DATA BRIEF
Racism is a Risk Factor, not Race: Health Inequities Among Black Youth in Colorado

Purpose

In the United States and in Colorado, centuries of systemic racism and inequitable social structures continue to systematically oppress people of color. Because of historical and ongoing discrimination, people of color experience health inequities when compared to white people.

The purpose of this data brief examining results from the 2019 and 2020 Healthy Kids Colorado Survey (HKCS) is to highlight the health inequities that Black young people in Colorado face due to systemic racism and discrimination, as well as to provide some guidance for individual and collective action to dismantle inequities. While this brief highlights the experiences and health disparities of Black youth in Colorado, we recognize that racism and discrimination negatively impact the health of all communities of color. The epidemiology of risk behavior surveillance and reporting on public health disparity tends to focus on negative findings, potentially contributing to implicit bias by presenting an incomplete picture focused on risk and deficit without also

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presenting data on protection and assets, especially when describing historically oppressed groups. Public health has an opportunity to move towards equity by asking questions about cultural protections and strengths as well, in order to create a more complete data-based description of all communities. By applying concepts of social epidemiology, we can redirect the focus to upstream determinants of health to improve culturally-relevant prevention activities and make an impact on equity.

2019 HKCS – Health Disparities among Black Youth in Colorado

The following data is from the statewide 2019 Healthy Kids Colorado Survey (HKCS), Colorado's only comprehensive survey on the health and wellbeing of young people administered to secondary students during odd numbered years. Data in this brief are only from students attending public high schools. The 2019 results are used to highlight racial-ethnic disparities in HKCS data that have been seen over time in the Colorado state representative sample.

As seen in the demographics table below, white students represent more than half of the population attending public high schools in Colorado. Black and Black Multiracial students predominantly live in urban areas compared to white sudents who predominantly live in suburban and rural areas. Black and Black Multiracial students experience hunger and homelessness at a higher rate, and they are less likely to report that their mother has a college-level education or more compared to white students. Mother's education level is used to represent a component of socioeconomic status.

In this brief, racial-ethnic groups identified by high school students in the survey have been categorized as follows:

Black: Students who identify as Non-Hispanic and Black.

Black Multiracial: Students who identify as Non-Hispanic and Black with other race(s) or Hispanic and Black with or without other race(s).

White: Students who identify as Non-Hispanic and white.

Students	Black	Black Multiracial	White
Total N (%)	**1985** (5.7)	**2877** (8.3)	**29728** (86.0)
Demographic Indicators % (95% Confidence Interval)			
Sex			
Female	**43.5** (42.1, 44.9)*	**42.0** (40.3, 43.6)*	**49.0** (48.7, 49.4)
Male	**56.5** (55.1, 57.9)*	**56.5** (55.1, 57.9)*	**51.0** (50.8, 51.3)
Gender Identity			
Cisgender	**98.2** (97.8, 98.7)	**92.0** (91.0, 93.0)*	**97.6** (97.4, 97.7)
Transgender	**0.6** (0.4, 0.9)*	**4.4** (3.7, 5.1)*	**1.2** (1.1, 1.3)
Grade			
9th	**25.8** (23.8, 2.8)	**31.5** (30.2, 32.7)*	**24.8** (24.4, 25.3)
10th	**23.8** (21.6, 25.9)	**25.1** (23.9, 26.4)	**25.7** (25.4, 26.0)
11th	**25.2** (23.4, 27.0)	**21.3** (20.1, 22.5)*	**25.1** (24.7, 25.4)
12th	**25.2** (23.0, 27.4)	**20.7** (20.7, 23.4)*	**24.4** (24.0, 24.8)

Table 1. 2019 HKCS - Proportion (%) of race/ethnicity by demographic and social factors.

To interpret these frequencies, read the table: "Of students who identify as (column race/ethnicity category), % are or experience (row category)" Ex: Of students who identify as Black, 43.5% are female.

Urbanicity**			
Urban	**71.4** (64.2, 78.5)*	**51.7** (45.7, 57.6)*	**29.0** (24.1, 33.9)
Suburban	**23.7** (16.8, 30.6)*	**31.9** (26.4, 37.4)*	**46.3** (41.0, 51.7)
Rural	**4.9** (3.4, 6.5)*	**16.4** (13.4, 19.5)*	**24.6** (20.9, 28.4)
Sexual Orientation			
Heterosexual	**82.6** (81.2, 84.1)	**78.9** (77.6, 80.2)*	**84.2** (83.6, 84.8)
Lesbian, Gay, Bisexual	**10.9** (9.9, 11.9)	**13.5** (12.5, 14.6)*	**11.7** (11.3, 12.2)
Not Sure	**6.5** (5.5, 7.5)*	**7.6** (6.6, 8.5)*	**4.1** (3.9, 4.2)
Socioeconomic Indicators % (95% Confidence Interval)			
Went hungry	**82.6** (81.2, 84.1)	**78.9** (77.6, 80.2)*	**84.2** (83.6, 84.8)
Experienced homelessness	**10.9** (9.9, 11.9)	**13.5** (12.5, 14.6)*	**11.7** (11.3, 12.2)
Mother's Education			
Some college +	**82.6** (81.2, 84.1)	**78.9** (77.6, 80.2)*	**84.2** (83.6, 84.8)
Lower than college	**10.9** (9.9, 11.9)	**13.5** (12.5, 14.6)*	**11.7** (11.3, 12.2)

