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On racial disparities in child abuse reports: Exploratory mapping the 2018 NCANDS

Amanda Luken[1], **Reshmi Nair**[1], **Rebecca L. Fix**[1]

[1]Department of Mental Health, Johns Hopkins Bloomberg School of Public Health

Abstract

Research suggests children from non-White and Hispanic/Latinx communities are at higher risk for child maltreatment. This study identified in which states children from specific non-White communities were overrepresented in child protective services reports for child physical, sexual, and emotional/psychological abuse through exploratory mapping. Reports on child maltreatment originated from the 2018 National Child Abuse and Neglect Data System and state-level population estimates from the U.S. Census Bureau. Racial disparities were identified in states with unequal proportions of reported child maltreatment among a non-White child population compared to the proportion among the White child population. We found disparities for children from non-White communities in many states, especially for Black communities (Disparity Ratio (DR): 15.10 for child physical abuse, DR: 12.77 for child sexual abuse in Washington DC, and DR: 5.25 for child emotional/psychological abuse in California). The ability to identify high disparities among Pacific Islanders highlights one of the study's strengths, given we separately examined Asian Americans, Pacific Islanders and multiracial communities. Results from our exploratory mapping provide insight into how preventive resources might be differentially allocated to non-White communities with higher child protective services reporting compared with White communities, and manifest states with multiple non-White communities overrepresented across maltreatment types.

In 2018, Child Protective Services (CPS) received roughly 4.3 million child abuse and neglect allegations for approximately 7.8 million children (U.S. DHHS, 2018). Of these allegations, 2.4 million led to investigations for child maltreatment (U.S. DHHS, 2018). Child maltreatment comprises different types (*e.g.,* child sexual abuse (CSA), child physical abuse (CPA), child emotional/psychological abuse (CEA)) with their own unique risk factors and sequalae, warranting separate examination of the different types (Fix & Nair, 2020). Since the early 1990s, child sexual abuse and child physical abuse rates have been decreasing on a national level in the United States (Finkelhor et al., 2018). Yet, some states have seen increases in child maltreatment rates over the same period (Finkelhor et al., 2018). While CSA and CPA rates have decreased over time, less is known about rates of child emotional/psychological abuse. CEA, defined as actions (not including CPA or CSA) that caused or could have promoted the development of conduct, cognitive, or other behavior or mental disorders, is seldom studied in the field of child maltreatment due to a lack of a

Correspondence concerning this article should be addressed to Amanda Luken, Department of Mental Health, Johns Hopkins Bloomberg School of Public Health, 624 N Broadway, Baltimore, Maryland 21205. aluken1@jhmi.edu.

universally accepted definition or construct (U.S. DHHS, 2018; Taussig, & Culhane, 2010). Examining cases of CEA within states, rather than across states, eliminates the issue of inconsistent definitions. Cases of CEA often include verbal abuse or placing excessive pressure on a child to achieve (U.S. DHHS, 2018). Although CEA has been less studied than CPA and CSA, the health risks associated with CEA (e.*g.,* substance use, risky sexual behavior, and mental illness) are on par with those of CPA and stronger than those of neglect. A meta-analysis of child maltreatment studies found that children who experienced emotional abuse had 3.37 higher odds of suicide attempts compared to children who had not experienced emotional abuse while physical abuse was associated with 3.40 higher odds and neglect with 1.95 higher odds (Norman et al., 2012).

For a child to be found as a victim of CPA, CSA, or CEA or their ability to ultimately receive services, depends upon decisions made by others. At each stage in the CPS process, from screening-in to service referrals, these decisions made by others at each juncture leave room for racial and ethnic disparities in representation and response (Dakil et al., 2011; Dettlaff et al., 2011). Although economic inequities across racial and ethnic groups account for much of these disparities, they do not entirely account for the disproportionate rates of racial and ethnic representation of children at different stages in the CPS system (Dettlaff et al., 2011; The Annie E. Casey Foundation, 2011). The CPS process can involve numerous professionals who bring their own cultural experiences and racial and ethnic biases that influence the substantiation decision-making process and ultimately, the case outcomes (The Annie E. Casey Foundation, 2011). The start of the CPS process - the allegation, followed by the decision to investigate - dictates the pool of children eligible for substantiation and service referrals. A few states, such as New Hampshire, have adopted diversion programs that allow children unsubstantiated for maltreatment but are still at high risk for maltreatment to benefit from service referrals or voluntary programs (DeWitt, 2020). As a result, any disparities at the report-level will have downstream effects on disparities at the substantiation- and service-levels.

CPA, CSA, and CEA rates vary across racial and ethnic groups such that children from communities identified as non-White are often involved with CPS investigations at higher rates than White-identified children (Ards et al., 2003; Fix & Nair, 2020; The Annie E. Casey Foundation, 2011). Black, Latinx, and multiracial communities are more likely than not to receive an investigation for CPA compared with White and non-Latinx children, possibly due to provider reporting bias (increased likelihood of medical providers testing children identified as non-White and from underresourced communities more than White-identified for alcohol use, drug use, and child maltreatment) and language barriers (inhibiting communication of unintentional injuries) (Dakil et al., 2011). Native North American communities, on the other hand, had lower odds of appearing in screened-in CPA reports compared with their White counterparts, possibly due to the use of tribal health care systems or low access to CPS (Dakil et al., 2011). Risk levels for select types of maltreatment are elevated among Black, Indigenous, and Latinx communities in particular, due to higher odds of exposure to communities with fewer economic resources, elevated community violence exposure, and prohibited access to prevention/harm reduction resources and services (Drake et al., 2011; The Annie E. Casey Foundation, 2011). The same is true for neglect; however, there is a high degree of overlap between neglect and poverty, and the

mechanisms through which that inextricable relationship introduces racial and ethnic bias into the child welfare system (Cancian et al., 2013; Kim & Drake, 2018). This is among one of the reasons the present paper has omitted the racial and ethnic examination of neglect. Solutions to the problem of racial bias in the CPS system for all maltreatment types are far more complex, in part because racial and ethnic groups comprise heterogeneous cultures and backgrounds influenced by local environments. Furthermore, challenging and changing economic inequities would require a major overhaul of policies and practices aimed at improving well-being of children - namely, non-White and Hispanic/Latinx children.

There is clear evidence for systemic differences in child maltreatment reports and case outcomes for children from non-White and Latinx racial and ethnic communities across the U.S. (Ards et al., 2003; Fix & Nair, 2020; The Annie E. Casey Foundation, 2011). Systemic racial and ethnic disparities differentially occur intranationally due to differences in state laws and the impact of geographic characteristics upon caseworkers' decisions and regional maltreatment norms (Maguire-Jack et al., 2015; Maguire-Jack et al., 2020). Although state-level spatial analyses are prone to aggregation bias - the inflation of rates due to the non-differentiation of county non-White population density (Ards et al., 2003), state-level mapping offers preliminary evidence of disparities for certain racial and ethnic groups in specific states. State-level maps offer an initial perspective on possible maltreatment patterns that can then further be explored at the county level.

Study Aims

Our study builds upon the literature by examining geographic differences in racial disparities for physical, sexual, and emotional maltreatment at the state-level using the 2018 National Child Abuse and Neglect Data System (NCANDS). The current study addressed the following three aims: 1) validated past literature on racial disparity ratio variability across states; 2) tested for racial and ethnic disparities in reported CPA, CSA, and CEA-recognizing that CEA is often omitted in related studies; and 3) tested for racial disparities for Black, Asian American, Native North American, Native Hawaiian/Pacific Islander, and multiracial-identified children in comparison with White children, and ethnic disparities for Latinx children in comparison with non-Latinx children. We hypothesized that, in a majority of states, 1) CPA cases would have the most pronounced disparities, followed by CSA and last, CEA, due to recent trends (Finkelhor et al., 2018); and 2) disparities would be largest for children who identified their race as Black, and lowest for children identified as Asian American, as shown in prior literature (Wildeman et al., 2014).

