

Covenant Elenwo*, MPH, Amy Hendrix-Dicken, MA, Vanessa Lin, BA, Ashton Gatewood, MPH, Tessa Chesher, DO, Michelle Escala, MD and Micah Hartwell, PhD

Racial discrimination among children in the United States from 2016 to 2020: an analysis of the National Survey of Children's Health

<https://doi.org/10.1515/jom-2022-0175>

Received August 18, 2022; accepted October 20, 2022;

published online November 10, 2022

Abstract

Context: Sociological research has linked racism and discrimination among children to poorer health outcomes and social conditions later in life.

Objectives: Given the change in the political climate in the United States, highly publicized deaths of Black men and women by police, and the rise in hate crimes against Asian Americans from 2016 through 2020, our primary objective was to assess trends in racial or ethnic discrimination among children in the United States.

Methods: We conducted a cross-sectional analysis of the National Survey of Children's Health (NSCH), a nationally representative survey, utilizing data from 2016 to 2020. We calculated yearly population estimates of whether a child had experienced discrimination based on race/ethnicity

via a parent-reported item. We further divided the estimates by race/ethnicity and plotted linear trends over time.

Results: Data from the NSCH show that racial/ethnic discrimination reported by parents of children who are minorities increased from 6.7% in 2016 to approximately 9.3% in 2020. Indigenous children were reported to experience discrimination at high rates ranging from 10.8% in 2016 to 15.7% in 2020, as well as Black children ranging from 9.69% in 2018 to 15.04% in 2020. The percent of Asian, Hawaiian or Pacific Islander, and Hispanic children reported to have experience discrimination was between 4.4 and 6.8% during this time.

Conclusions: Discrimination negatively impacts the developmental experiences of children, disproportionately affecting those identifying as Indigenous and Black. Therefore, addressing harmful stereotyping of Indigenous and Black cultures is necessary, especially in media targeted toward children. Providing culturally competent healthcare, critically in the Indigenous and Black pediatric population, may improve long-term outcomes by reducing discriminatory barriers to healthcare access.

Keywords: childhood; discrimination; National Survey of Children's Health; trends.

*Corresponding author: Covenant Elenwo, MPH, Office of Medical Student Research, Oklahoma State University College of Osteopathic Medicine at Cherokee Nation, Tahlequah, OK, USA; and Oklahoma State University Center for Health Sciences, 1111 W 17th Street, Tulsa, OK 74107, USA, E-mail: covenant.elenwo@okstate.edu

Amy Hendrix-Dicken, MA and Michelle Escala, MD, Department of Pediatrics, University of Oklahoma School of Community Medicine, Tulsa, OK, USA

Vanessa Lin, BA, Office of Medical Student Research, Oklahoma State University Center for Health Sciences, Tulsa, OK, USA

Ashton Gatewood, MPH, Office of Medical Student Research, Oklahoma State University College of Osteopathic Medicine at Cherokee Nation, Tahlequah, OK, USA

Tessa Chesher, DO, Department of Psychiatry and Behavioral Sciences, Oklahoma State University Center for Health Sciences, Tulsa, OK, USA

Micah Hartwell, PhD, Office of Medical Student Research, Oklahoma State University Center for Health Sciences, Tulsa, OK, USA; and Department of Psychiatry and Behavioral Sciences, Oklahoma State University Center for Health Sciences, Tulsa, OK, USA

Racism is a social determinant of health (SDOH) that utilizes policies and practices to create imbalances in power, resources, and opportunities between ethno-racial groups in society [1]. Discriminatory influences in historical and contemporary policies have created grave disparities and deleterious socioeconomic and health outcomes [1]. At the interpersonal level, racism is imbued in daily interactions, shown as microaggressions, discriminatory behaviors, and preconceived prejudices that guide social interactions [1]. Negative social interactions toward ethno-racial groups may be internalized and thus influence the formation of self-concept, self-esteem, and overall well-being [1, 2]. A longitudinal study assessing the association between infant and early childhood mental health and racism from 2015 to 2020 showed increased odds of poor mental health and

sleep difficulties compared to those with a time-limited exposure [3].

The effects of discriminatory attitudes exhibited toward ethno-racial minorities can be viewed along the life course, beginning *in utero* [4]. To assess the origin of development of implicit attitudes, a study was conducted among 79 individuals ages 6 to 19 utilizing the implicit association tests (IAT) [5]. Specifically, among the 27 White six-year-olds included in the study, researchers found almost 50% of children chose someone from their in-group, a rate statistically similar to White adults [6]. In the United States, White people are in a socially dominant position; thus, an early awareness of one's own group status and unfavorable notions about out-groups might dictate discriminatory and racial experiences of the out-groups [5]. Studies more commonly utilizing animal models have shown that social behavior is learned [7–9]. A classic example of social learning in humans is the Bandura Bobo doll experiment, in which toddlers imitate previously observed aggressive behavior of an adult toward a doll [10]. The early development of unconscious implicit in-group and out-group biases might be a result of children seeing and mirroring behavior exhibited by their adult parents as seen in children's attitudes being predicted by their mother's implicit attitudes [11]. Among 89 child-parent pairs who participated in a study examining the interactive effect of parent's prejudice on children, results found children who highly identified with their parents had implicit racial biases that were positively associated with their parent's explicit racial biases [11, 12]. Conversely, evidence shows that parental intergroup friendships and prosocial behavior are associated with reduced intergroup bias among children [13, 14]. These findings suggest that the patterns in parental behaviors, tone, and body language that children observe are likely driving learned implicit racial bias seen in early childhood [15].

