racial groups or categories with which they identified (i.e. White; Asian; American Indian; Black, African, or African American; Hispanic

or Latino/Latina; Middle Eastern or North African; and Native Hawaiian or Other Pacific). Individuals who chose Black, African, or African American were also asked a follow-up question: *If you are Black, African or African American, which group best describes you? (If more than one describes you, Mark ALL that apply)*. Options for this question included: African American; Oromo Ethiopian; Other Ethiopian; Liberian; Nigerian; Somali; Other Black, African, or African American. Two additional categories were created to capture individuals who selected multiple ethnic groups (Multiethnic Black, e.g. Nigerian and African American) and individuals who identified as Black and another racial group (Multiracial, e.g. Black and White, regardless of ethnic identity). In our analyses, we use African American youth as our reference group due to our interest in understanding the experiences of youth from other Black ethnic subgroups.

We examined four dependent variables of mental health status: depression symptoms, anxiety symptoms, suicide ideation and suicide attempt.

### Depressive Symptoms

We assessed symptoms of depression over the past 2 weeks using the two-item Patient Health Questionnaire (PHQ-2)—“how often have you been bothered by little interest or pleasure in doing things?” and “how often have you been bothered by feeling down, depressed, or hopeless?” Response options were “not at all,” “several days,” “more than half the days,” or “nearly every day.” A cutoff score of  $\geq 3$  indicated a positive screening result ( $\alpha = 0.67$ ). The PHQ-2 is a validated screener that has been used in various populations of adolescents and adults [35, 36]. It shows strong reliability and the PHQ-2 is used as a first step to screen for depression before more comprehensive measures such as the PhQ-9 [37].

### Anxiety Symptoms

We assessed anxiety symptomology over the past 2 weeks using the validated two-item, General Anxiety Disorder-2 questionnaire (GAD-2) [38]. Students were asked how often in the last two weeks they had, been bothered by “feeling nervous, anxious, or on edge;” and “not being able to stop or control worrying.” Response options were the same as those available in the PHQ-2 and similarly a cutoff score of  $\geq 3$  indicated a positive screening result ( $\alpha = 0.86$ ). This categorization of responses has been validated in other research and is an accepted conceptualization of anxiety symptoms in youth populations [39].

### Suicidal Thoughts and Behaviors (STBs)

We assessed reports of suicidal ideation and past suicide attempt to capture STBs. Suicidal ideation was measured using the item “have you ever seriously considered attempting suicide?” Suicide attempt was assessed using a second survey item that asked, “have you ever actually attempted suicide?” Response options to both questions were no; yes, during the last year; and yes, more than a year ago. Responses to both questions were dichotomized as yes (ever), or no. These items are routinely used to assess suicidal thoughts and behaviors on large epidemiological surveys.

### Race-related Bullying

A single survey item was used to assess student experiences of race-related bullying. Students were asked, “During the last 30 days, how often have other students harassed or bullied you for any of the following reasons—your race, ethnicity, or national origin?” Students with responses other than never (0) were coded as having experienced race-related bullying (1). This item captures discrimination due to race, ethnicity, or national origin but for is referred to as “race-related bullying” throughout this manuscript.

### Covariates

We controlled for demographic covariates including grade, sex assigned at birth, gender minority status (e.g. did not identify as cisgender), sexual minority status (e.g. did not identify as heterosexual), and metropolitan residence (vs. non-metropolitan)—variables known to be associated with adolescent mental health outcomes [40, 41]. Two survey items were used to measure economic hardship: (1) “During the last 30 days, have you had to skip meals because your family did not have enough money to buy food,” and (2) “During the past 12 months, have you stayed in a shelter, somewhere not intended as a place to live, or someone else’s home because you had no other place to stay?” An affirmative response to either question was coded as having experienced hardship.

### Analysis

All statistical analyses were performed using STATA<sup>®</sup> V.18.0 [42]. First, we calculated descriptive statistics among the full sample and for each ethnic subgroup. Next, we conducted a test of variance to determine if the rates of race related bullying varied across each of our nine ethnic subgroups. Next, we used logistic regressions to examine the associations between ethnic identity and our

mental health variables of interest (i.e. depressive symptoms, anxiety symptoms, suicidal ideation, and suicidal attempt) while controlling for experiences of race related bias bullying and other covariates. There was considerable variation in the amount of missing data for each of our outcomes of interest across ethnic groups (i.e. data were not missing at random). This missingness may indicate varying levels of comfort or social desirability regarding reporting adverse mental health experiences that are influenced by a respondent's community of origin.

