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**Racial/Ethnic Differences in Adverse and Positive Childhood Experiences
Across Rural Communities:
Results from the National Survey of Children's Health**

- **Adverse childhood experiences (ACEs):**
 - There were higher rates of four or more ACEs among racial/ethnic minority children living in rural areas.
 - Asian/Pacific Islander rural children had the highest rates of three out of six ACEs: parental death, witnessing neighborhood violence, and economic hardship.
 - Economic hardship was prevalent among rural children, with 26.2% of this population experiencing economic hardship, and over 40% of Black and Asian/Pacific Islander children experiencing economic hardship
- **Positive childhood experiences (PCEs):**
 - There were lower rates of each type of PCE among racial/ethnic minority rural children.
 - Asian/Pacific Islander children had the lowest proportion of each of the following PCEs: after school activities (60.5%), community volunteer (33.4%), guiding mentor (85.7%), supportive neighborhood (34.8%), and resilient family (80.4%).

INTRODUCTION

Both positive and adverse events that occur during childhood and adolescence have been shown to be associated with physical and mental health outcomes in adulthood.^{1,2} Adverse childhood experiences (ACEs) are incidences of abuse, neglect, or other potentially damaging experiences that occur before the age of 18.³ Positive childhood experiences (PCEs), which foster healthy social emotional development in a child, help to build resilience against ACEs.⁴

PCEs may be particularly significant for rural children, as rural children have been shown to experience higher rates of nearly every ACE including economic hardship, parental separation/divorce, household incarceration, household violence, neighborhood violence, household mental illness, and household substance misuse (see Table 1 for variable definitions). Rural children, particularly racial/ethnic minority children residing in rural areas, have less access to and utilization of health services than those in urban areas, and are more likely to die before the age of 18 than their urban counterparts.⁵ Racial/ethnic differences within rural child populations are rarely studied, as the population of non-white rural children is relatively small. Despite this barrier, it is important to learn about the differences in childhood experiences within racially different rural communities because of the compounding effects of racism and rurality on health.⁶

Among both rural and urban children, previous research has shown that racial/ethnic minority children often experience higher rates of ACEs than non-minority children.⁷ Additionally, racial/ethnic minority groups are less likely to experience many PCEs and this lack or absence of supportive factors may impede healthy development in children.⁸ Racial/ethnic differences in PCEs within rural children has been studied, but was limited to four racial-ethnic groups: Hispanic, non-Hispanic White, non-Hispanic Black, and non-Hispanic Other, as other racial/ethnic groups' data are often suppressed in rural residents in publicly available datasets due to small sample size.⁹

Past studies of rural childhood experiences have been limited by publicly available data. The National Survey of Children's Health (NSCH) excluded 16 states due to potential disclosure concerns.^{7,9} These states included Alaska, Arizona, Connecticut, Hawaii, Maine, Maryland, Massachusetts, Montana, Nevada, New Hampshire, North Dakota, South Dakota, Utah, Vermont, Virginia, and Wyoming. Inclusion of these states in the evaluation of rates of ACEs and PCEs might alter outcomes as there are significant demographic differences between residents of non-suppressed and suppressed states.

Specifically, Western data-suppressed states (Alaska, Montana, North Dakota, South Dakota, Wyoming) include substantial American Indian/Alaska Native (AI/AN) populations. Research has shown that AI/AN children are subject to ACEs at a higher rate than their non-Hispanic White counterparts.¹⁰ Crouch et al 2021 was limited in that it only examined positive experiences for minority rural children and was unable to examine childhood experiences among the AI/AN population due to small sample size from this racial/ethnic category.⁹

Therefore, the purpose of this policy brief is to examine racial/ethnic differences in ACE and PCE exposure across rural communities, by type and by count. This is the first study to estimate racial/ethnic differences in ACEs and PCEs using the restricted National Survey of Children's Health from the U.S. Census, which requires use of the Research Triangle Research Data Center (see methods below), which includes data from all fifty states and the District of Columbia. This policy brief is second in a three-part series. Additional briefs discuss whether ACE and PCE exposure differs between rural and urban children (brief 1 of 3) and the degree to which children exposed to ACEs also have potentially strengthening PCEs (brief 3 of 3).