Multiple events occurring during the 2010s have likely increased facets of discrimination, disparity, and inequity. These occurrences may, directly and indirectly, affect children and thus childhood developmental outcomes. Between 2013 and 2020, multiple high-profile cases of police violence against Black men and women—inducing the deaths of Eric Garner, Michael Brown, Breonna Taylor, and George Floyd, among many others—sparked a racial reckoning [16]. Additionally, in early 2016, the Standing Rock Sioux community attempted to block the Dakota Access Pipeline from being constructed near the primary water source for their reservation, resulting in protesters being met with increasing violence, and sacred tribal sites were destroyed by the construction's contractor [17]. With mounting racial issues and ongoing police brutality against ethno-racial minorities, comments from the President of the United States from 2017 to 2021 served to further incite racial tension [18]. He described individuals migrating to the United States from

Latin American countries as “rapists, murderers, and criminals,” and he repeatedly referenced the SARS-CoV-2 virus as the “Chinese virus” [19, 20]. These statements were shown to increase the incidence of hate crimes against minority groups [21]. Furthermore, recent controversial events regarding the editor of *JAMA* denying the existence of racism in medicine—despite the longstanding history of medicine and racism intertwining—shows that discrimination is a pervasive problem even within the medical community [22, 23]. Given the enhanced media coverage of these events and public perpetuation of negative rhetoric toward minority groups, it is likely that children and adolescents were exposed directly or indirectly and may have experienced or perpetrated discriminatory acts.

Recognizing early childhood exposure to discrimination and racism as an adverse experience, with long-term health consequences, substantiates efforts to assess trends of racism in the United States [24]. Given the previously discussed events, our aim was to assess racial discrimination trends among US children reported by parents utilizing the National Survey of Children's Health (NSCH) dataset from 2016 to 2020. Our secondary aim was to assess differences between ethno-racial groups to inform recommendations for minimizing the adverse long- and short-term outcomes associated with childhood racism and discrimination.

Methods

Data source

We conducted a cross-sectional analysis of the NSCH dataset from 2016 to 2020, which is collected annually by the Health and Resources and Services Administration's Maternal and Child Health Bureau (HRSA MCHB) [25]. The NSCH is a nationally representative survey that collects data on a variety of topics related to the well-being of children 0–17 years of age. Questions are divided into 11 sections spanning the child's overall health, experiences as an infant, experiences with healthcare services and providers, insurance coverage, caregivers' experiences regarding providing care, learning/school activities, caregiver and child relationship, and family/household relationships and information [26]. Surveys are administered annually with any changes in methodology, including survey revisions, being notated in the accompanying methodology report [26]. Data are provided at both the national and state levels [25]. Participants can answer survey questions online, by mail, or over the phone [27]. They first complete a screener questionnaire NSCH-S1 (or S1) to determine if their address represents an occupied residence, and if there are eligible children ages 0 to 17 living at the sampled address [27]. Participants then complete a topical questionnaire asking detailed questions about one randomly selected child in the household [25, 27]. Eligible households receive one of the three age-specific topical questionnaires based on the age of the sampled child: (0–5, 6–11, or 12–17 years). In addition, participants could request a paper copy of the household screener and topical questionnaire if they did not wish to complete it online [25]. NSCH data collection efforts do not undergo an external Institutional Review Board (IRB) review. Instead, the process for the review of methods and procedures is

Percent of Children Treated Unfairly Because of Race or Ethnicity

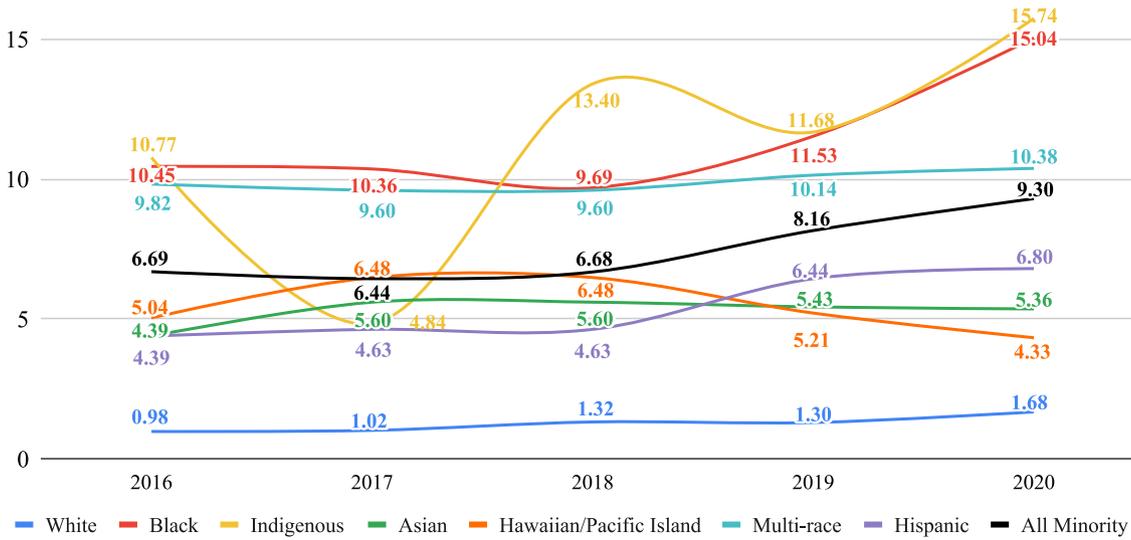


Figure 1: Percent of children by race who were treated or judged unfairly because of their race or ethnic group by parent report from 2016 through 2020.

incorporated into the responsibilities of the US Census Bureau and Office of Management and Budget (OMB) officials, thereby ensuring that NSCH participant data are protected and treated with sensitivity [28]. The NSCH data are publicly available, and IRB approval was not required for this study.