## Results

As shown in Table 1, over a quarter of our analytic sample identified as Multiracial (26.2%;  $n=2,151$ ), 1 in 5 identified as African American (22.6%;  $n=1,852$ ), and 1 in 6 identified as Somali (17.7%;  $n=2,069$ ). Most of the individuals in our sample resided within the metropolitan area (74.2%). Students in our sample were more likely to be female (53.2%;  $X^2=74.4$ ;  $p<0.001$ ). We present the incidence of each mental health outcome for each outcome in Table 2. Nearly 1 in 3 students (29.5%;  $n=2,417$ ) in our sample screened positive for depressive symptoms and Multiracial (35.8%;  $n=770$ ) and African American (30.7%;  $n=569$ ) youth reported the highest rates of symptoms. The differences across all groups were statistically significant ( $X^2=129.8$ ;  $p<0.001$ ). Multiracial youth had the highest rates of all outcomes of interest and Somali youth the lowest. Rates of race-related bullying varied across ethnic groups with Nigerian students in our sample being most likely to report that they had experienced any discrimination in the past 30 days (40%;  $n=78$ ) and Somali students being the least likely (18.2%;  $n=1,061$ ). The differences across ethnic groups were statistically significant ( $X^2=146.1$ ;  $p<0.001$ ).

In our multivariate logistic regression models (Table 3), we continued to see statistically significant differences in the association between experiences of race-related bullying and the odds of adverse mental health outcomes, controlling for sociodemographic factors. For example, race-related bullying is associated with elevated odds of depressive symptoms (OR = 1.8; CI = 1.57–1.95;  $p<0.001$ ) in this sample.

### Ethnic Identity and Depressive Symptoms

In Table 3, we find odds of depressive symptoms that are significantly lower for Oromo (OR = 0.51; CI = 0.36–0.72;  $p<0.001$ ), non-Oromo Ethiopian (OR = 0.69; CI = 0.50–0.95;  $p<0.05$ ), and Somali (OR = 0.63; CI = 0.53–0.75;  $p<0.001$ ) ethnic groups even when we do not control for experiences

of race-related bullying. There was no statistically significant difference in odds of depressive symptoms for Liberian, Nigerian, Multiethnic, Multiracial, or youth with other Black, African, or African American identities compared to African American youth. In our second model controlling for race-related discrimination, we observe light increases in the odds of reporting depressive symptoms but for Oromo (OR = 0.50; CI = 0.35–0.71;  $p<0.001$ ), non-Oromo Ethiopian (OR = 0.70; CI = 0.51–0.97;  $p<0.05$ ), and Somali (OR = 0.66; CI = 0.57–0.79;  $p<0.001$ ) ethnic groups were less likely than their African American peers to report depressive symptoms and these associations were statistically significant.

### Ethnic Identity and Anxiety Symptoms

In our first model, anxiety symptoms were lower for Oromo Ethiopian (OR = 0.61; CI = 0.44–0.86;  $p<0.01$ ) and Somali (OR = 0.61; CI = 0.51–0.74;  $p<0.001$ ) youth compared to their African American peers. Multiracial youth were more likely to report depressive symptoms (OR = 1.3; CI = 1.16–1.55;  $p<0.001$ ). When controlling for race-related bullying, we lower odds of anxiety symptoms for Oromo Ethiopian (OR = 0.60; CI = 0.43–0.85;  $p<0.01$ ), Nigerian (OR = 0.66; CI = 0.45–0.95;  $p<0.05$ ), and Somali (OR = 0.65; CI = 0.54–0.78;  $p<0.001$ ) youth that are statistically significant. Multiracial youth remained more likely to report anxiety symptoms (OR = 1.3; CI = 1.13–1.51;  $p<0.001$ ) and this association was also statistically significant.

### Ethnic Identity and STBs

When controlling for race-related bullying, the following subgroups had lower odds of past suicidal ideation compared to African American youth: Oromo Ethiopian (OR = 0.61; CI = 0.37–0.99;  $p<0.05$ ) and Somali youth (OR = 0.35; CI = 0.26–0.47;  $p<0.001$ ). Multiracial Black youth reported an elevated odds of past ideation (OR = 1.3; CI = 1.06–1.51;  $p<0.01$ ). Reports of past suicide attempt were lower for Oromo Ethiopian youth (OR = 0.41; CI = 0.21–0.79;  $p<0.01$ ), non-Oromo Ethiopian youth (OR = 0.40; CI = 0.21–0.75;  $p<0.001$ ), and Somali youth (OR = 0.32; CI = 0.23–0.46;  $p<0.001$ ) compared to their African American peers. When controlling for experiences of race-related bullying, we find statistically significant outcomes for Oromo Ethiopian (OR = 0.60; CI = 0.36–0.97;  $p<0.05$ ), Somali (OR = 0.38; CI = 0.28–0.51;  $p<0.001$ ) and Multiracial (OR = 1.2; CI = 1.01–1.45;  $p<0.05$ ), youth. When we examined reports of past suicide attempt while controlling for race-related bullying, we found statistically significant associations for Oromo Ethiopian youth (OR = 0.40; CI = 0.20–0.77;  $p<0.01$ ), non-Oromo