Methods

This study examined state-level geographic variability of racial and ethnic disparities for CPA, CSA, and CEA. First, we calculated maltreatment rates with data from the NCANDS. Then, we computed the disparity ratios with U.S. Census population estimates. Finally, we developed choropleth maps, which are used to visually represent the degrees of a measure with differential colors corresponding to a specified geographic unit (Brewer & Pickle, 2002). In this paper, we depict disparity ratios for each racial/ethnic group across states.

Sample

We connected data from the NCANDS and U.S. Census by state. The NCANDS comprises CPS reports for conclusive cases of child abuse and neglect in all 50 states in the United States, in addition to Puerto Rico and the District of Columbia (U.S. DHHS, 2020). Data are collected annually and comprise reports with dispositions of children aged 17 and under found between October 1, 2017 to September 30, 2018 (U.S. DHHS, 2020). We estimated state-level population data from the U.S. Census Bureau's Population Estimates Program for children 19 and under for the year 2018 (U.S. Census Bureau, 2019). Our study employed 1-year estimates rather than 5-year estimates to ensure the calculated disparities represented timely population estimates. Given the trade-off for timeliness and completeness with 1-year population estimates from the American Community Survey (ACS), the Population Estimates Program annually updates population estimates by predicting state and county-level estimates from preceding years with high accuracy (U.S Census Bureau, 2019). These estimates, however, group 15- to 19-year-olds together (U.S. Census Bureau, 2019), inhibiting disaggregation for children 17 and under, and resulting in slightly lower estimates for analyses. The sum of county-level population estimates for each state were taken to estimate state-level counts. State-level analyses, rather than county-level analyses, were conducted to preserve as much data as possible, for many reports lack FIPS codes. Additionally, county-level analyses may inflate disparity ratios for Pacific Islanders due to small population size, but state-level analyses may more accurately portray Pacific Islander disparities.

Sample Thresholds

For each state, children identified as a racial group comprising greater than 0.04% of the state's racial composition for those aged 19 and under were included. Previous studies have employed count thresholds at the county-level (Maguire-Jack et al., 2015), which becomes difficult to implement at the state-level without eliminating a large number of states, particularly for Pacific Islanders. Instead, the present study chose to use the precision of the U.S. Census's 1-year ACS (U.S. Census Bureau, 2018). The 1-year ACS estimates for the racial composition round to the tenths place, meaning states with a reported composition of 0.0% of a specific race could have at most 0.04% of that race (U.S. Census Bureau, 2018), hence a threshold of 0.04% is considered appropriate. Thus, any states with a racial/ethnic group of 0.0% by the 1-year ACS were identified as having too small of a racial composition to accurately calculate a DR. This resulted in the exclusion of children who were identified as Native North Americans/Alaskan Natives in the District of Columbia (D.C.) and as Pacific Islander in Alabama, D.C., Florida, Illinois, Indiana, Louisiana, Massachusetts, Maine, Michigan, Mississippi, Montana, North Dakota, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, South Dakota, Virginia, Vermont, West Virginia, and Wyoming.

Measures

Demographic factors—Race included monoracial White, Black, Asian, Pacific Islander and Native Hawaiian, and Native North American/American Indian and Alaskan Native. All racial categories comprised both Latinx and Non-Latinx individuals. Multiracial individuals were coded as multiracial if they identified as two or more races, regardless of ethnicity.

Latinx ethnicity was coded as a separate identifier. The race and ethnicity of the child was identified in the NCANDS and children of the same race or ethnicity were aggregated at the state-level. Population-level estimates of state racial and ethnic composition were obtained from the U.S. Census.

Reported Maltreatment—In the NCANDS, reported CPA, CSA, or CEA indicated the child received an investigation from CPS for any of these three types of abuse, regardless of the case finding. Definitions of CPA, CSA, and CEA vary by state law. Accordingly, types of maltreatment overlap across the three abuse categories used in the present study (*e.g.*, risk of CPA can be categorized as CPA or CEA). CPA may include actions that inflict physical injury upon a child, risk of CPA and threatened harm (U.S. DHHS, 2018; U.S. DHHS, 2020). CSA may include sexual actions between a child and perpetrator for the purpose of fulfilling the perpetrator's sexual satiation and/or monetary profit (*e.g.,* statutory rape, molestation, sexual exploitation, sex work, pornography, incest, etc.) and the risk of CSA (U.S. DHHS, 2018; U.S. DHHS, 2020). CEA may include actions or omissions of actions beyond CPA or CSA that could contribute to behavior or mental disorders, risk of CPA or CSA, threatened harm, and domestic violence (U.S. DHHS, 2018; U.S. DHHS, 2020).

We created a dataset for each of the three maltreatment types, so children with reports for multiple maltreatment types may appear in each respective dataset. Within each dataset, we abstracted the earliest report date of the year, a method commonly used in the literature for improving the precision of child-level estimates (Wildeman et al., 2014). Thus, the number of reported children reflected unique children. When the state information was suppressed in the publicly available NCANDS data (*e.g.,* if the child died), we were not able to include those cases. Instances where the NCANDS had no reports for a state for a specific racial/ethnic group were interpreted to have 0 reports for the respective racial/ethnic group and maltreatment type.

Disparity Ratio (DR)—Racial disparities were calculated based on Shaw et al.'s calculation for racial disparities in child welfare:

$$\frac{E_r/P_r}{E_w/P_w}$$

where E represents the number of children reported for the maltreatment type of interest, P represents the number of children in the state of interest based on the U.S. Census data, r refers to non-White race category, and w refers to White race category (Shaw et al., 2008). In other words, racial disparity calculations reflect the proportion of reported children of a particular non-White race to the proportion of reported White children. For children identified as Latinx, the disparity ratio is the proportion of reported Latinx-identified children to non-Latinx-identified children. A disparity existed when the ratio did not equal 1 (Shaw et al., 2008). We categorized representation as under (DR: 0.00 – 0.90), equal (DR: 0.91 – 1.20), over (DR: 1.21 – 2.00) and highly over (DR: over 2.01). In the literature, a disparity ratio of 1.00 is classified as equal since the proportion is equal across both groups. Given that we are not conducting any statistical tests, where a confidence interval may provide further insight into true equality, we chose an asymmetric range to represent clinical

meaningfulness. Each report for a child of a racial/ethnic group with small state populations carries a greater weight than a report for a child of a racial/ethnic group with a large state population. As a result, children of racial/ethnic groups with small state populations may be more likely to drive the ratio to exceed 1, even if the number of children reported is the same across groups. To account for this inflation and to be conservative, we expanded the equal category to include disparity ratios between 0.91 and 1.20. The upper limit of the overrepresentation category was then chosen to encompass racial/ethnic groups that were not equally reported compared to White children but were also not more than twice as likely to be reported compared to White children. We used R version 3.6.2 to clean the data and calculate the disparity ratios and descriptive statistics.

Exploratory mapping

State-level exploratory maps were created to identify where racial and ethnic disparities existed. We used QGIS version 2.18.22 to create the choropleth maps. The state shapefiles were obtained from the 2018 U.S. Census Cartographic Boundary Files. States that did not meet the 0.04% threshold were colored in white, along with states that did not report the maltreatment type of interest for any children. In all maps, underrepresentation was indicated with beige, approximately equal representation with light orange, overrepresentation with dark orange, and highly overrepresented with red. Washington, Idaho, Indiana, D.C., and Massachusetts did not report CEA for any races and are whited out for each race for the CEA maps, accordingly.