The odds ratios presented in this brief are not adjusted for any socioeconomic indicators as they are interconnected with race due to systemic discrimination. Odds ratios are only adjusted for demographic indicators. Throughout this brief, a significance level of 0.05 is used - meaning there is a 5% risk of concluding that a difference exists when there is no actual difference.

*Significant difference in demographic/socioeconomic indicator of Black or Black Multiracial students compared to white students.
** Urbanicity designations are defined at the school level by the National Center for Education Statistics.

Racial-Ethnic Inequities in School and Social Connectedness

School and social connectedness are protective factors against many adverse health outcomes and risk behaviors.[1,2] Students of color and students who experience discrimination are less likely to feel connected and cared for at school,[3,4] exposing them to additional harm for adverse outcomes related to mental health, substance use, risky sexual behavior, violence, and reduced academic achievement.[5-8] There is a known "test score gap" seen between white compared to Black students[9] as well as systematic disciplinary action experienced by Black students.[10,11] These two inequities are also associated with each other and the "school to prison pipeline." Better representation in teaching staff is one factor that helps close this achievement gap for students[9] and has an impact on improved disciplinary outcomes for Black students.[10] These relationships between school environment and student outcomes are seen in Colorado as well. Some measures from the 2019 HKCS show related inequities in Black and Black Multiracial youth.
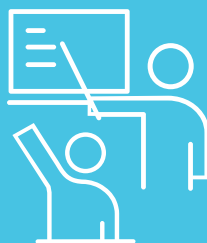
Compared to white students

Black students were 46% less likely to have an adult to go to for help.

Black Multiracial students were 44% less likely to have an adult to go to for help.

Black students were 45% more likely to think their teachers notice when they do a good job and let them know.

Black students were 36% less likely to participate in extracurricular activities.*

Black Multiracial students were 39% less likely to participate in extracurricular activities.*

Black students were 27% less likely to enjoy being in school.

* Participation in extracurricular activities is influenced by social inequities, as some students may not be able to afford associated costs or have other commitments such as working after school or caring for family members.

Racial-Ethnic Inequities in Safety and Violence

Adolescents are at increased risk for experiencing and witnessing violence compared to other age groups, which also puts them at increased risk for violence victimization, perpetrating violence, and other risk behaviors.[12] Youth who live in urban, impoverished, or resource-deprived environments are more likely to be exposed to violence as a social norm, placing them at increased risk for violence-related behaviors themselves. Because of systemic racism and segregation, Black youth are often relegated to low-income communities and, due to community environmental factors, are more likely to be exposed to violence-related health outcomes.[13]

As mentioned above, students who are less connected at school are at increased risk for violence-related behavior. There is also a bi-directional relationship where violence-exposed youth are less likely to engage and perform well in school.[14] Schools can play a role in preventing violence by addressing best practices in school connectedness, safety, anti-bullying, and ensuring culturally inclusive policies and practices.

Figure 1: 2019 HKCS – Odds of Safety and Violence by Race/Ethnicity
To interpret the increased risk expressed in odds ratios (OR) to the right of the green reference line, use the following format: "Black or Black Multiracial students are (OR number) times more likely to experience (the outcome listed) compared to white students." Odds ratios falling to the left of the reference line indicate a reduction in odds ("less like to...").