Eligibility

To assess the prevalence of children experiencing discrimination, we extracted responses, provided by parents/guardians, to the prompt: “To the best of your knowledge, has this child EVER experienced any of the following? Treated or judged unfairly because of their race or ethnic group.” Respondents were excluded if they did not provide an answer to this prompt.

Measures

To assess the race/ethnicity of included children, we utilized NSCH’s detailed race categories and included Hispanic/Latino ethnicity to include the following groups: White, Black or African American (Black), American Indian or Alaska Native (Indigenous), Asian, Native Hawaiian or Other Pacific Islander, Hispanic, and multiracial. Additionally, we created a variable to encompass all minority children by combining all race/ethnicity groups listed previously with the exception of non-Hispanic White. We utilized Schmidt’s guidance in our language pertaining to race and ethnicity [29].

Statistical analysis

We calculated the yearly sample sizes and weighted estimates (weighing supplied by NSCH) of children reported to have experienced discrimination. We then estimated the rates of discrimination over time by race/

ethnicity and plotted the trends. Analyses were conducted in Stata 16.1 (StataCorp, LLC, College Station, TX). This study was submitted for ethics review and was determined not to meet the requirements of human subjects research because it is a secondary analysis utilizing de-identified data.

Results

The sample size from each year of the NSCH survey ranged from 20,983 to 48,830, representing approximately 70 million children per cycle. The average number of children with parents identifying them as White per cycle was 23,409 (SD=7,720), Black was 2064 (SD=623), Indigenous was 196 (SD=69), Asian was 1708 (SD=642), Hawaiian or Pacific Islander was 83 (SD=31), multiracial was 2,216 (SD=716), and Hispanic or Latino was 4,011 (SD=1,346).

Overall, 1,053 (of 13,945, 6.7%) parents of minority children reported that their child had experienced discrimination at some point in their life in 2016. The percentage lowered slightly to 6.4% (n=478 of 6,275) of parents in 2017, and steadily increased through 2020 to a high of 1,455 parents (of 13,755, 9.3%; Figure 1 and Table 1). Comparatively, 309 (of 34,537, 1.0%) parents of White children reported their child experiencing discrimination in 2016; this increased by 0.7 points over this time period and peaked in 2020 at 1.7% (n=331 of 27,411).

With the exception of 2017, children identifying as Indigenous were reported by parents to experience discrimination at greater rates compared to all other groups, with

Table 1: Rates of racial discrimination among children (as reported by parents) from the NSCH dataset from 2016 to 2020 by race/ethnicity.

Year	2016 n (weighted %)	2017 n (weighted %)	2018 n (weighted %)	2019 n (weighted %)	2020 n (weighted %)
Race/ethnicity					
White	309 of 34,537 (0.98)	129 of 14,539 (1.02)	212 of 20,666 (1.32)	233 of 19,892 (1.3)	331 of 27,411 (1.68)
Black	317 of 2,728 (10.45)	140 of 1,300 (10.36)	232 of 1846 (9.69)	227 of 1760 (11.53)	463 of 2,688 (15.04)
AI/AN	27 of 270 (10.77)	11 of 106 (4.84)	18 of 184 (13.4)	23 of 161 (11.68)	44 of 258 (15.74)
Asian	131 of 2,550 (4.39)	49 of 1,042 (5.06)	86 of 1,382 (5.6)	96 of 1,347 (5.43)	162 of 2,221 (5.36)
Multi	285 of 2,973 (9.82)	134 of 1,396 (9.32)	178 of 1862 (9.6)	222 of 1881 (10.14)	332 of 2,968 (10.38)
Hispanic	284 of 5,305 (4.39)	140 of 2,383 (3.95)	239 of 3,485 (4.63)	223 of 3,374 (6.44)	445 of 5,507 (6.8)
All minority	1,053 of 13,945 (6.69)	478 of 6,275 (6.44)	756 of 8,823 (6.68)	798 of 8,596 (8.16)	1,455 of 13,755 (9.3)

AI/AN, American Indian or Alaska native; NSCH, National Survey of Children's Health.

parents/guardians reporting 10.8% (n=27 of 270) of children experiencing discrimination in 2016, decreasing to 4.8% (n=11 of 106) in 2017 and increasing to 13.4% (n=18 of 184) in 2018, before decreasing to 11.7% (n=23 of 161) in 2019, before peaking at 15.7% (n=44 of 258) in 2020. Children identifying as Black had a similar range of percentage of parents reporting they experienced discrimination as Indigenous children, starting at 10.5% (n=317 of 2,728) in 2016 and peaking at 15.0% (n=463 of 2,628) in 2020, but were 3–4 points lower in 2017 and 2018. Parents of children identifying as Asian, Hawaiian or Pacific Islander, and Hispanic reported rates of discrimination between 4.4 and 6.8% in the same time period.