Results

The 2018 NCANDS dataset included 4.3 million referrals to CPS for child maltreatment. We included reports for CPA, CSA, or CEA for children aged 17 and under with reported sex, state of residence (excluding Puerto Rico), and race and ethnicity (n = 1,223,676 duplicate reports). We included the earliest report for 2018, resulting in 757,038 children for CPA, 249,265 children for CSA, and 226,772 children for CEA at the state-level (Table 1). Children who were identified as White comprised the largest race group of reports across maltreatment types, followed by children who were identified as Black for CPA, CSA and CEA. Figure 1 shows CPA, Figure 2 shows CSA, and Figure 3 shows CEA exploratory mapping results. Only one state, Tennessee, had no overrepresented non-White populations for all three maltreatment types. Within each maltreatment type, the average number of overrepresented non-White populations across all included states and D.C. was 2.00 racial/ethnic groups for CPA reports, 1.45 racial/ethnic groups for CSA reports, and 1.46 racial/ethnic groups for CEA reports.

Black-White Disparity

Across all three maltreatment types (CPA, CSA, and CEA), children identified as Black were the most overrepresented racial group. The largest disparity across all races/ethnicities existed in D.C. for both CPA (DR: 15.10) and CSA (DR: 12.77). Black-identified children were overrepresented for CPA reports in 44 of 51 states/territories and were underrepresented in only one state - Idaho. In CSA reports, children identified as monoracial Black were overrepresented in 30 of 51 states/territories (from here on “states”) and were

underrepresented in 7 states. Last, 26 of 46 states overrepresented monoracial children from Black communities in CEA reports with 9 underrepresenting them. In CEA reports, Black-identified children were most overrepresented in California (DR: 5.25).

Latinx versus non-Latinx Disparity

Latinx-identified children were underrepresented in about half of states across all maltreatment types but were overrepresented for CPA reports in 10 states. Similarly, Latinx-identified children were overrepresented for CSA in 9 states and CEA in 6 states. Children from Latinx communities were most overrepresented in Connecticut for CPA (DR: 1.79) and in New Jersey for CSA (DR: 2.03). Connecticut had the highest DR (1.46) for CEA reports.

Native North American/Alaskan Native-White Disparity

Children identified as Native North American were largely underrepresented in reports for CPA (38 states), CSA (38 states), and CEA (34 states). They were overrepresented for both CPA and CSA in 8 states and for CEA reports in 7 states. Alaska had the highest disparity ratio for CPA (DR: 3.20), CSA (DR: 4.34), and CEA (DR: 5.18).

Asian American-White Disparity

Asian Americans were underreported in 50 states for both CPA and CSA reports and in 45 states for CEA reports. Asian Americans were not overrepresented in any state for all maltreatment types. The highest DRs for Asian Americans were 0.94 for CPA in California, 1.18 for CSA in D.C., and 1.00 for CEA reports in Maryland.

Pacific Islander-White Disparity

Pacific Islanders were overrepresented in CPA reports for 15 states, in CSA reports for 12 states, and in CEA reports for 11 states. Pacific Islanders were underrepresented in 10 states in CPA reports, 16 states in CSA reports, and 13 states in CEA reports. The largest disparity was in Alaska for CSA (DR: 4.60). Alaska also had the largest disparity ratio for CPA (DR: 3.98). The largest disparity for CEA was in Wisconsin (DR: 2.79).

Multiracial-White Disparity

Multiracial children were more likely to be overrepresented for CPA and more likely to be underrepresented for both CEA and CSA. Multiracial children were most overrepresented in CPA reports (25 states), followed by 17 states for CEA and 15 states for CSA. Multiracial children were most underrepresented in CSA and CEA reports (23 states), followed by CPA reports (17 states). The largest disparity for multiracial children was in CEA reports for South Dakota (DR: 4.61). Minnesota had the largest DR for CSA reports (3.66) and Oklahoma for CPA reports (3.82).

Discussion

To inform policies, resource allocation, and prevention strategies at the state-level for child maltreatment, this study provides estimates of racial disparities for reports of CPA, CSA, and CEA across U.S. states and territories. Moreover, reported data are more inclusive of different racial/ethnic communities. Our results suggest that non-White-identified and

Hispanic/Latinx-identified children appear in CPS reports at higher rates compared with White children for CPA, CSA, and CEA. Moreover, we observed the largest racial disparities in CPA reports, followed by CSA and then CEA reports. We also observed different patterns of racial and ethnic group disparities in reported child abuse between states.

Our findings indicate that Black communities are the most overrepresented non-White community for all three maltreatment types, followed by multiracial, Pacific Islander, and Native North American. These disparities largely reflect a structural system of racial oppression in the U.S. that has not only disenfranchised non-White and Latinx communities of economic opportunities but have also increased their susceptibility to the risk factors associated with child maltreatment (Dettlaff et al., 2011; Maguire-Jack et al., 2015). Although child maltreatment involves the actions of individuals whose behavior harms children, most cases of child maltreatment are a reflection of societal failures through structural and economic inequity. Funds to prevent child maltreatment have been made available to states for over 40 years, and although the prevalence of child maltreatment as a whole has decreased overall (Finkelhor et al., 2018), our findings may suggest these funds may not have been distributed equitably among racial/ethnic communities. More importantly, our findings suggest these funds have not been used to rectify the lasting effects of racially discriminatory policies that inhibited economic growth and fostered poverty-related stressors conducive for child maltreatment among non-White or Latinx communities (Maguire-Jack et al., 2015; Farrell et al. 2017; Coulton et al. 2007). Together, racial disparities in economic security along with structural racism increase the risk for child maltreatment events for children living in non-White and Latinx communities. For example, in addition to food insecurity and reduced access to resources, individuals residing in economically disadvantaged communities have higher rates of substance use, especially alcohol; higher rates of mental illness; and higher rates of stress; that increase risk for child maltreatment (The Annie E. Casey Foundation, 2011).

Aligning with findings from previous studies (Maguire-Jack et al., 2015; Maguire-Jack et al., 2020), CPS investigations most frequently involve children from Black communities relative to the number of Black-identified children in the general population across all maltreatment types, racial and ethnic groups, and states. Previous research attributed maltreatment disparities among Black communities to concentrated poverty and urbanicity (Maguire-Jack et al., 2015), which are likely the primary reason for such disparities. In the United States' brief history, the social mobility of Black communities was undermined through racially oppressive policies like redlining that restricted (and continue to restrict) access to financial resources over generations based on residential segregation policies enacted by the government. After the 1960's, while Black neighborhoods were barred from economic growth, the country saw the expansion of police forces coupled with punitive federal policies (*e.g.*, War on Drugs) that promoted violence towards and within Black communities. Decades later, the effects of neighborhood racial segregation, financial limitations, and violence persist in the youngest generation of Black Americans. In addition to historic and structural racism contributing to maltreatment in the Black community, reporters' and caseworkers' racial biases may also lead to more punitive decision-making in cases perpetrated by members of the non-White community (King & Wheelock, 2007). This

is relevant to the current study given that most cases of maltreatment are intraracial, meaning most reported cases with a non-White victim also involve a non-White perpetrator. Our findings highlight the severe systemic issue of high child maltreatment report rates for Black communities nationwide. In response, policy makers should begin nationwide reform targeting key risk factors that perpetuate high child maltreatment rates among Black families with a major focus on economic insecurity (Cancian et al., 2013).