**Table 1** Demographic characteristics of sample

	African American	Oromo Ethiopian	Other Ethiopian	Liberian	Nigerian	Somali	Other	Multiethnic Black	Multiracial	Total	p-value	X <sup>2</sup>
N	1,852	262	256	238	195	1,297	828	1,123	2,151	8,201		
(%)	(22.6)	(3.2)	(3.1)	(2.9)	(2.4)	(15.8)	(10.1)	(13.7)	(26.2)	(100.0)		
Grade												
8th	830	126	107	100	83	543	360	530	858	3,537		
	(44.8)	(48.1)	(41.8)	(42.0)	(42.6)	(41.9)	(43.5)	(47.2)	(39.9)	(42.6)		
9th	631	76	93	81	54	406	279	359	763	2,742		
	(34.1)	(29.0)	(36.3)	(34.0)	(27.7)	(31.3)	(33.7)	(32.0)	(35.5)	(33.4)		
11th	391	60	56	57	58	348	188	234	530	1,922		
	(21.1)	(22.9)	(21.9)	(23.9)	(29.7)	(26.8)	188(22.7)	(20.8)	(24.6)	(23.4)		
Sex												
Male	1,016	117	121	94	96	566	383	523	918	3,834		
	(54.9)	(44.7)	(47.3)	(39.5)	(49.2)	(43.6)	(46.3)	(46.6)	(42.7)	(46.8)		
Female	836	145	135	144	99	731	444	600	1,233	4,367		
	(45.1)	(55.3)	(52.7)	(60.5)	(50.8)	(56.4)	(53.7)	(53.4)	(57.3)	(53.2)		
Gender												
Cisgender	1,651	248	239	226	182	1,217	756	978	1,846	7,343		
	(90.7)	(95.8)	(93.7)	(95.4)	(94.3)	(94.9)	(92.4)	(88.1)	(86.5)	(90.6)		
Orientation												
Heterosexual	1,395	225	223	184	159	1,156	644	818	1,431	6,235		
	(75.8)	(87.2)	(87.1)	(77.3)	(82.0)	(89.5)	(78.4)	(73.2)	(66.9)	(76.5)		
Region												
Twin Cities Metro Area	1,374	246	201	189	153	1,002	581	832	1,449	6,027		
	(74.2)	(93.9)	(78.5)	(79.4)	(78.5)	(77.3)	(70.3)	(74.1)	(67.4)	(73.5)		

**Table 2** Mental health outcomes, by ethnic group

	African American	Oromo Ethiopian	Other Ethiopian	Liberian	Nigerian	Somali	Other	Multietnic Black	Multiracial	Total	p-value	X <sup>2</sup>
N	1,852	262	256	238	195	1,297	828	1,123	2,151	8,201		
(%)	(22.6)	(3.2)	(3.1)	(2.9)	(2.4)	(15.8)	(10.1)	(13.7)	(26.2)	(100.0)		
<b>Depression</b>												
Yes	569	45	56(21.9)	73	49	259	241(29.1)	355(31.6)	770	2,417		
	(30.7)	(17.2)		(30.7)	(25.1)	(20.0)			(35.8)	(29.5)		
No	1,283	217	200(78.1)	165	146	1,038	586(70.9)	768	1,381	5,754		
	(69.3)	(82.8)		(69.3)	(74.9)	(80.0)		(68.4)	(64.2)	(70.2)		
<b>Anxiety</b>												
Yes	541	51	70	68	45	247	233	356	858	2,469		
	(29.2)	(19.5)	(27.3)	(28.6)	(23.1)	(19.0)	(28.2)	(31.7)	(39.9)	(30.1)		
No	1,311	211	186	170	150	1,050	594	767	1,293	5,732		
	(70.8)	(80.5)	(72.7)	(71.4)	(76.9)	(81.0)	(71.8)	(68.3)	(60.1)	(69.9)		
<b>Suicidal Ideation</b>												
Yes	281	20	25	42	29	61	123	192	467	1,240		
	(15.4)	(7.8)	(9.8)	(18.3)	(15.4)	(4.8)	(15.2)	(17.5)	(22.1)	(15.4)		
No	1,548	237	229	188	159	1,219	685	904	1,643	6,812		
	(84.6)	(92.2)	(90.2)	(81.7)	(84.6)	(95.2)	(84.8)	(82.5)	(77.9)	(84.6)		
<b>Suicide Attempt</b>												
Yes	212	10	11	26	15	44	71	148	327	864		
	(11.6)	(3.9)	(4.3)	(11.2)	(7.9)	(3.4)	(8.8)	(13.5)	(15.5)	(10.7)		
No	1,617	247	243	206	176	1,237	737	952	1,780	7,195		
	(88.4)	(96.1)	(95.7)	(88.8)	(92.1)	(96.6)	(91.2)	(86.5)	(84.5)	(89.3)		
<b>Race-related bullying</b>												
None	1,306	195	197	169	117	1,061	576	728	1,394	5,743		
	(70.5)	(74.4)	(77.0)	(71.0)	(60.0)	(81.8)	(69.6)	(64.8)	(64.8)	(70.0)		
Any	546	67	59	69	78	236	251	395	757	2,458		
	(29.5)	(25.6)	(23.0)	(29.0)	(40.0)	(18.2)	(30.4)	(35.2)	(35.2)	(30.0)		
											<0.001	129.8
											<0.001	196.6
											<0.001	207.2
											<0.001	160.0
											<0.001	146.1