Discussion

Overall, data from the NSCH shows that parent-reported racial discrimination among minority children deviated by 2.6% between 2016 and 2020, with the lowest occurrence in 2017 at 6.4% before steadily increasing through 2020 to 9.6%. This trend was heavily impacted by rates of parent-reported discrimination among Indigenous, Black, and Hispanic children. Specifically, by 2020, nearly 1 in 6 children who were Indigenous or Black were reported to have experienced discrimination based on their race or ethnicity. The decrease in 2017 in discrimination among Indigenous children may be due to under-sampling among this group for this cycle. However, the overall increasing trend in the United States is concerning given the history of discrimination among many groups and the progress that was made during the civil rights movement and the first decade of the 21st century.

Indigenous children

Results from the NSCH data show that Indigenous parents frequently report that their children have experienced

discrimination, which supports previous findings that Indigenous people, as a whole, experience high rates of racism and discrimination [30]. The history of the United States with Indigenous people includes severe persecution, including a period of genocide, followed by ethnocide. When it became clear that Indigenous people resisted assimilation to Western lifestyles, the federal government targeted their children as a means to destabilize tribal culture and acquire tribal lands [31]. Assimilation efforts targeting children included the boarding school era during which Indigenous children were forced to attend westernized schools, given new names, learned English, and forbade to speak their native languages, and usually had their hair cut, which was culturally symbolic [31]. This era was followed by egregious adoption policies, sometimes forced, that could place Indigenous children with White families, leaving them with no connection to their native tribe [32]. Removal from tribal lands, accompanied by disrupted economic systems and ceremonial traditions, left many tribes with little resources and severe trauma.

These policies resulted in many disparities, both short-term (loss of life and loved ones) and enduring (loss of traditions, culture, freedom, land, and increased rates of suicide, diabetes, substance use, etc.). In addition, the contrasting lifestyles of Indigenous peoples and that of the Euro-Americans led to many Indigenous stereotypes, such as being uncivilized, a “vanishing” people, lazy, or intoxicated, among others [33]. Through reinforcement of negative policies, media, and mascots, stigmatizing portrayals of Indigenous peoples have become deeply rooted in Euro-American culture [33]. These beliefs, unfortunately, trickle down to the everyday spaces that Indigenous children inhabit, such as classrooms where children encounter inaccurate historical depictions of Indigenous peoples, including the limited context of Indigenous peoples surrounding Thanksgiving, stereotypical mascots, and Oklahoma land-run reenactments [34, 35]. These early exposures to contrasting cultures, as mentioned in the

introduction, may illicit in-race bias and lead to intentional or unintentional discriminatory behavior. There is a demonstrated link between perceived discrimination and negative psychological well-being [36], which may lower self-esteem, lead to depression, and increase suicidal ideation [37]. The Office of Minority Health indicates that the death rate attributed to suicide was five times higher for Indigenous females 15–19 years of age and twice as high for Indigenous males 15–19 years of age compared to their non-Hispanic White peers [38]. Thus, eliminating harmful stereotypes of Indigenous peoples and increasing roles for Indigenous people in film may increase self-esteem among Indigenous children and enhance cultural awareness in the United States.

Black children

The results of our analysis support the body of evidence showing Black children experienced discrimination at alarmingly high rates [39]. Vicarious exposures to racism commonly occur through media, often depicting negative stereotypes and social imagery of Black people and Black culture, including distorted images of Black femininity—the mammy, jezebel, and the angry Black woman caricature known as Sapphire [40]—while negative imagery applied to Black males focuses on issues of poverty, powerlessness, academic underachievement, and incarceration [41]. Most notably, these negative social images influence schooling experiences and academic success among Black male youth in the United States, because Black men are consistently at the bottom of most academic indicators [42]. The erasure of Black achievement from media, and the lack of proximal representations of Black success in current education models, is a potential driver of lower academic self-efficacy among Black children. Efforts to counteract the historical misrepresentations of Black people should include educational theories that center around Black success and achievement [43]. In addition, media efforts through TV shows and movies showcasing Black achievement, and positive imagery of Black men and women, could minimize the effect of discriminatory experiences on self-identity and self-efficacy among Black children.

The ongoing impacts of racism against Black communities can also be seen in economic indicators that showed that 26% of Black children were living in poverty in 2019 [44]. Addressing the nefarious effects of racism will require radical changes to the social and legal structures that are hindering the normal socioemotional development of Black children. Additionally, evidence-based training opportunities

on unconscious implicit bias may be a way forward in decreasing harmful biases about Black people and unlearning generations of harmful discriminatory behaviors.

Hispanic children

The NSCH data show an increase in discrimination reported by parents of Hispanic children starting in 2019 and continuing through 2020, which is consistent with findings from Zeiders et al. [45]. Previously, Hispanic adolescents have been shown to endure social stratification and discrimination when immigration policies utilized language that belittled or dehumanized Hispanic immigrants [46]. Further exacerbating the issue is the parental expectation that children avoid drawing attention to maintain family safety leading to outwardly compliant behavior but internalized anxiety [47]. Considering all of these factors, the adolescents that rely on their parents' work, lean on their families for social support, and also have to meet cultural expectations, are faced with stressors that possibly lead to greater barriers to seeking help.