The Midwest and Northeast regions of the U.S., however, show high DRs for Latinx children across maltreatment forms, requiring further investigation. Our findings diverge from older data on child maltreatment, in which Latinx communities had lower DRs than Black-identified children, despite both groups having high poverty rates (Drake et al., 2011). Prior research speculated such findings might be due to 1) strong familial support networks (Drake et al., 2011), 2) moral dilemmas towards reporting undocumented CSA perpetrators (Graham et al., 2018), 3) anti-immigrant and anti-migrant institutional barriers that deter even U.S.-born Latinx (Borjas, 2011), and 4) the dilution effects of the heterogeneous ethnicity classifier termed “Hispanic” (Becerra et al., 1991). The Latinx ethnic group aggregates children from various birth countries in North, Central, and South America - a diverse group with variability in health care use and access, U.S. citizenship status, and cultural influences (Becerra et al., 1991; Palloni & Morenoff, 2001). Previous studies have suggested that low CPS reporting for Latinx communities may largely be due to language barriers (Dakil et al., 2011), but this view requires the belief that most Latinx-identified children involved with CPS belong to immigrant or migrant families. “Latinx”, however, fails to discriminate immigrant families from multigenerational families, preventing the identification of intergenerational continuity effects on child maltreatment (Berlin et al., 2011; Schofield et al., 2013).

Our findings highlight that the language barrier theory for underreporting among Latinx communities may only apply to certain regions of the U.S. such as the Midwest, where there may be more concentrated foreign-born populations. Other regions in the U.S. with high DRs may have lower proportions of foreign-born Latinx families, where intergenerational continuity may be contributing to child maltreatment behaviors or concentrated subgroups of Latinx families from a specific birthplace may be more apparent. States in which children from the Latinx community were underreported, on the other hand, may have more birthplace-diverse Latinx groups, such that the heterogeneous ethnic group obscures subgroup effects. Future studies should examine if the children involved in CPS reports more often belong to migrant or immigrant families and if subgroup differences exist to help design the best-suited strategies for decreasing child maltreatment rates among Latinx families.

Higher DRs for Native North American reports of CPA, CSA, and CEA were found in states with decidedly higher and lower percentages of Native North Americans. States with more than 4% of children identifying as Native North American but reported low DRs may be underreporting, have true low prevalence, or may be referring cases to tribal healthcare. Both states with fewer children identifying as Native North Americans (< 2%), and states with many children identifying as Native North American (>14%) may have higher DRs (> 2) due to high rates of child maltreatment among non-White- and Latinx-identified

communities altogether (US Census Bureau, 2018). Alaska, which has the largest composition of children identifying as Native North American in any U.S. state, had the largest disparities and could be attributed to difficulty allocating resources across the vastness of the state and to forgoing tribal jurisdiction for placement responses to substantiated child maltreatment reports, as required by the Indian Child Welfare Act (Kastelic, 2013), possibly inflating the number of Native North American-identified children entering CPS services compared to other states with large Native North American populations. Similar to Black communities, Native North American communities have historically been oppressed in the U.S. and severely economically disadvantaged, increasing risk for child maltreatment. From our findings, future research on child maltreatment patterns in Native North American communities may require more state-specific investigation rather than nationwide generalizations to identify how state interactions with tribal communities may systematically affect CPS involvement with children identified as Native North American.

For Asian Americans, our findings mainly consisted of low DRs across states. Such findings may be due to an actual low prevalence or underreporting of maltreatment. If there is underreporting within the Asian American community, that would indicate a nationwide need for greater cultural sensitivity for detecting cases, addressing stigma, encouraging more reporting within the community, and for clarifying misconceptions among the Asian American community, such as the belief that society's perceptions of the family outweigh the harms inflicted upon the child (collectivist versus individualist perceptions) (Zhai & Gao, 2009). Underreporting of abuse could also be due to the inability to separate children of foreign-born versus U.S.-born parents or heterogeneous group effects, as suggested with Latinx communities. On the other hand, reporters' and CPS workers' perceptions of Asian Americans as the "model minority" may cause doubt when presented with evidence of maltreatment, leading to less of an inclination to report or substantiate child maltreatment for Asian American families. Nevertheless, our findings suggest a nationwide lack of Asian American representation in CPS reports, which should provide sufficient motivation for policy makers to reform barriers inhibiting child maltreatment reporting for Asian American-identified children.

Expanding upon previous research, we delineated Asian Americans from Pacific Islanders. While Asian Americans were uniformly underrepresented in CPA, CSA, and CEA reports across the country, Pacific Islanders were overrepresented in states throughout all U.S. regions. Given that Asian Americans and Pacific Islanders are often combined into one racial category, more research is needed to understand the factors driving high DRs among Pacific Islanders observed in our study.

Finally, we found select states had high DRs for multiracial children, particularly for CPA reports. There was also a trend that states with high DRs for CPA reporting among multiracial children also had high DRs for CSA and CEA reporting. This trend was parallel to that observed for Black-identified children in the Midwest and Southwestern states. Future studies should test whether the racial composition of multiracial children differentially impacts maltreatment reporting and if so, if it differs from monoracial children.

These findings further indicate that child maltreatment reporting systematically affects non-White- and Latinx- identified children, particularly for CPA. Racial disparities may have been most pronounced for CPA reports because poverty may be more strongly associated with CPA compared to CSA or CEA (Drake et al., 2011; Fix & Nair, 2020; Kim & Drake, 2018). The order of the maltreatment disparities, in which CPA had the most profound (and CEA the least profound) disparities, follows the conspicuousness of the effects of the maltreatment type. Wounds inflicted from CPA would be most apparent to reporters, whereas the effects of CSA and CEA may be less so. The effects of CSA and CEA may further be obscured by reporters' racial biases or behaviors influenced by culture. For example, Asian American children who have experienced CEA from a family member may go undetected by reporters biased by the "model minority" perception and other family members may avoid reporting to preserve the family's reputation (Zhai & Gao, 2009). Even so, our findings also address the importance of further examination of CEA, which was the maltreatment type with the lowest DRs. From our sample, nearly 226,000 children were involved in CEA reports, a number large enough to warrant significant attention. Our findings also indicate that non-White children may differentially experience CEA and given that several states did not report CEA in 2018, the magnitude of the issue may be underestimated.

Geographically, racial/ethnic disparities varied by race, but there were patterns in which children from multiple non-White communities were overrepresented across maltreatment types in some states (e.g., Alaska, Minnesota, Nebraska, Wisconsin) and regions (e.g., Midwest, Southwest). Meanwhile in Tennessee (the one state with no overrepresentation of non-White communities), White-identified children comprise 71% of the state's total child population (U.S. Census Bureau, 2018). Although these differences suggest that there may not be a linear relationship dependent upon a state's racial composition, caseworker reporting bias and poverty rates may confound this relationship (Drake et al., 2011; Maguire-Jack et al., 2015). Differences in state maltreatment definitions, including methods and teachings of recognizing maltreatment among non-White communities, may also contribute to these differences. It is important to note that these differences do not necessarily describe differences in the true prevalence of child maltreatment but may rather reflect racial biases present throughout the CPS decision-making process.