**Table 3** Logistic models of the association between race-based discrimination and mental health outcomes, across ethnic groups

	<i>Depressive Symptoms</i>		<i>Anxiety Symptoms</i>		<i>Suicidal Ideation</i>		<i>Suicide Attempt</i>	
	Model1	Model2	Model1	Model2	Model1	Model2	Model1	Model2
	OR	OR	OR	OR	OR	OR	OR	OR
	[CI]	[CI]	[CI]	[CI]	[CI]	[CI]	[CI]	[CI]
	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.
African American								
Oromo Ethiopian	0.51*** [0.36–0.72]	0.50*** [0.35–0.71]	0.61** [0.44–0.86]	0.60** [0.43–0.85]	0.61* [0.37–0.99]	0.60* [0.36–0.97]	0.41** [0.21–0.79]	0.40** [0.20–0.77]
Other Ethiopian	0.69* [0.50–0.95]	0.70* [0.51–0.97]	0.97 [0.72–1.32]	1.0 [0.74–1.37]	0.70 [0.45–1.09]	0.73 [0.46–1.14]	0.40*** [0.21–0.75]	0.41** [0.22–0.77]
Liberian	0.96 [0.71–1.29]	0.96 [0.71–1.30]	0.90 [0.65–1.23]	0.90 [0.65–1.23]	1.3 [0.86–1.83]	1.2 [0.86–1.84]	0.96 [0.61–1.50]	0.96 [0.61–1.51]
Nigerian	0.77 [0.54–1.09]	0.71 [0.51–1.05]	0.71 [0.49–1.03]	0.66* [0.45–0.95]	1.1 [0.71–1.71]	1.0 [0.64–1.56]	0.71 [0.40–1.24]	0.63 [0.36–1.11]
Somali	0.63*** [0.53–0.75]	0.66*** [0.57–0.79]	0.61*** [0.51–0.74]	0.65*** [0.54–0.78]	0.35*** [0.26–0.47]	0.38*** [0.28–0.51]	0.32*** [0.23–0.46]	0.35*** [0.24–0.50]
Other	0.92 [0.76–1.11]	0.92 [0.76–1.11]	0.91 [0.75–1.11]	0.91 [0.74–1.10]	1.0 [0.79–1.29]	1.0 [0.78–1.28]	0.75 [0.56–1.00]	0.73* [0.55–0.99]
Multiethnic Black	0.98 [0.83–1.16]	0.95 [0.80–1.13]	1.0 [0.87–1.23]	1.0 [0.84–1.19]	1.1 [0.88–1.35]	1.0 [0.84–1.30]	1.1 [0.87–1.39]	1.1 [0.83–1.33]
Multiracial	1.0 [0.91–1.21]	1.0 [0.89–1.18]	1.3*** [1.16–1.55]	1.3*** [1.13–1.51]	1.3** [1.06–1.51]	1.2* [1.01–1.45]	1.1 [0.92–1.37]	1.1 [0.88–1.31]
Race-related bullying	—	1.8*** [1.57–1.95]	—	1.9*** [1.68–2.09]	—	2.0*** [1.78–2.35]	—	2.2*** [1.88–2.55]

\* =  $p < 0.05$ ; \*\*  $p < 0.01$ ; \*\*\*  $p < 0.001$ ; OR = odds ratio; CI = 95% confidence interval. Both models control for grade, sex, gender identity, sexual orientation, economic hardship, and region of residence (i.e., non-metropolitan vs. Twin Cities metropolitan area). Model 1 does not control for race-based bullying, and model 2 does control for this exposure.