Asian children

Data from the NSCH indicated that between 2016 and 2017, parent reports of Asian children experiencing discrimination rose above 5%, and this trend has stayed consistent over the years up to 2020, reflecting the history of Asian-American discrimination. One of the first legal exclusionary immigration measures was the Chinese Exclusion Act in 1882, which was preceded by a massacre of Chinese Americans in Los Angeles, California in 1871 [48]. Further discrimination against Asian Americans included but is not limited to the Japanese American internment camps during World War II [49]. These findings highlight a clear need to address current discrimination and its resulting health outcomes for Asian Americans. The rhetoric surrounding the COVID-19 pandemic arising in Wuhan, China, has perpetuated a new wave of hate crimes toward Asian Americans within the United States [50]. Because the NSCH data utilized covers up to 2020, we were limited in analyzing the impact that the COVID-19 pandemic potentially had on the experience of Asian children experiencing discrimination. Literature on Asian American children's health disparities and discrimination is lacking; however, Huang et al. [51] found that Asian American children were more at risk of poorer physical health than their White counterparts. Thus, further research is needed to further evaluate the COVID-19 pandemic and its effect on discrimination against Asian American children.

Recommendations

Because the aim of our study was to assess trends of racial discrimination among children, we acknowledge that the following recommendations are beyond the scope of our research. However, the following information regarding history and recommendations are pertinent to readers.

Education and representation

As mentioned, the omission of minorities in textbooks/history books throughout grade school may lead to lower self-efficacy, cultural self-doubt, and conversely, negative bias from other groups. As a public health strategy to retain or build self-esteem and self-efficacy, we suggest including historical successes of individuals from minority groups to increase representation within educational settings. A medical example would be that vaccines originated from African traditions of inoculation from cowpox for smallpox, which were passed from Black slaves to their owners, albeit with hesitancy [52]. Similarly, other cultures, including Indigenous peoples, have made revolutionary contributions to medicine, including syringes, pain relievers, and birth control [53]. Conversely, we recommend that teaching historical trauma to provide perspectives from across cultures in the United States would likely increase cultural understanding. This is critically important to expand, because negative racial biases experienced in childhood may endure throughout adulthood.

Policy

Given the expansive literature indicating the impact of social determinants, such as poverty, on health, it is imperative that physicians be aware of ongoing policy initiatives to better engage in advocacy efforts that will improve societal factors that influence patient health [54, 55]. This need for physician involvement is further highlighted by the American Osteopathic Association's 2020 statement denouncing racism and inequality, which restated the profession's commitment to addressing drivers of health disparities, including those outside of the clinical setting that profoundly impact members of minority communities [56]. In recent years, the American Civil Liberties Union has outlined a policy agenda addressing ways to end systemic racism in the United States [18]. Potential avenues to improve equity, particularly among children, would be to make child tax credits fully refundable [18]. Given that an estimated 17% of children in the United States are considered impoverished [18], by

expanding that credit, child poverty would fall by 40% and would likely positively impact more than 50% of Black children in the United States [18]. Fair housing concerns should also be addressed by reimplementing the 2015 Affirmatively Furthering Fair Housing rule, and by Congress passing the American Housing and Economic Mobility Act, both of which will limit discriminatory housing practices [18]. Further, given the increasing importance of high-speed internet, expanding reach to all Americans, as currently being undertaken by Cherokee Nation for its citizens [57], would likely affect education deficits among disadvantaged communities [57]. Finally, the United States needs to continue to reaffirm its commitment to tribal sovereignty, maintaining and strengthening agreements pursuant to previous treaties, laws, and policies.

Interventions for pediatricians and other medical providers

The results of racism and discrimination begin *in utero*, and the implications last throughout life; however, medical providers can be part of a system that works to prevent the adverse childhood experience of racism. The medical community has a large role in eliciting positive change by addressing racism in their practices. In a statement on racism in 2019, the American Academy of Pediatrics (AAP) "calls on pediatricians to create welcoming, culturally competent medical practices, to advocate for policies that advance social justice, and to engage leaders in their communities to reduce health disparities" [24]. Medical providers can open the conversation about racism with their patients and recognize that racism is a public health crisis and strong determinant of health. In addition, medical colleges should be intentional in ensuring that a diverse body of physicians are being trained. The American Association of Colleges of Osteopathic Medicine (AACOM) statement on diversity in osteopathic medicine specifies a commitment to educating and training a more diverse body of osteopathic physicians to not only decrease health disparities but also improve overall health [58].

The American Academy of Child and Adolescent Psychiatry supported the AAP's policy statement and created an antiracism resource library to provide accurate education as well as recommendations for action at all levels [59]. Tervalon and Murray-García [60] posit that medical providers need to start with introspection and cultural humility. Next, they must examine their practices and finally progress to the systems in which they work; however, laying foundational groundwork through education is necessary for improving the future of healthcare. The Massachusetts General

Hospital/McLean Psychiatry residency program developed a curriculum addressing race inequities in mental health from which 92% of participants stated that the training should be a part of the routine curriculum [61].