Policy Implications

The continued racial disparities in child maltreatment made apparent from our study's findings underscore the need for child maltreatment policy provisions that benefit non-White children. Currently, states receive annual federal block grants via Title II of the Child Abuse and Prevention Treatment Act (CAPTA), [P.L 100–294], The Community-Based Grants for the Prevention of Child Abuse and Neglect program and Title XX of the Social Security Act, [P.L. 93–647], Social Services Block Grant that can be used to prevent child maltreatment (U.S DHHS, 2018). These policies, however, allow states to be flexible in their decision of where to allocate their funds. From our findings, there is a clear need for states to set aside more of these funds for non-White communities. Amendments to these policies could set provisions specifying a certain percent of funds to be allocated for the prevention of child maltreatment among non-White communities. Further, stricter guidelines to protect data

quality are required for the continuous examination of prevention efforts. Although NCANDS is the best available national-level data, it is limited to the quality of individual counties' reports, and missing data limits the ability for researchers and policymakers to assess prevention progress with more accurate detail, as noted as a limitation of the present study. Moreover, new solutions are needed to examine masked counties with small populations. Without a method to unmask these counties, researchers are missing a critical piece to the issue of child maltreatment in smaller communities. Last, the study's findings manifest that child maltreatment is a national public health issue of concern. As a result, a national effort to counter child maltreatment requires standardized child maltreatment definitions to assess states' progress. Mixed-methods studies obtaining the anecdotal experiences of children from all racial backgrounds could help inform the creation of these updated definitions.

Limitations and Future Directions

This study's findings should be interpreted while considering several limitations. First, the calculated disparity ratios can only approximate the true disparities. Given the organization of the U.S. Census estimates, the population estimates used to calculate maltreatment rates reflect individuals 19 and under, whereas, the NCANDS data reflects children 17 and under. Second, the findings are restricted to the quality of individual county's reports since the NCANDS obtains CPS reports from counties. For example, a large number of reports did not list the state of residence and were thus excluded. As a result, the estimates presented in the current study are at times limited by the data quality provided by counties. Future studies should examine whether counties with poor data quality tend to have higher maltreatment rates and higher poverty rates or lower median household income, all of which reflect economic factors associated with increased maltreatment rates (Borjas, 2011; Dettlaff et al., 2011). Third, there is limited interpretability for cross-state comparisons due to differences in CPS definitions and procedures, such as the lack of CEA reports for any child from several states/territories. Therefore, although one state has high disparity ratios for CEA, this does not mean they truly have the greatest disparity. Their definitions may be broader, increasing sensitivity for maltreatment reports. Conversely, states with low disparity ratios may have too refined definitions, increasing false negatives. Additionally, child maltreatment greatly varies within states, constituting a greater need for county-level analyses. Fourth, we examined Latinx-White disparities that may be diluted by a high concentration of White-Latinx children. Similarly, we examined multiracial-White disparities of children comprising two or more races, without inspecting variability across different multiracial identities. Fifth, since the same child can appear within each maltreatment type subset, it is unclear whether high disparity ratios for the same racial/ethnic group across maltreatment forms for the same state result from high rates of polyvictimization. Last, our study is prone to aggregation bias (Ards et al., 2003), such that dense counties may largely influence state-level findings. The NCANDS also masks less densely populated counties, increasing the risk of aggregation bias.

Conclusion

Our study adds to the growing body of child maltreatment literature by providing nationwide geospatial estimates of racial and ethnic disparities across reports of CPA, CSA and CEA. Moreover, our findings support the previous literature manifesting large CPS involvement among non-White communities, particularly for Black-identified children for CPA and CSA reporting. One of the strengths of this study was the ability to manifest child maltreatment reporting patterns among children identified as Asian American, Pacific Islander and multiracial.

Most importantly, our findings emphasize states and regions with the greatest need of targeted policy reform. Our results indicate that CEA profoundly affects children from non-White- and Latinx- identified communities in certain states, especially in the Midwest, and that more attention towards this type of maltreatment is needed. Policy makers and professionals who regularly engage with youth can refer to their state's maltreatment disparities to not only quote disparity estimates for their cause, but also to broaden their perspective of child maltreatment as a whole. Given the inextricable link between community economic insecurity and child maltreatment, policies designed to reduce income gaps, food insecurity, and limited access to care are warranted. For example, policy makers who prioritize CPA reduction may note that CPA, CSA, and CEA afflict Black communities in their state, suggesting that multifaceted and culturally-informed interventions targeting shared risk factors across maltreatment types may have the greatest impact. Our study's findings highlight where the greatest disparities lie and can help guide local-level interventions, policies, and continued research.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

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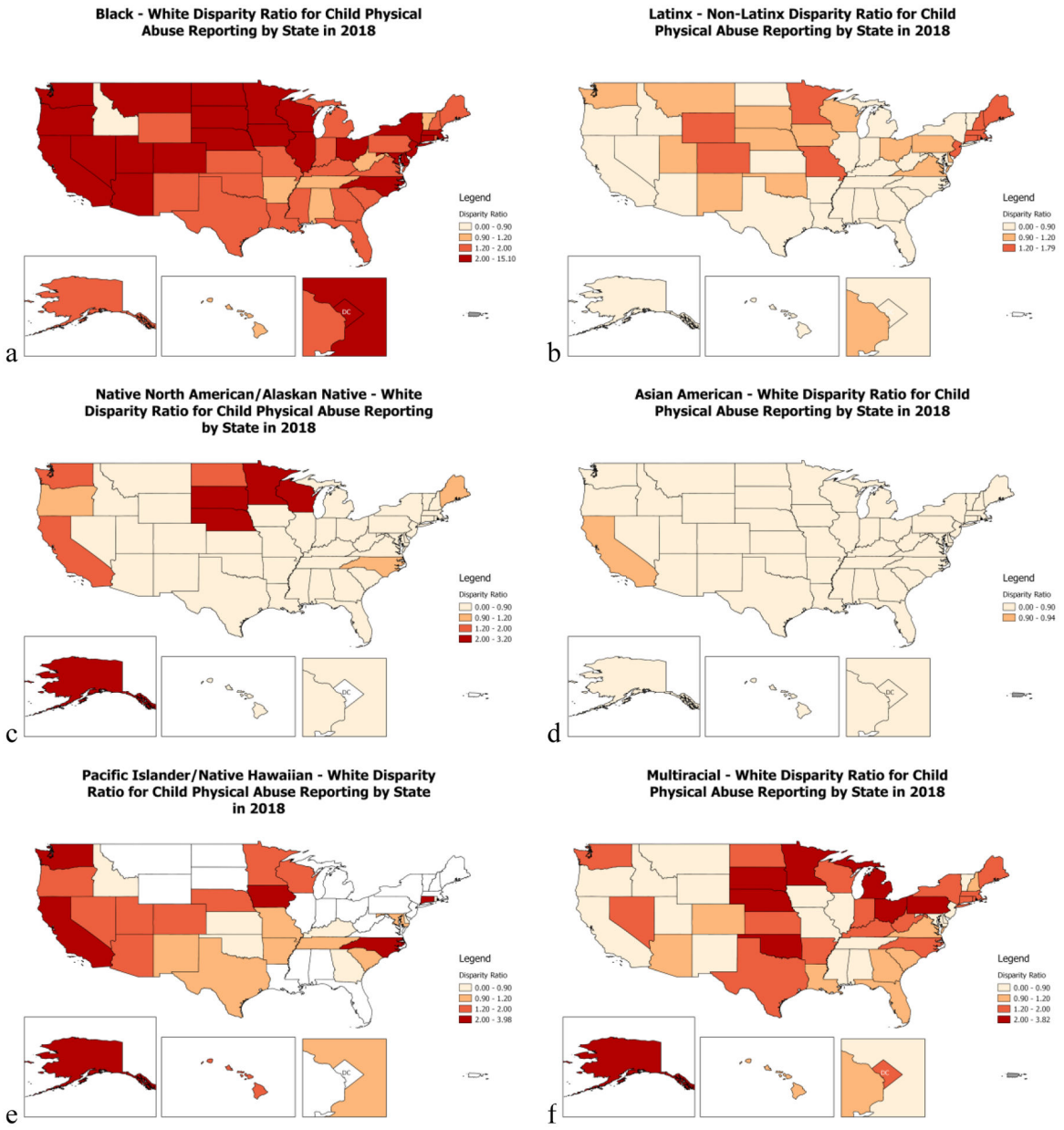