The bracket lines at the end of each bar display the 95% confidence interval for that estimate. If the confidence interval ("whiskers") of an estimate cross over the reference line (OR = 1.0), then there is no statistically significant difference in the outcome between that group compared to white students.
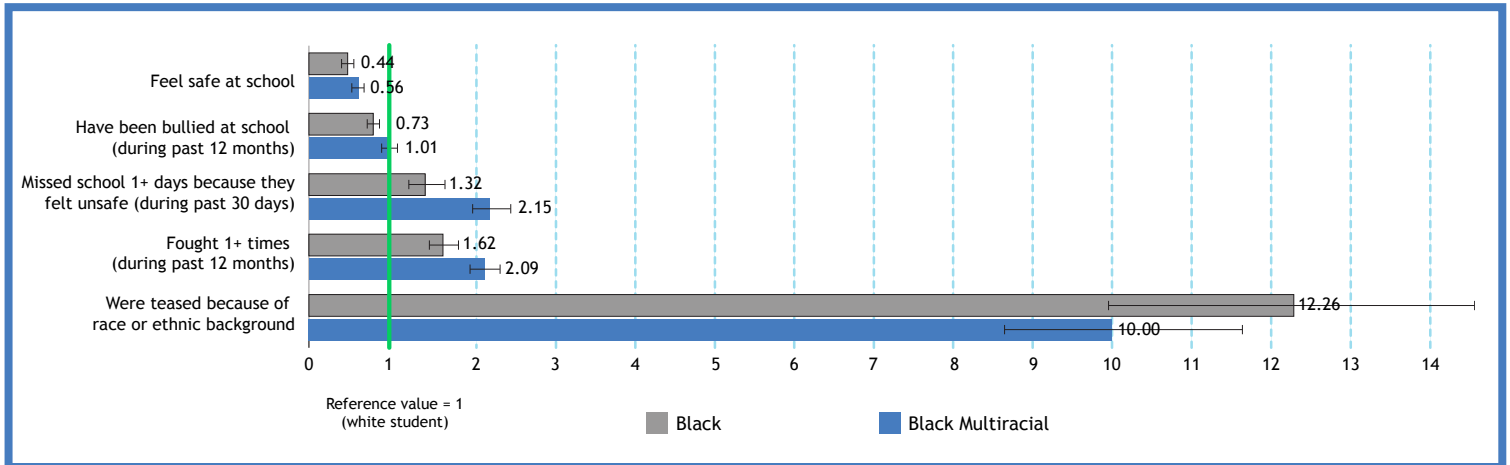
Shown in Figure 1, Black and Black Multiracial students in Colorado are 56% and 44% *less likely* (OR 0.44 and 0.56) to feel safe at school and *more likely* to have been in a fight, teased because of their race or ethnic background, and have missed school compared to white students. Black students were *less likely* to have been bullied at school compared to white students.

Racial-Ethnic Inequities in Mental Health

Mental health and suicide continue to be a pervasive health concern for adolescents in the US. Nationally, suicide is the second leading cause of death in adolescents 15-19 years old and has been increasing since 2000.[15] However, in Colorado it is the leading cause of death among young people, ages 10-17.[16] Suicidal ideation is associated with health risk behaviors and social determinants of health such as violence exposure, mental health, sex, gender, sexual orientation, and race/ethnicity.[17] Many disparities by race/ethnicity exist when looking at upstream predictors of suicidal ideation including the relationship between residential segregation, poverty, and suicide.[18] There is a lack of research on differences in Black adolescent mental health and suicidal ideation outcomes.[19] Some research points to inequities in access to mental health care and suicide misclassification which contributes to the inconsistent findings in Black adolescent suicide rates compared to white adolescents. More research and culturally-relevant prevention efforts are needed to address mental health disparities among Black youth.[20]

Figure 2: 2019 HKCS - Odds of Depression and Suicidal Ideation During Past 12 Months by Race/Ethnicity
The figure to the right shows risk estimates (OR) for each mental health indicator displayed as a bar on either side of the reference line (white students = 1). Bars extending to the right show an increased risk in mental health outcomes, and lines extending to the left show less risk/odds of the mental health outcomes.

The bracket lines at the end of each bar display the 95% confidence interval for that estimate. If the confidence interval ("whiskers") of an estimate cross over the reference line (OR = 1.0), then there is no statistically significant difference in the outcome between that group compared to white students.
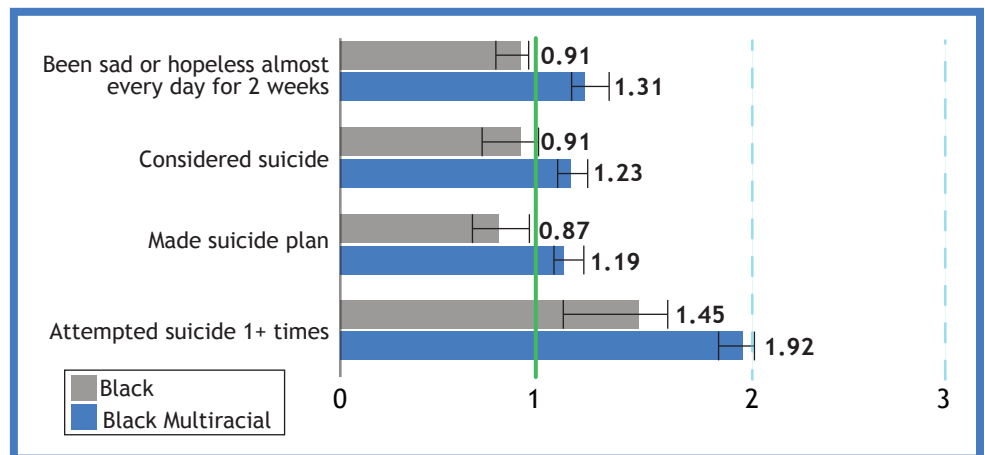
Shown in Figure 2, Black Multiracial students in Colorado are *significantly more likely* to have felt sad or hopeless, considered suicide, made a suicide plan, and attempted suicide compared to white students. Black students are *significantly less likely* to have felt sad or hopeless and to have made a suicide plan that white students, but *significantly more likely* to have attempted suicide.