Strengths and limitations

Reports of discrimination coming from parents is a notable limitation to the study because parent report may introduce certain levels of bias to responses. According to the NSCH codebook, race categories for American Indian and Alaska Native, Native Hawaiian or other Pacific Islander, and ‘other’ races are not independently controlled and should be interpreted as weighted estimates rather than population estimates, and are appropriate when the subcategories comprise more than 30 respondents. Our analyses have met these criteria and given the large sample size and complex, randomized, sampling procedures, the race subcategories are robust in yearly estimates. Socio-political movements led by nationally recognized leaders in health equity, such as the National Congress of American Indians and the Robert Wood Johnson Foundation, include the desegregation of Indigenous data to increase access for academic, policy, and media sources to improve health outcomes [62]. To reduce the categories to US Census Bureau grouping (White, Black, Asian, and Other) moves away from the mission of creating health equity for cultures, races, and ethnicities who experience discrimination. Researchers may seek to assess rates of discrimination experienced by Asian Americans beyond 2020, because there is evidence of increased hate crimes against Asian Americans following the COVID-19 pandemic.

Conclusions

The NSCH data indicated that reports of racism by parents of all minority children increased by 2.6% between 2016 and 2020. Among the most impacted groups were Indigenous and Black children, with reported rates of racism as high as 15% in 2020. Changes in policy, historically accurate education, and radical representation of ethno-racial minorities in textbooks, television, and media might be a way forward as childhood exposure to positive depictions of diverse ethno-racial groups could shape social interactions and the development of self and identity. Antiracism resources for physicians and intentional conversations between providers and patients might highlight gaps in antiracist care. Further, pediatricians and other osteopathic medical providers must be diligent in providing culturally sensitive and competent

healthcare that prioritizes the role of racism as an SDOH in order to lessen the effects of adverse childhood experiences with racism.

Research funding: None reported.

Author contributions: M.H. provided substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; C.E., A.H., V.L., M.E., T.C., and A.G. drafted the article or revised it critically for important intellectual content; T.C., A.H. and M.H. gave final approval of the version of the article to be published; and all authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Competing interests: Dr. Hartwell reports receiving funding from the National Institute for Justice and Health Resources and Services Administration for research unrelated to the current topic.

References

1. Macedo DM, Smithers LG, Roberts RM, Paradies Y, Jamieson LM. Effects of racism on the socio-emotional wellbeing of Aboriginal Australian children. *Int J Equity Health* 2019;18:132.
2. Zakharov N. Race, racialization and racism: a new theoretical framework. In: *Race and racism in Russia*. London: Palgrave Macmillan; 2015:46–78 pp.
3. Berry OO, Tobón AL, Njoroge WFM. Social determinants of health: the impact of racism on early childhood mental health. *Curr Psychiatr Rep* 2021;23:23.
4. Slaughter-Acey JC, Sealy-Jefferson S, Helmkamp L, Caldwell CH, Osypuk TL, Platt RW, et al. Racism in the form of micro aggressions and the risk of preterm birth among black women. *Ann Epidemiol* 2016;26:7–13.e1.
5. Dunham Y, Baron AS, Banaji MR. The development of implicit intergroup cognition. *Trends Cognit Sci* 2008;12:248–53.
6. Newheiser AK, Olson KR. White and black American children’s implicit intergroup bias. *J Exp Soc Psychol* 2012;48: 264–70.
7. Morozov A. Behavioral modulation by social experiences in rodent models. *Curr Protoc Neurosci* 2018;84:e50.
8. Debiec J, Olsson A. Social fear learning: from animal models to human function. *Trends Cognit Sci* 2017;21:546–55.
9. Bandura A. *Social learning theory*. Englewood Cliffs, N.J, Toronto: Prentice Hall, Prentice-Hall of Canada; 1977.
10. Bandura A, Ross D, Ross SA. Transmission of aggression through imitation of aggressive models. *J Abnorm Soc Psychol* 1961;63: 575–82.
11. Castelli L, Zogmaister C, Tomelleri S. The transmission of racial attitudes within the family. *Dev Psychol* 2009;45: 586–91.
12. Sinclair S, Dunn E, Lowery B. The relationship between parental racial attitudes and children’s implicit prejudice. *J Exp Soc Psychol* 2005;41:283–9.