Figure 1. Child Physical Abuse Reporting by State and Racial/Ethnic Group, 2018

Note. Black-White (a), Latinx-non-Latinx (b), Native North American-White (c), Asian American-White (d), Pacific Islander/Native Hawaiian-White (e), and multiracial-White (f) Disparity Ratios for CPA by state in 2018

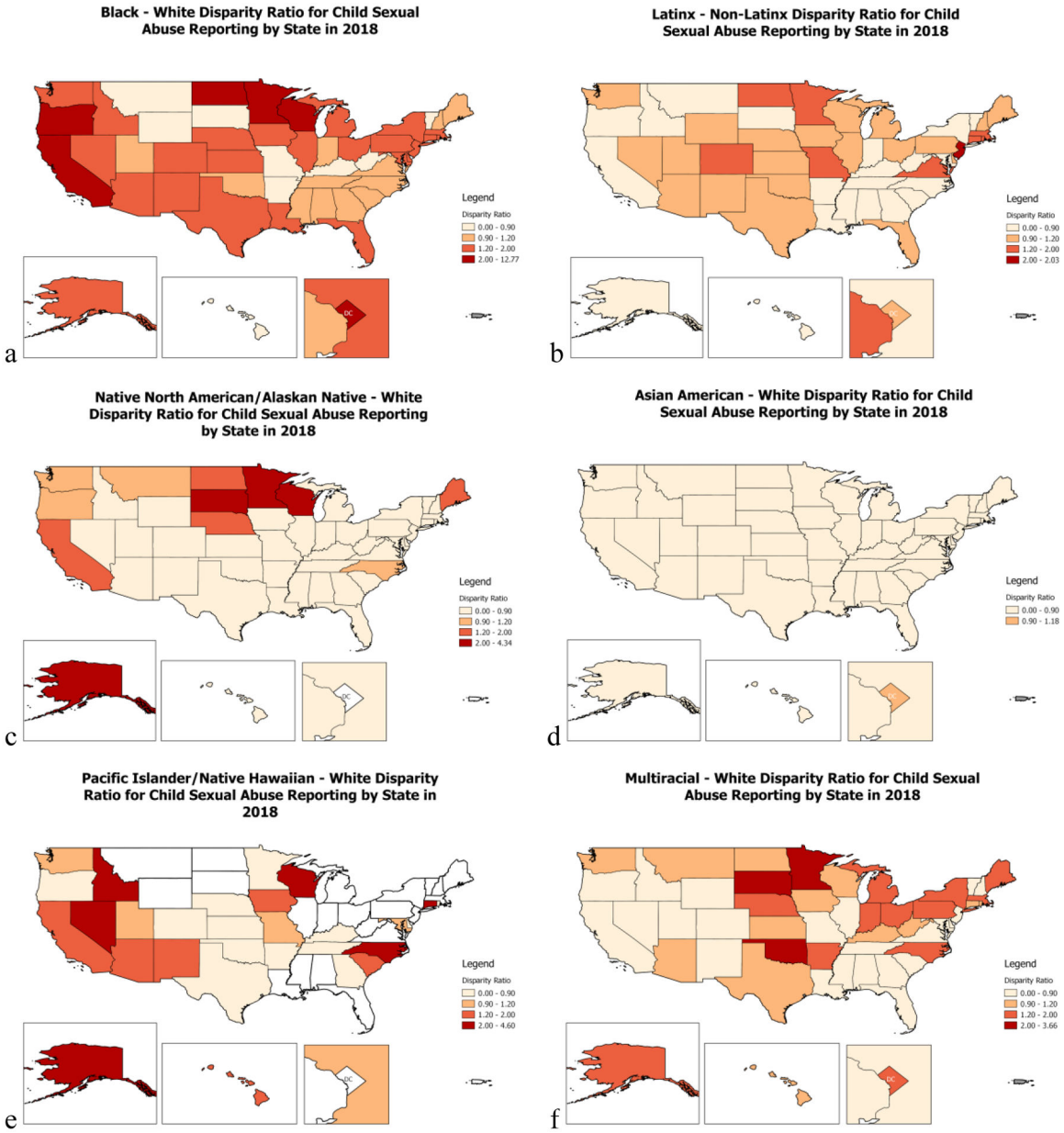

Figure 2. Child Sexual Abuse Reporting by State and Racial/Ethnic Group, 2018

Note. Black-White (a), Latinx-non-Latinx (b), Native North American-White (c), Asian American-White (d), Pacific Islander/Native Hawaiian-White (e), and multiracial-White (f) Disparity Ratios for CSA by state in 2018