2020 HKCS - New Measures of Racism

In May 2020, the Black Lives Matter (BLM) Movement reached an unprecedented level of support after the murder of George Floyd, a Black man killed by an active-duty police officer in Minneapolis. His murder adds to the growing toll of unjust killings of Black Americans at the hands of law enforcement. As public health professionals, we recognize racism as a public health crisis. We are compelled to identify and dismantle oppressive practices, policies, and systems and take action towards equity and justice.

The Colorado School of Public Health Survey Team implemented an off-year, supplemental survey in the fall of 2020 to evaluate student health and wellbeing in the midst of exposed acts of racism as well as a global pandemic. Twenty-six high schools participated from mostly rural settings in Colorado. Participating schools in this analysis were primarily from small districts (<6,000 students) and had above a 60% student response rate. The study sample is comprised of 4,758 total high school students (weighted to total school enrollment, race, sex, and grade).

Racism is a Risk Factor, *not* Race

In many public health studies, "race" as a variable is commonly used to measure disparities or differences in health outcomes, but often lacks proper explanation for its use as a proxy for root causes of racial inequities.[21] Because racism, not race, is the root cause of health inequities, it is important that we study, as directly as we can, the experiences of racism and its manifestations expressed in health disparities.

On the 2020 Supplement, the HKCS piloted new questions about students' experiences with racism and discrimination. The following results showcase these new measures of racism and build on concepts discussed thus far in this brief. Due to the small sample size in 2020, and less representation among Black and Black Multiracial students, these results are not considered representative of Colorado.
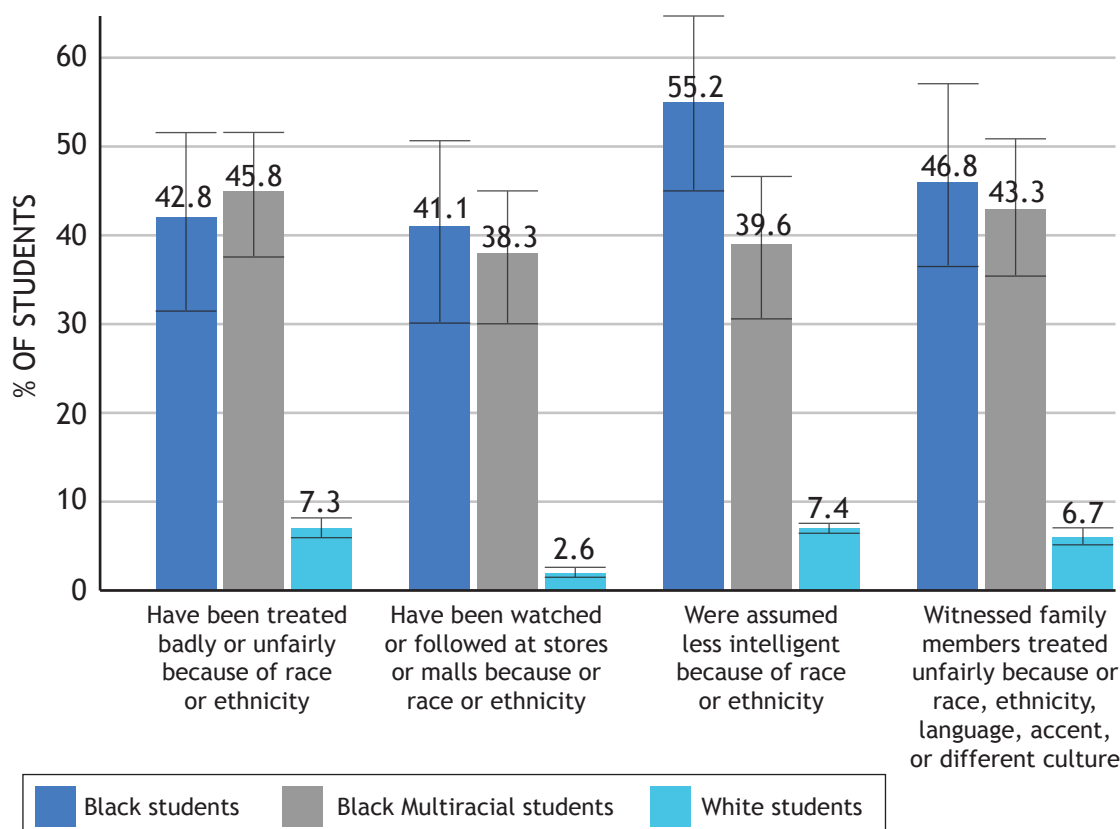

Figure 3: Student Experiences with Racism and Discrimination
To interpret these frequencies, read the graph: "Of students who identify as (race/ethnicity category in color key), % (racism indicator)"

Ex: Of students who identify as Black, 43% have been treated badly or unfairly because of their race or ethnicity.