13. Pahlke E, Bigler RS, Suizzo MA. Relations between colorblind socialization and children's racial bias: evidence from European American mothers and their preschool children. *Child Dev* 2012; 83:1164–79.
14. Vittrup B, Holden GW. Exploring the impact of educational television and parent-child discussions on children's racial attitudes. *Anal Soc Issues Public Policy* 2011;11:82–104.
15. Setoh P, Lee KJ, Zhang L, Qian MK, Quinn PC, Heyman GD, et al. Racial categorization predicts implicit racial bias in preschool children. *Child Dev* 2019;90:162–79.
16. Horowitz JM, Parker K, Brown A, Cox K. Amid national reckoning, Americans divided on whether increased focus on race will lead to major policy change. *Pew Research Center's Social & Demographic Trends Project*; 2020. Available from: <https://www.pewresearch.org/social-trends/2020/10/06/amid-national-reckoning-americans-divided-on-whether-increased-focus-on-race-will-lead-to-major-policy-change/> [Accessed 19 Jul 2022].
17. Hersher R. Key moments in the Dakota access pipeline fight. *NPR*; 2017. Available from: <https://www.npr.org/sections/thetwo-way/2017/02/22/514988040/key-moments-in-the-dakota-access-pipeline-fight> [Accessed 20 Jul 2022].
18. ACLU Racial Justice Program. To end systemic racism, ensure systemic equality. *American Civil Liberties Union*; 2021. Available from: <https://www.aclu.org/news/racial-justice/ending-systemic-racism-requires-ensuring-systemic-equality> [Accessed 19 Jul 2022].
19. Yen H, Long C. AP fact check: president Trump's rhetoric and the truth about migrant caravans. *PBS NewsHour*; 2018. Available from: <https://www.pbs.org/newshour/politics/ap-fact-check-president-trumps-rhetoric-and-the-truth-about-migrant-caravans> [Accessed 20 Jul 2022].
20. Salcedo A. Racist anti-Asian hashtags spiked after Trump first tweeted "Chinese virus," study finds. *The Washington Post*; 2021. Available from: <https://www.washingtonpost.com/nation/2021/03/19/trump-tweets-chinese-virus-racist/> [Accessed 19 Jul 2022].
21. Hodwitz O, Massingale K. Rhetoric and hate crimes: examining the public response to the Trump narrative. *Behav Sci Terror Political Aggress* 2021;10:1–18.
22. Nuriddin A, Mooney G, White AIR. Reckoning with histories of medical racism and violence in the USA. *Lancet* 2020;396: 949–51.
23. American Medical Association. Speaking out against structural racism at JAMA and across health care. *American Medical Association*; 2021. Available from: <https://www.ama-assn.org/about/leadership/speaking-out-against-structural-racism-jama-and-across-health-care> [Accessed 10 Sep 2022].
24. Trent M, Dooley DG, Dougé J. Section on adolescent health, council on community pediatrics, committee on adolescence. The impact of racism on child and adolescent health. *Pediatrics* 2019; 144:e20191765.
25. Child and Adolescent Health Measurement Initiative. Fast facts: 2020 National Survey of Children's Health. *Data Resource Center for Child and Adolescent Health*, supported by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB); 2021. Available from: https://www.childhealthdata.org/docs/default-source/nsch-docs/2020-nsch-fast-facts-cahmi.pdf?sfvrsn=68c75f17_2 [Accessed 13 Jun 2022].
26. United States Census Bureau. 2020 National Survey of Children's Health: Methodology report 2020; 2021. Available from: <https://www2.census.gov/programs-surveys/nsch/technical-documentation/methodology/2020-NSCH-Methodology-Report.pdf>.
27. US Census Bureau. About the national survey of children's health; 2022. Available from: <https://www.census.gov/programs-surveys/nsch/about.html> [Accessed 5 Oct 2022].
28. The United States Census Bureau. Associate director of demographic programs, national survey of children's health. 2017 national survey of children's health frequently asked questions; 2018. Available from: <https://www.census.gov/content/dam/Census/programs-surveys/nsch/tech-documentation/methodology/NSCH%202016%20FAQs.pdf>.
29. Schmidt M. The language of race and ethnicity in academic medical publishing. *J Osteopath Med* 2021;121:121–3.
30. Edwards KM, Banyard VL, Charge LL, Kollar LMM, Fortson B. Experiences and correlates of violence Among American Indian and Alaska Native youth: a brief report. *J Interpers Violence* 2021; 36:11808–21.
31. United States Department of the Interior. Federal Indian boarding school initiative investigative report; 2022. Available from: https://www.bia.gov/sites/default/files/dup/inline-files/bsi_investigative_report_may_2022_508.pdf.
32. Pauls EP. Native American. In: *Encyclopedia britannica*; 2021. Available from: <https://www.britannica.com/topic/Native-American>.
33. Nadler JT, Voyles EC. Stereotypes: the incidence and impacts of bias. *Santa Barbara, CA: ABC-CLIO*; 2020.
34. Lara-Cooper K, Cooper S. "My culture is not a costume": the influence of stereotypes on children in middle childhood. *Wicazo Sa Rev* 2016;31:56–68.
35. Price C. Group calls for end of land run re-enactments in Edmond elementary schools; 2017. Available from: <https://www.koco.com/article/group-calls-for-end-of-land-run-re-enactments-in-edmond-elementary-schools/13971693> [Accessed 13 Jun 2022].
36. Jaramillo J, Mello ZR, Worrell FC. Ethnic identity, stereotype threat, and perceived discrimination among native American adolescents. *J Res Adolesc* 2016;26:769–75.
37. Brockie TN. Historical and contemporary factors influencing non-lethal suicidal behavior among reservation-based native American youth. *The Johns Hopkins University*; 2012. Available from: <https://login.ezproxy.lib.ou.edu/login?url=https%3A%2F%2Fwww.proquest.com%2Fdissertations-theses%2Fhistorical-contemporary-factors-influencing-non%2Fdocview%2F1432194634%2Fse-2%3Faccountid%3D12964thesis>.
38. Office of Minority Health. Mental and behavioral health – American Indians/Alaska natives. *Office of Minority Health*. Available from: <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=39> [Accessed 1 Jun 2022].
39. Assari S, Ayoubian A, Caldwell CH. Comparison of European, African, Asian, and other/mixed race American children for the association between household income and perceived discrimination. *Int J Travel Med Glob Health* 2021;9: 31–8.
40. Muhammad GE, McArthur SA. "Styled by their perceptions": black adolescent girls interpret representations of black females in popular culture. *Multicult Perspect* 2015;17:133–40.
41. Kumah-Abiwu F. Media gatekeeping and portrayal of black men in America. *J Men's Stud* 2020;28:64–81.