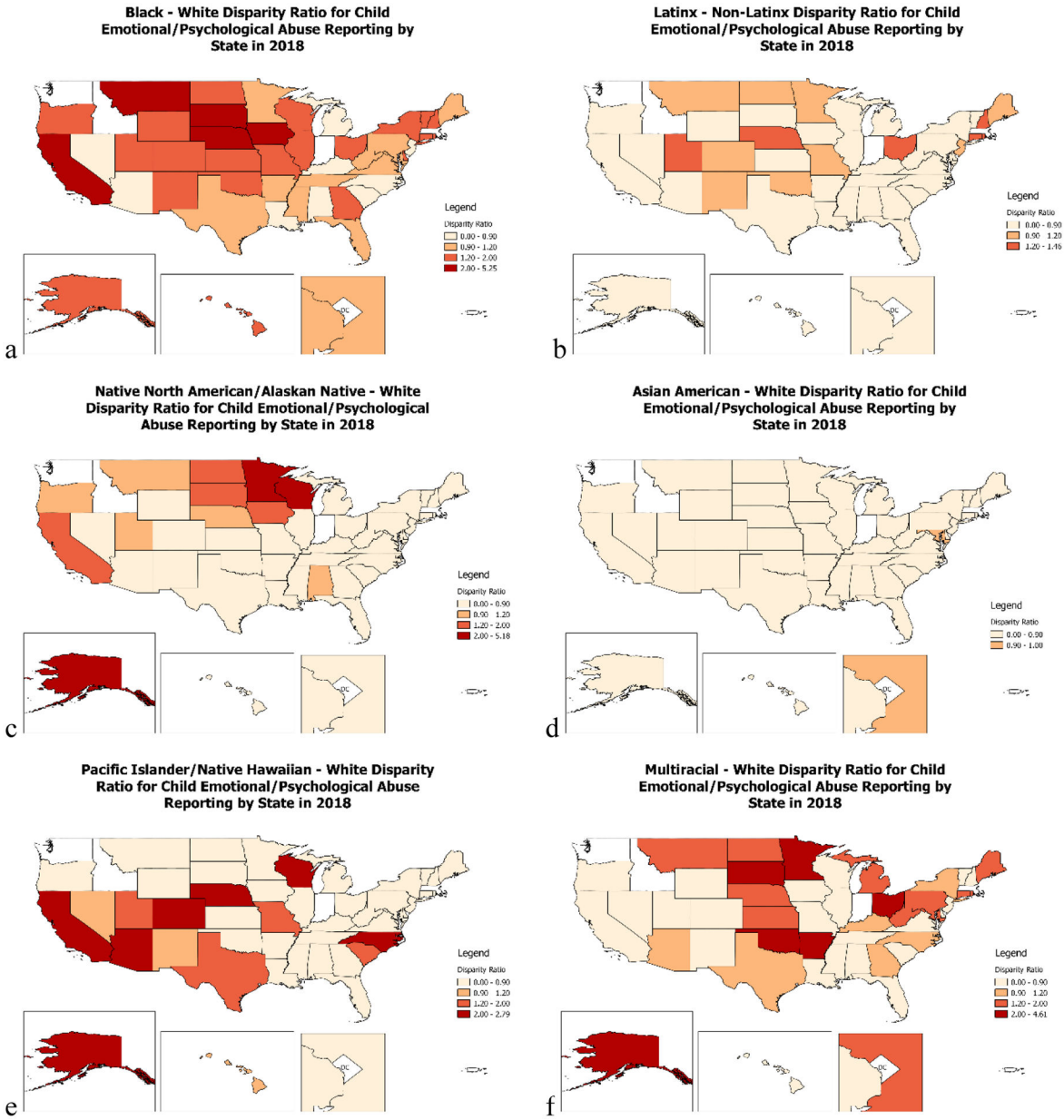

Figure 3. Child Emotional/Psychological Abuse Reporting by State and Racial/Ethnic Group, 2018

Note. Black-White (a), Latinx-non-Latinx (b), Native North American-White (c), Asian American-White (d), Pacific Islander/Native Hawaiian-White (e), and multiracial-White (f) Disparity Ratios for CEA by state in 2018

Table 1

Population Characteristics of Children Reported for Child Physical Abuse (CPA), Child Sexual Abuse (CSA), and Child Emotional/psychological Abuse (CEA), 2018

		Child Maltreatment Type		
Racial/Ethnic Group	**Overall**	**CPA**	**CSA**	**CEA**
White				
n	725,429	489,858	179,798	154,834
% Boy	47.5	52.9	30.8	47.0
% Girl	52.5	47.1	69.2	53.0
M Age (years)	8.65	8.30	9.71	8.92
SD Age (years)	4.97	5.02	4.67	4.92
Latinx				
n	196,378	120,543	57,003	39,988
% Boy	45.8	51.8	31.0	45.6
% Girl	54.2	48.2	69.0	54.4
M Age (years)	8.64	8.38	9.53	8.71
SD Age (years)	4.84	4.85	4.63	4.95
Black				
n	270,663	200,647	50,817	44,910
% Boy	49.0	52.6	32.4	48.4
% Girl	51.0	47.4	67.6	51.6
M Age (years)	8.32	8.18	9.48	8.29
SD Age (years)	4.96	4.96	4.75	5.06
Asian				
n	18,239	12,135	2,616	5,580
% Boy	49.0	53.3	29.8	46.6
% Girl	51.0	46.7	70.2	53.4
M Age (years)	9.21	9.04	10.44	9.41
SD Age (years)	4.77	4.68	4.55	4.98
Pacific Islander				
n	2,776	1,764	518	805
% Boy	47.7	52.3	27.6	48.1
% Girl	52.3	47.7	72.4	51.9
M Age (years)	8.71	8.68	10.30	8.04
SD Age (years)	4.90	4.79	4.61	5.13
Native North American				
n	13,720	7,075	2,682	5,755
% Boy	47.9	52.6	31.7	48.6
% Girl	52.1	47.4	68.3	51.4

M Age (years)	7.94	8.07	9.30	7.40
SD Age (years)	4.96	4.99	4.65	4.95
Multiracial				
n	64,978	45,559	12,834	14,888
% Boy	49.1	53.1	32.7	48.0
% Girl	50.9	46.9	67.3	52.0
M Age (years)	7.76	7.56	8.94	7.80
SD Age (years)	4.93	4.95	4.68	4.91
Total children	1,095,805	757,038	249,265	226,772

Note. Latinx children include those without an identified race, all racial groups include both Latinx and non-Latinx, and all racial groups besides multiracial include monoracial children only.

Table 2

Child Physical Abuse Disparity Ratios, 2018

	Racial/Ethnic Group					
State	**Black**	**Latinx**	**Native North American**	**Asian**	**Pacific Islander**	**Multiracial**
AK	1.63	0.65	3.20	0.42	3.98	2.03
AL	1.19	0.42	0.31	0.22	-	0.87
AR	1.03	0.61	0.16	0.27	1.12	1.94
AZ	2.06	0.8	0.62	0.24	1.48	1.16
CA	6.23	0.32	1.51	0.94	2.57	0.84
CO	2.42	1.32	0.32	0.43	1.95	1.02
CT	2.22	1.79	0.35	0.38	2.71	1.29
DC	15.10	0.71	-	0.47	-	1.61
DE	2.23	0.97	0.19	0.14	0.64	0.51
FL	1.82	0.79	0.26	0.31	-	1.08
GA	1.76	0.56	0.19	0.31	0.78	1.08
HI	1.16	0.22	0.54	0.29	1.50	0.93
IA	2.74	0.99	0.74	0.28	2.11	0.81
ID	0.70	0.38	0.57	0.09	0.65	0.15
IL	2.50	0.75	0.23	0.43	-	0.66
IN	1.77	0.82	0.38	0.27	-	1.76
KS	1.96	0.79	0.50	0.42	0.79	1.37
KY	1.40	0.72	0.17	0.25	0.83	1.22
LA	1.69	0.41	0.33	0.29	-	0.95
MA	2.89	1.58	0.39	0.54	-	1.70
MD	2.82	0.26	0.37	0.44	1.17	0.56
ME	1.52	1.27	1.19	0.23	-	1.34
MI	1.97	0.85	0.45	0.14	-	2.02
MN	3.03	1.41	3.11	0.69	1.28	3.72
MO	1.53	1.29	0.20	0.22	1.17	0.54
MS	1.25	0.30	0.25	0.35	-	0.72
MT	2.14	0.93	0.90	0.50	-	0.82
NC	2.38	0.47	1.05	0.46	2.31	1.61
ND	4.89	0.90	1.47	0.59	-	1.31
NE	2.81	0.98	2.48	0.50	1.31	2.42
NH	1.71	1.39	0.21	0.36	-	0.91
NJ	2.56	1.40	0.31	0.49	-	0.53
NM	1.24	1.15	0.51	0.22	0.99	0.59
NV	3.11	0.55	0.34	0.32	1.92	1.25
NY	2.69	0.76	0.64	0.66	-	1.41
OH	2.72	1.07	0.22	0.21	-	2.56
OK	1.68	1.07	0.58	0.31	0.82	3.82
OR	2.37	0.64	1.10	0.36	1.67	0.57

PA	1.77	1.14	0.17	0.30	-	2.38

	Racial/Ethnic Group					
State	**Black**	**Latinx**	**Native North American**	**Asian**	**Pacific Islander**	**Multiracial**
RI	1.81	1.35	0.23	0.39	0.55	1.43
SC	1.54	0.54	0.20	0.22	1.07	0.91
SD	2.04	0.94	2.24	0.66	-	3.10
TN	1.13	0.46	0.23	0.11	0.97	0.78
TX	1.94	0.80	0.41	0.35	1.09	1.43
UT	2.04	1.13	0.89	0.45	1.36	0.70
VA	1.51	0.91	0.21	0.27	-	1.02
VT	1.08	0.27	0.28	0.33	-	0.15
WA	2.26	0.95	1.77	0.40	2.25	1.53
WI	4.20	1.11	2.75	0.69	1.86	1.30
WV	0.97	0.32	0.06	0.11	-	1.36
WY	1.31	1.27	0.41	0.00	-	0.10

Note. Cells with dashes indicate that the racial/ethnic group comprises fewer than 0.04% of the state's population under the age of 19, and thus, did not meet the study's threshold.