Ethiopian youth (OR = 0.41; CI = 0.22–0.77;  $p < 0.01$ ), Somali youth (OR = 0.35; CI = 0.24–0.50;  $p < 0.001$ ), and youth from Other Black, African, or African American groups (OR = 0.73; CI = 0.55–0.99;  $p < 0.001$ ).

## Discussion

The findings of our analysis offer valuable contributions to the literature on youth mental health and ethnic differences across heterogeneous Black populations. In our primary analysis, we demonstrate an association between reports of race-related bullying and adverse mental health outcomes (i.e. depressive symptoms, anxiety symptoms, suicidal ideation, and history of suicide attempts). The findings align with other scholarship that has found that experiences of racial discrimination are associated with adverse mental health outcomes for Black adolescents [2, 43, 44]. When examining between-group differences, we find considerable differences across ethnic groups for both experiences of discrimination and mental health outcomes [7, 45]. Notably, and somewhat contrary to extant literature, in our sample we find that non-Oromo Ethiopian, Somali, and Multiracial youth have rates of race related bullying that are higher than their African American peers. While our data do not allow us to investigate the underlying causes of these differences, other literature suggests that factors like colorism or

perceived immigration status may be influencing these differences as well as xenophobia and Islamophobia [46–48]. In the case of Somali youth, it is possible that they are experiencing a mixture of race and religion-related discrimination if they wear clothing that portrays their Muslim identity. The lower rates of reported discrimination in Liberian and Nigerian youth may signal that these youth are received and perceived more positively than other African origin peers and therefore are able to acculturate into American society with greater ease [49]. This increased acculturation may allow these youth the ability to blend their two cultures in ways that support improved psychosocial outcomes [50]. The MSS does not allow us to identify the race or ethnicity of perpetrators, therefore there is no way to identify whether this discrimination is the result of discrimination from peers from the same racial/ethnic group or if it's being perpetrated [51] by peers from other racial groups. The high rates of reported discrimination among Multiracial youth is consistent with previous studies that have shown high rates of race-related discrimination within this population [34, 52]. It is likely that Multiethnic Black youth also face similar challenges when trying to navigate their multiple ethnic identities.

The notable differences in the mental health outcomes across ethnic groups suggests the need for additional research. Our findings extend previous work and show that across most Black ethnicities, adverse mental health

outcomes are lower compared to their African American peers. These differences could be due to the socialization processes these young people undergo that allow them to better respond to and develop resistance skills that minimize the impact of race-related bullying or other protective factors grounded in their immigrant identities [13, 53, 54].

## Strengths and Limitations

Several limitations must be noted. First, this analysis uses cross-sectional data which prevents us from determining causality. Specifically, for many measures respondents are asked about their experiences over very short amounts of time (2 weeks to 30 days), which prevent us from establishing temporal ordering. Second, no questions were asked about students' immigration, nativity, or generation status. Additionally, no information was available about respondents' parents and their immigration status—factors that we know dramatically shape youth experiences of discrimination and the mental health consequences of these interactions [32, 45]. Third, a major consideration is the level of missingness present in this data and its potential to bias findings. Almost one-third of participants did not respond to questions about mental health, and this differed across ethnic subgroups. We expect this variation is due to cultural values, religious teachings, socialization, and other factors that are not measured in the Minnesota Student Survey which contribute to mental health stigma and make students feel uncomfortable answering these questions. Common approaches to handling missingness, such as multiple imputation, may also generate biased results. Further research, particularly using qualitative methods, is recommended to deepen our understanding of reasons for skipping these items [55].

This work also has certain strengths. In particular, the use of a large population-based sample does provide us with sufficient power to examine numerous ethnic subgroups, including those that are less populous in a specific state [56].

## Conclusion

Results of this analysis contribute to a growing literature aimed at identifying processes and mechanisms linking experiences of perceived discrimination or bias-based bullying and health among diverse samples of youth. Chiefly, by simultaneously looking at outcomes across multiple Black ethnic groups, this analysis identifies potential differences across groups that are often assumed to be a monolith. These findings also support the creation of culturally, as well as racially, tailored programs aimed at improving mental health outcomes among Black youth.

## Declarations

**Conflict of interest** The authors declare that no funds, grants, or other support were received during the preparation of this manuscript.

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