The bracket lines at the end of each bar display the 95% confidence interval for that estimate. If the confidence interval ("whiskers") of an estimate overlap with the whiskers on the adjacent bars for that outcome, then there is no statistically significant difference in the outcome between that group compared to the other(s).

A significantly higher percentage of Black and Black Multiracial students experienced all four kinds of racism as compared to white students.

Racism as a Risk Factor in School Connectedness, Neighborhood Safety, and Stress Management
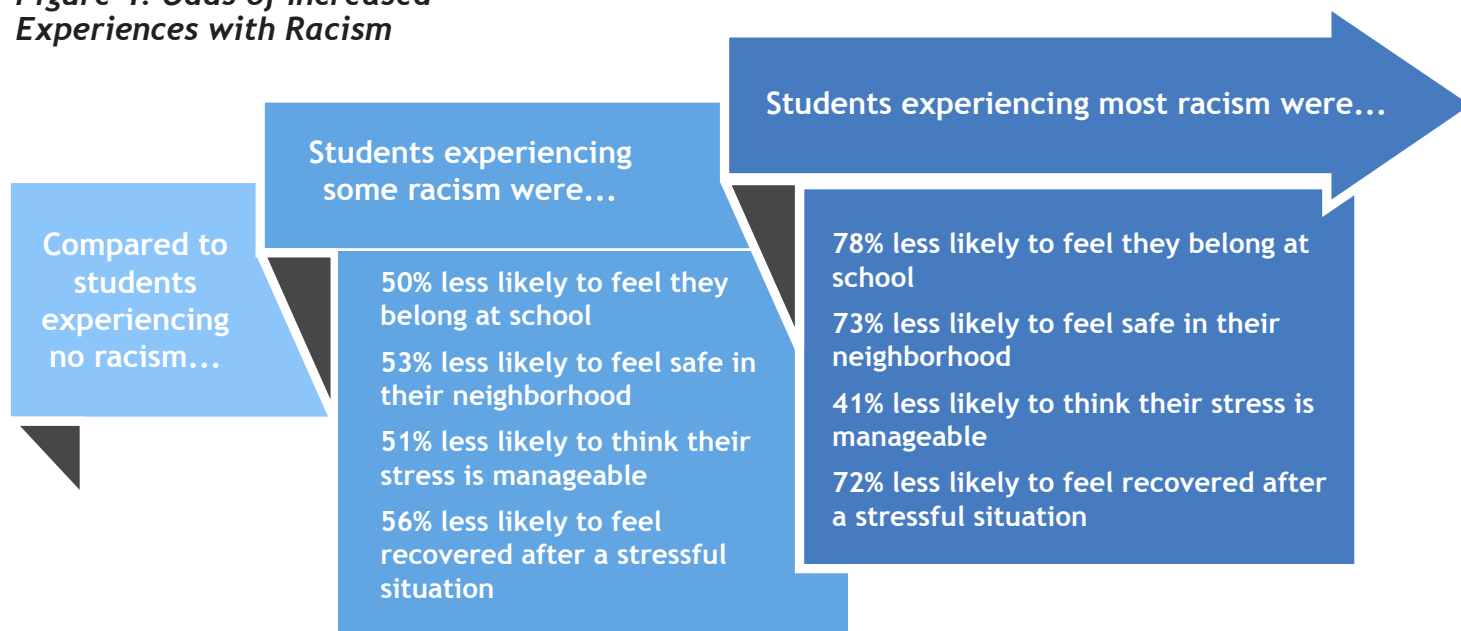
As discussed earlier in this brief using 2019 HKCS data, Black youth are experiencing health disparities in school connectedness, community environments, and mental health outcomes. These factors play a significant role in the overall health and success of young Black people in Colorado. While examining different types of racism as described above and attempting to quantify the cumulative impacts of racism below, we run the risk of normalizing Black youth experience of racism. Public health principles urge us to remember that race is a social construct and we carry responsibility to deconstruct it so that Black youth's experience of racism becomes an exception rather than a norm.

The purpose of the following analysis is to highlight the health inequities young Black people in Colorado face due to racism and discrimination versus focusing on health disparities between race/ethnicity demographics alone. The results from a statistical model, using the experiences of racism as the predictor variable to the four protective factors, help to draw a more direct correlation to the root cause of the disparities we see in health outcomes (e.g., racism, discrimination). Directly measuring social determinants of health associated with health outcomes will help guide public health work towards upstream prevention efforts aimed at changing root causes of health inequity.