Table 3

Child Sexual Abuse Disparity Ratios, 2018

	Racial/ Ethnic Group					
State	**Black**	**Latinx**	**Native North American**	**Asian**	**Pacific Islander**	**Multiracial**
AK	1.29	0.71	4.34	0.41	4.60	1.76
AL	1.02	0.65	0.28	0.13	-	0.61
AR	0.90	0.6	0.05	0.13	0.58	1.62
AZ	1.35	1.02	0.46	0.19	1.90	0.95
CA	4.65	0.39	1.31	0.51	1.40	0.77
CO	1.44	1.42	0.30	0.28	0.87	0.67
CT	1.37	1.96	0.26	0.31	2.39	1.02
DC	12.77	0.92	-	1.18	-	1.44
DE	1.64	0.91	0.00	0.14	0.00	0.49
FL	1.33	0.95	0.22	0.23	-	0.89
GA	1.15	0.72	0.05	0.15	0.85	0.79
HI	0.86	0.39	0.00	0.41	1.49	0.98
IA	1.77	1.11	0.86	0.17	1.42	0.97
ID	1.62	0.8	0.43	0.00	4.05	0.00
IL	1.76	0.95	0.20	0.19	-	0.51
IN	1.20	0.86	0.28	0.15	-	1.26
KS	1.37	0.93	0.53	0.25	0.86	1.08
KY	0.68	0.81	0.10	0.20	0.52	0.97
LA	1.25	0.52	0.09	0.47	-	0.65
MA	1.58	1.49	0.70	0.36	-	1.60
MD	1.45	0.63	0.33	0.28	1.14	0.49
ME	0.93	1.08	1.59	0.21	-	1.64
MI	1.26	1.01	0.43	0.14	-	1.63
MN	2.25	1.51	2.50	0.61	0.48	3.66
MO	0.90	1.78	0.25	0.20	1.19	0.34
MS	0.98	0.35	0.40	0.16	-	0.38
MT	0.83	0.84	1.13	0.44	-	0.93
NC	1.17	0.75	1.05	0.03	2.66	1.24
ND	2.08	1.38	1.71	0.54	-	1.04
NE	1.95	0.97	1.61	0.25	0.38	1.63
NH	1.17	1.04	0.75	0.07	-	0.85
NJ	1.98	2.03	0.18	0.21	-	0.46
NM	1.28	1.08	0.40	0.28	2.00	0.44
NV	1.50	0.98	0.09	0.37	3.02	0.83
NY	1.83	0.8	0.39	0.25	-	1.24
OH	1.65	1.04	0.23	0.15	-	1.73
OK	1.01	1.04	0.60	0.12	0.51	3.55
OR	2.14	0.59	1.17	0.19	0.61	0.63

PA	1.30	1.13	0.02	0.18	-	1.93
	Racial/ Ethnic Group					
State	**Black**	**Latinx**	**Native North American**	**Asian**	**Pacific Islander**	**Multiracial**
RI	1.37	1.28	0.29	0.65	0.00	0.99
SC	1.01	0.63	0.34	0.43	1.42	0.55
SD	0.49	0.56	2.89	0.44	-	2.25
TN	1.02	0.67	0.30	0.12	0.59	0.88
TX	1.25	1.05	0.21	0.15	0.82	1.00
UT	1.08	1.03	0.69	0.18	1.17	0.47
VA	0.95	1.34	0.39	0.13	-	0.82
VT	0.87	0.08	0.00	0.07	-	0.08
WA	1.34	1.10	1.08	0.28	0.95	1.08
WI	2.55	1.20	2.65	0.37	2.50	1.15
WV	0.69	0.63	0.00	0.53	-	1.08
WY	0.38	1.13	0.60	0.00	-	0.07

Note. Cells with dashes indicate that the racial/ethnic group comprises fewer than 0.04% of the state's population under the age of 19, and thus, did not meet the study's threshold.

Table 4

Child Emotional/Psychological Abuse Disparity Ratios, 2018

	Racial/ Ethnic Group					
State	**Black**	**Latinx**	**Native North American**	**Asian**	**Pacific Islander**	**Multiracial**
AK	1.73	0.55	5.18	0.49	2.60	2.20
AL	0.77	0.63	1.09	0.23	-	0.64
AR	0.99	0.54	0.20	0.40	0.88	2.03
AZ	0.79	0.76	0.62	0.76	2.71	0.94
CA	5.25	0.39	1.34	0.82	2.09	0.72
CO	1.40	1.01	0.23	0.24	2.01	0.78
CT	1.75	1.46	0.15	0.20	0.74	1.67
DE	1.64	0.86	0.08	0.08	0.88	0.34
FL	1.19	0.86	0.23	0.35	-	0.88
GA	1.25	0.54	0.09	0.20	0.42	1.02
HI	1.48	0.14	0.00	0.33	1.07	0.59
IA	2.21	0.76	1.43	0.35	0.84	0.76
IL	1.27	0.81	0.30	0.52	-	0.45
KS	1.73	0.79	0.59	0.37	0.51	1.25
KY	0.80	0.64	0.00	0.12	0.57	0.97
LA	0.65	0.44	0.00	0.65	-	0.30
MD	1.00	0.25	0.00	1.00	0.00	2.00
ME	0.95	0.96	0.80	0.40	-	1.52
MI	0.88	0.81	0.32	0.24	-	1.50
MN	1.07	0.97	3.05	0.54	0.00	2.14
MO	1.21	1.06	0.00	0.24	1.55	0.34
MS	0.92	0.30	0.22	0.27	-	0.69
MT	4.03	0.95	1.08	0.86	-	1.21
NC	0.81	0.52	0.79	0.26	2.50	0.93
ND	1.99	1.13	1.89	0.35	-	1.91
NE	3.17	1.31	1.17	0.28	2.67	1.50
NH	1.43	1.28	0.72	0.27	-	0.88
NJ	0.89	1.07	0.00	0.50	-	0.17
NM	1.31	1.18	0.70	0.12	0.98	0.67
NV	0.64	0.41	0.52	0.52	1.20	0.36
NY	1.25	0.58	0.53	0.58	-	0.91
OH	1.97	1.27	0.23	0.09	-	2.04
OK	1.75	1.15	0.80	0.23	0.77	3.96
OR	1.95	0.56	0.93	0.39	0.75	0.68
PA	0.96	0.77	0.00	0.46	-	1.96
RI	1.65	1.30	0.34	0.41	0.00	1.83
SC	0.76	0.45	0.28	0.11	1.28	0.37
SD	2.74	0.81	1.99	0.28	-	4.61

	Racial/ Ethnic Group					
State	**Black**	**Latinx**	**Native North American**	**Asian**	**Pacific Islander**	**Multiracial**
TN	1.17	0.66	0.32	0.21	0.81	0.70
TX	1.20	0.79	0.43	0.42	1.25	1.08
UT	1.89	1.30	1.09	0.47	1.67	0.69
VA	0.95	0.87	0.13	0.27	-	0.72
VT	1.30	0.00	0.00	0.00	-	0.00
WI	1.78	0.90	4.19	0.37	2.79	0.88
WV	0.92	0.31	0.07	0.04	-	1.35
WY	1.54	0.90	0.50	0.00	-	0.25

Note. Cells with dashes indicate that the racial/ethnic group comprises fewer than 0.04% of the state's population under the age of 19, and thus, did not meet the study's threshold.