42. Howard TC, Flenbaugh TK, Terry Sr CL. Black males, social imagery, and the disruption of pathological identities: implications for research and teaching. *Educ Found* 2012;26: 85–102.
43. Stinson DW. African American male adolescents, schooling (and mathematics): deficiency, rejection, and achievement. *Rev Educ Res* 2006;76:477–506.
44. Thomas D, Fry R. Prior to COVID-19, child poverty rates had reached record lows in U.S. Pew Research Center; 2020. Available from: <https://www.pewresearch.org/fact-tank/2020/11/30/prior-to-covid-19-child-poverty-rates-had-reached-record-lows-in-u-s/> [Accessed 21 Jul 2022].
45. Zeiders KH, Nair RL, Hoyt LT, Pace TWW, Cruze A. Latino early adolescents' psychological and physiological responses during the 2016 U.S. presidential election. *Cult Divers Ethnic Minor Psychol* 2020;26:169–75.
46. Cardoso JB, Brabeck K, Capps R, Chen T, Giraldo-Santiago N, Huertas A, et al. Immigration enforcement fear and anxiety in Latinx high school students: the indirect effect of perceived discrimination. *J Adolesc Health* 2021;68:961–8.
47. Callister AH, Galbraith Q, Galbraith S. Immigration, deportation, and discrimination: Hispanic political opinion since the election of Donald Trump. *Hisp J Behav Sci* 2019;41:166–84.
48. Grad S. The racist massacre that killed 10% of L.A.'s Chinese population and brought shame to the city. *Los Angeles Times*; 2021. Available from: <https://www.latimes.com/california/story/2021-03-18/reflecting-los-angeles-chinatown-massacre-after-atlanta-shootings> [Accessed 29 Jun 2022].
49. Fremont David K. *Japanese-American internment in American history*. Springfield, NJ: Enslow; 1996.
50. Lang C. Hate crimes against Asian Americans are on the rise. Many say more policing isn't the answer. *Time*; 2021. Available from: <https://time.com/5938482/asian-american-attacks/> [Accessed 21 Jul 2022].
51. Huang KY, Calzada E, Cheng S, Brotman LM. Physical and mental health disparities among young children of Asian immigrants. *J Pediatr* 2012;160:331–6.e1.
52. Mather C, Tumain W, Dummer J. An account of the method and success of inoculating the small-pox, in Boston in New-England; 1722. Available from: <https://curiosity.lib.harvard.edu/contagion/catalog/36-990033586030203941> [Accessed 31 Jul 2022].
53. Roberts NF. 7 Native American inventions that revolutionized medicine and public health. *Forbes Magazine*; 2020. Available from: <https://www.forbes.com/sites/nicolefisher/2020/11/29/7-native-american-inventions-that-revolutionized-medicine-and-public-health/> [Accessed 31 Jul 2022].
54. Heard-Garris N, Boyd R, Kan K, Perez-Cardona L, Heard NJ, Johnson TJ. Structuring poverty: how racism shapes child poverty and child and adolescent health. *Acad Pediatr* 2021;21:S108–16.
55. Chaudry A, Wimer C. Poverty is not just an indicator: the relationship between income, poverty, and child well-being. *Acad Pediatr* 2016;16(3 Suppl):S23–29.
56. Johnson B. AOA statement denouncing racism and inequality. American Osteopathic Association; 2020. Available from: <https://osteopathic.org/2020/06/04/aoa-statement-denouncing-racism-and-inequality/> [Accessed 15 Sep 2022].
57. Hunter C. Boosting internet access goal of new CN program. *Cherokee Phoenix*; 2020. Available from: https://www.cherokeephoenix.org/education/boosting-internet-access-goal-of-new-cn-program/article_c6746f2d-5270-545d-b645-4f4cb455e4b7.html [Accessed 2 Aug 2022].
58. American Association of Colleges of Osteopathic Medicine's Council on Diversity & Equity. AACOM statement on racism and injustice. Available from: <https://www.aacom.org/diversity-in-OME/2020/06/02/aacom-statement-on-racism-and-injustice> [Accessed 15 Sep 2022].
59. The American Academy of Child and Adolescent Psychiatry. Anti racism resource library. The American Academy of Child and Adolescent Psychiatry. Available from: https://www.aacap.org/AACAP/Families_and_Youth/Resource_Libraries/Racism_Resource_Library.aspx [Accessed 13 Jul 2022].
60. Tervalon M, Murray-García J. Cultural humility versus cultural competence: a critical distinction in defining physician training outcomes in multicultural education. *J Health Care Poor Underserved* 1998;9:117–25.
61. Medlock M, Weissman A, Wong SS, Carlo A, Zeng M, Borba C, et al. Racism as a unique social determinant of mental health: development of a didactic curriculum for psychiatry residents. *MedEdPORTAL* 2017;13:10618.
62. Villegas M, Ebarb A, Pytalski S, Roubideaux Y. Disaggregating American Indian & Alaska native data: a review of literature; 2016. Available from: <https://bayareaequityatlas.org/sites/default/files/AIAN-report.pdf> [Accessed 8 Aug 2022].