The four measures of racism (Figure 3) are part of the complex and interconnected root causes that contribute to health inequities. Those experiences were used to create a composite score for each student. The scores of 0-4 were a sum given to each student who experienced any of the four kinds of racism. Those scores were re-coded into three groups: students scoring 0 or experiencing no form of racism, composite scores 1-2 for students who experienced some racism, and composite scores 3-4 for students who experienced most or all forms of racism.

Figure 4: Odds of Increased Experiences with Racism

Compared to students experiencing no racism...

Students experiencing some racism were...

50% less likely to feel they belong at school

53% less likely to feel safe in their neighborhood

51% less likely to think their stress is manageable

56% less likely to feel recovered after a stressful situation

Students experiencing most racism were...

78% less likely to feel they belong at school

73% less likely to feel safe in their neighborhood

41% less likely to think their stress is manageable

72% less likely to feel recovered after a stressful situation
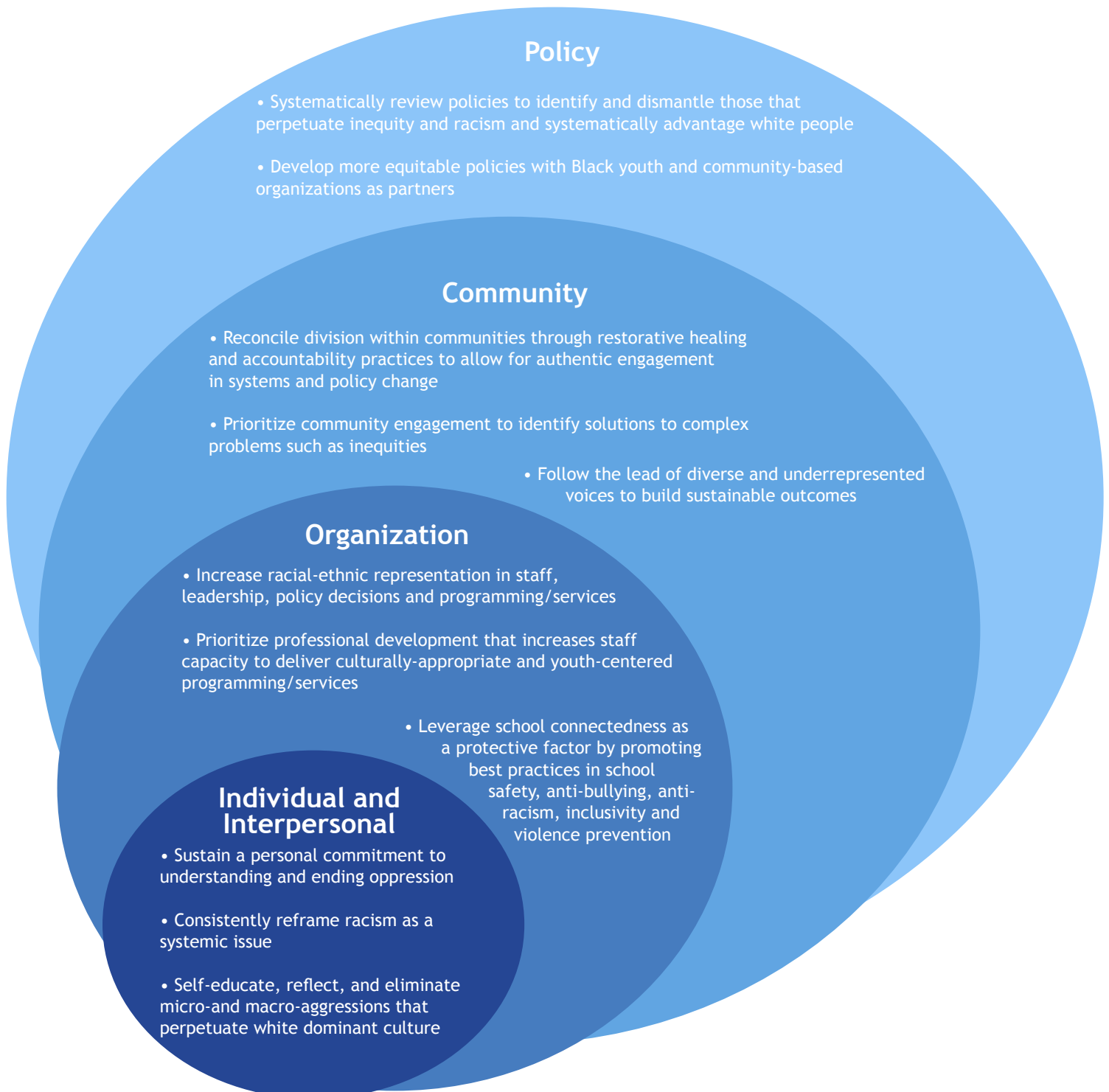
Black students and Black Multiracial students had a dose response to racism affecting school connectedness, neighborhood safety, and stress management. The more racism that was experienced, the greater reduction in odds they had in experiencing the protective factors described above. As discussed in this brief, these protective factors are important to preventing many health risk behaviors and adverse health outcomes in adolescents. Though this analysis uses composite scores to measure the impact of the amount of racism experienced by young people, there is no amount of racism that is acceptable for anyone to experience. By addressing systemic and interpersonal racism, with the intention to eradicate it completely, we can improve upon prevention efforts for Black students experiencing health inequities.