METHODS

Data were drawn from the restricted use 2016-2018 National Survey of Children's Health (NSCH), using the Research Triangle Research Data Center (RDC) in Raleigh, NC, which requires special access and permission to obtain geographic information on all survey participants. The NSCH is an online and mail survey of U.S. households with children ages 0-17 years; parents or guardians answer questions regarding the child's physical and emotional health.¹¹ The reporting by parents or guardians of the child's experience is a potential limitation of the NSCH. A total of 102,341 samples were collected including 50,212 interviews in 2016, 21,599 in 2017, and 30,530 in 2018. Our sample was limited to children who were six years of age or older, as many PCEs are only measured at school age. It was further restricted to respondents who had completed the ACE and PCE questions and had complete demographic information. The final unweighted rounded sample size was 63,000 children, per the United States Census Bureau Data Review Board (data are rounded for confidentiality purposes). Just over eleven percent (11.7%) of the sample were rural children, with the sample size count for rural children from the Census not approved by the Census disclosure review board. Our reported frequencies were weighted to account for the complex survey design used by the NSCH. We used proc surveyfreq controlling for the strata, cluster, and survey weights using SAS 9.4.

ACEs were measured using the ACE module in the NSCH and PCEs were constructed using the Healthy Outcomes Positive Experiences (H.O.P.E.) framework, which includes four categories of PCEs: (1) nurturing, supportive relationships, (2) living in safe, stable environments, (3) constructive social engagement opportunities, and (4) learning social and emotional competencies.⁷ Table 1, below, includes the questions used to assess each category of this framework. Race/ethnicity was self-reported by the parent and was categorized as non-Hispanic White, non-Hispanic Black, Hispanic, American Indian/Alaska Native, and Asian/Pacific Islander, and “Other”, comprising multi-racial or unspecified race. Per the NSCH, children who identify as Hispanic and another race would be categorized as Other race by the NSCH.

Table 1: ACE and PCE assessment questionnaire

Measurement of adverse events	Measurement of positive events
Precise questionnaire language	
<p>To the best of your knowledge, has this child experienced any of the following?</p> <ol style="list-style-type: none"> 1. Parent or guardian divorced or separated? 2. Parent or guardian died? 3. Parent or guardian served time in jail? 4. Saw or heard parents or adults slap, hit, kick, punch one another in the home? 5. Was a victim of violence or witnessed violence in the neighborhood? 6. Lived with anyone who was mentally ill, suicidal, or severely depressed? 7. Lived with anyone who had a problem with alcohol or drugs? 8. Treated or judged unfairly because of his or her race or ethnic group? 9. Hard to get by on family’s income—hard to cover basics like food or housing? 	<ol style="list-style-type: none"> 1. When your family faces problems, how often are you likely to do each of the following? <ol style="list-style-type: none"> a. Stay hopeful even in difficult times b. Work together to solve our problems 2. During the past 12 months, did this child participate in any type of community service or volunteer work at school, church, or in the community, age 6-17 years? 3. During the past 12 months, did this child participate in any organized activities or lessons, after school or on weekend, age 6-17 years? 4. How true are each of the following statements about this child, age 6-17? <ol style="list-style-type: none"> a. Child stays calm and in control when faced with a challenge 5. Other than you or other adults in your home, is there at least one other adult in this child’s school, neighborhood, or community who knows this child well and who he or she can rely on for advice or guidance? 6. To what extent do you agree with these statements about your neighborhood or community... 1) people in this neighborhood help each other out, 2) we watch out for each other’s children in this neighborhood, and 3) when we encounter difficulties, we know where to go for help in our community? 7. To what extent do you agree with these statements about your neighborhood or community... the child is safe in our neighborhood