Key Take-Aways and Related Action Steps

These data point to a story of health inequity in the US and Colorado. It is important to acknowledge that these data together show evidence of increased risk and worse health outcomes because of social determinants of health, including racism and discrimination. Due to the cross-sectional nature of the HKCS, we cannot indicate causality of these health outcomes, but we can recognize the complex root causes that contribute to the health inequities experienced by young Black people in Colorado. To better understand these root causes, the HKCS is changing to add more culturally-relevant questions about identities, behaviors, and experiences of all youth.

Data from the HKCS serve as one of many lenses to use to better understand the experiences of young people and support efforts to improve equity. By dismantling discriminatory policies and practices using a social-ecological approach, we can reduce inequities and help improve opportunities for all Coloradans.

Policy

- Systematically review policies to identify and dismantle those that perpetuate inequity and racism and systematically advantage white people

- Develop more equitable policies with Black youth and community-based organizations as partners

Community

- Reconcile division within communities through restorative healing and accountability practices to allow for authentic engagement in systems and policy change

- Prioritize community engagement to identify solutions to complex problems such as inequities

- Follow the lead of diverse and underrepresented voices to build sustainable outcomes

Organization

- Increase racial-ethnic representation in staff, leadership, policy decisions and programming/services

- Prioritize professional development that increases staff capacity to deliver culturally-appropriate and youth-centered programming/services

- Leverage school connectedness as a protective factor by promoting best practices in school safety, anti-bullying, anti-racism, inclusivity and violence prevention

Individual and Interpersonal

- Sustain a personal commitment to understanding and ending oppression

- Consistently reframe racism as a systemic issue

- Self-educate, reflect, and eliminate micro-and macro-aggressions that perpetuate white dominant culture

Resources

In order to decrease and ultimately eradicate health inequities such as those described here for Black youth in Colorado, sustained and coordinated efforts are needed from collaborating disciplines including public health, mental health, education and more. Discipline-specific resources for addressing racial inequities are available, as well as resources that take a systems-level perspective. Each individual, organization, and system will have different readiness and capacity for implementing strategies to advance equity. A continuous improvement approach to implementation, including regular equity audits, will ensure we follow existing and emerging best practices and implement research-based strategies.

Equity-specific Resources & Strategies

CDPHE Office of Health Equity – Tools and Resources: https://cdphe.colorado.gov/tools-resources
- Includes resources such as a Glossary of Equity Terms and Framing Data to Advance Equity
- As well as Using Communications to Advance Equity and Authentic Community Engagement to Advance Equity

CDE Equity Resources for Districts and BOCES - https://www.cde.state.co.us/equityresourcesfordistrictsandboces
- Includes federal and state resources, such as the Guide to Inclusive Hiring Practices
- As well as educator resources such as Diversity, Equity & Inclusion Resources for Individual Career and Academic Planning and Postsecondary and Workforce Readiness

CDE Diverse and Learner-Ready Teachers Initiative -
https://www.cde.state.co.us/educatortalent/dlrtequityforteachersandstudents
- Includes a series of short papers outlining how teacher diversity and culturally responsive practice relate to key aspects of the teacher pipeline such as Induction and Mentoring and Retention

NIH – Ending Structural Racism - https://www.nih.gov/ending-structural-racism
- Includes notices of funding and research opportunities directly related to impacts of structural racism

W.K. Kellogg Foundation - https://healourcommunities.org
- Includes community-based reconciliation resources such as Restoring to Wholeness and Truth, Racial Healing & Transformation (TRHT) Implementation Guidebook

General Resources

1. Healthy Kids Colorado Survey – Information and Publicly-Available Data https://cdphe.colorado.gov/hkcs

2. CDPHE Child Fatality Prevention System - https://cdphe.colorado.gov/prevention-and-wellness/injury-prevention/child-fatality-prevention-system

3. CDPHE Positive Youth Development - https://cdphe.colorado.gov/maternal-and-child-health/positive-youth-development

4. CDPHE Positive Youth, Families, and Communities - https://cdphe.colorado.gov/healthy-eating-and-active-living/positive-youth-families-and-communities

5. CDC Adolescent and School Health – Safe and Supportive Environments: https://www.cdc.gov/healthyyouth/safe-supportive-environments/index.htm

References

1. McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the national longitudinal study of adolescent health. *Journal of School Health*, *72*(4), 138-146.

2. Thompson, D. R., Iachan, R., Overpeck, M., Ross, J. G., & Gross, L. A. (2006). School connectedness in the Health Behavior in School-Aged Children Study: The role of student, school, and school neighborhood characteristics. *Journal of School Health*, *76*(7), 379-386.

3. Anyon, Y., Zhang, D., & Hazel, C. (2016). Race, exclusionary discipline, and connectedness to adults in secondary schools. *American Journal of Community Psychology*, *57*(3-4), 342-352.

4. Rankin, S. R., & Reason, R. D. (2005). Differing perceptions: How students of color and white students perceive campus climate for underrepresented groups. *Journal of College Student Development*, *46*(1), 43-61.

5. Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., Bowes, G., & Patton, G. (2007). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes. *Journal of Adolescent Health*, *40*(4), 357-e9.

6. Brookmeyer, K. A., Fanti, K. A., & Henrich, C. C. (2006). Schools, parents, and youth violence: A multilevel, ecological analysis. *Journal of Clinical Child and Adolescent Psychology*, *35*(4), 504-514.

7. Shochet, I. M., Dadds, M. R., Ham, D., & Montague, R. (2006). School connectedness is an underemphasized parameter in adolescent mental health: Results of a community prediction study. *Journal of Clinical Child & Adolescent Psychology*, *35*(2), 170-179.

8. McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting school connectedness: Evidence from the national longitudinal study of adolescent health. *Journal of School Health*, *72*(4), 138-146.

9. Bali, V. A., & Alvarez, R. M. (2003). Schools and educational outcomes: What causes the "race gap" in student test scores?. *Social Science Quarterly, 84*(3), 485-507.

10. Lindsay, C. A., & Hart, C. M. (2017). Exposure to same-race teachers and student disciplinary outcomes for Black students in North Carolina. *Educational Evaluation and Policy Analysis*, *39*(3), 485-510.

11. Wallace Jr, J. M., Goodkind, S., Wallace, C. M., & Bachman, J. G. (2008). Racial, ethnic, and gender differences in school discipline among US high school students: 1991-2005. *The Negro Educational Review*, *59*(1-2), 47

12. Smith-Khuri, E., Iachan, R., Scheidt, P. C., Overpeck, M. D., Gabhainn, S. N., Pickett, W., & Harel, Y. (2004). A cross-national study of violence-related behaviors in adolescents. *Archives of Pediatrics & Adolescent Medicine*, *158*(6), 539-544.

13. Rojas-Gaona, C. E., Hong, J. S., & Peguero, A. A. (2016). The significance of race/ethnicity in adolescent violence: A decade of review, 2005–2015. *Journal of Criminal Justice*, *46*, 137-147.

14. Borofsky, L. A., Kellerman, I., Baucom, B., Oliver, P. H., & Margolin, G. (2013). Community violence exposure and adolescents' school engagement and academic achievement over time. *Psychology of Violence*, *3*(4), 381.

15. Miron, O., Yu, K. H., Wilf-Miron, R., & Kohane, I. S. (2019). Suicide rates among adolescents and young adults in the United States, 2000-2017. *JAMA*, *321*(23), 2362-2364.

16. Mintz, S., Heilmann, L., Hoagland, K., & Jamison, E. Suicide Among Youth in Colorado, 2013-2017. Colorado Child Fatality Prevention System. http://www.cochildfatalityprevention.com/p/reports.html.

17. Eaton, D. K., Foti, K., Brener, N. D., Crosby, A. E., Flores, G., & Kann, L. (2011). Associations between risk behaviors and suicidal ideation and suicide attempts: Do racial/ethnic variations in associations account for increased risk of suicidal behaviors among Hispanic/Latina 9th-to 12th-grade female students?. *Archives of Suicide Research*, *15*(2), 113-126.

18. Hoffmann, J. A., Farrell, C. A., Monuteaux, M. C., Fleegler, E. W., & Lee, L. K. (2020). Association of pediatric suicide with county-level poverty in the United States, 2007-2016. *JAMA Pediatrics*, *174*(3), 287-294.

19. Freedenthal, S. (2007). Racial disparities in mental health service use by adolescents who thought about or attempted suicide. *Suicide and Life-Threatening Behavior*, *37*(1), 22-34.

20. Ali, B., Rockett, I. R., Miller, T. R., & Leonardo, J. B. (2021). Racial/ethnic differences in preceding circumstances of suicide and potential suicide misclassification among US adolescents. *Journal of Racial and Ethnic Health Disparities*, 1-9.

21. Jones, C. P. (2001). Invited commentary: "Race," racism, and the practice of epidemiology. *American Journal of Epidemiology*, *154*(4), 299-304.