FINDINGS

Survey Participant Characteristics

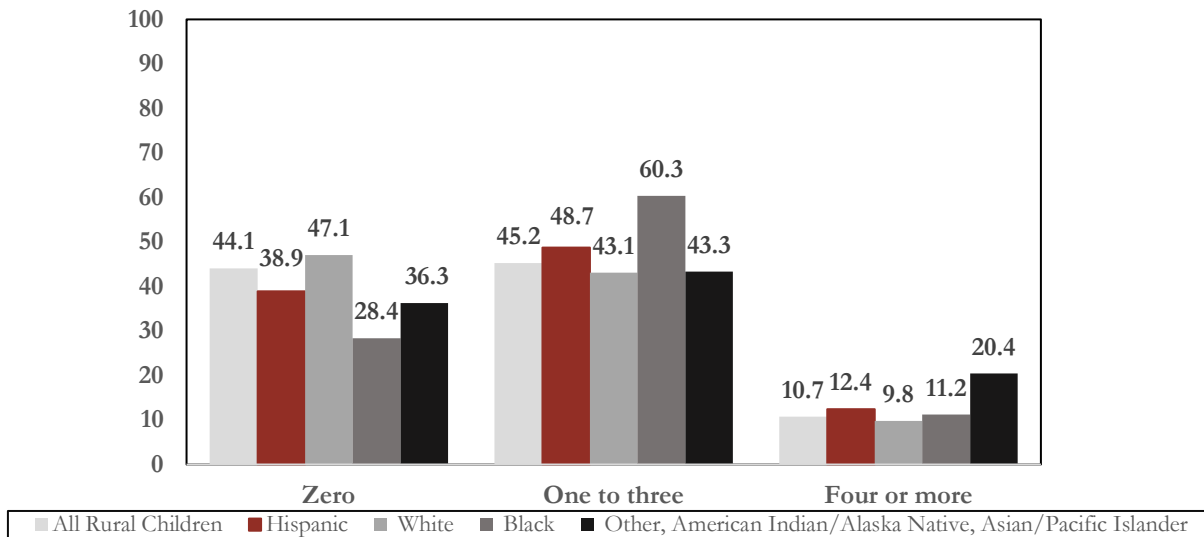
Survey characteristics are for the entire sample, not only the rural children, as the demographic data among rural residents by race/ethnicity was not released by the United States Census Bureau Data Review Board. The majority of children were male (51.3%, see Table A-1 in the appendix) and between the ages of 6 to 12 years old (58.3%). Almost one quarter of respondents (23.1%) had special health care needs. Survey respondents were primarily the children's mother (62.4%). Most children had private health insurance (59.9%) and lived with caregivers who had completed some college education or more (71.7%).

Over half of the children surveyed lived with both parents currently married (65.7%) and nearly 1 in 5 children (19.1%) lived below the federal poverty level. Just over eleven percent (11.7%) of the sample were rural children. Nearly a quarter of the children were of Hispanic ethnicity (24.5%). Other racial/ethnic groups in the sample included 13.1% Black children, 52.9% White children, 4.7% 'Other' children, 4.4% American Indian/Alaska Native children, and 0.4% Asian/Pacific Islander children. There were significant differences by race/ethnicity for age of the child, special health care needs of the child, respondent's relation to the child, guardian education, family structure, poverty/income level, and health insurance ($p < 0.05$, see Table A-2 in the appendix).

ACE Exposure: Total Number among rural children, by race/ethnicity

We first sought to quantify ACE exposure disparities by racial/ethnic groups among rural children. Just over ten percent (10.7%) of all rural children had experienced four or more ACEs (see Figure 1 below). ACE counts significantly varied by race/ethnicity ($p < 0.01$). Non-Hispanic "Other" American Indian/Alaska Native, and Asian/Pacific Islander rural children were grouped together for this chart, due to data suppression from Census. This group had the greatest percentage of exposure to four or more ACEs (20.4%) compared to their peers, followed by Hispanic rural children (12.4%) and Black rural children (11.2%). Sixty percent (60.3%) of Black rural children had exposure to one to three ACEs, followed by 48.7% of Hispanic rural children. White rural children (47.1%) had the highest percentage of respondents who had not experienced any ACEs during their lifetime.

Figure 1: Proportion (%) of Adverse Childhood Experiences, by count, among rural children ages 6-17, National Survey of Children's Health



ACE Exposure: By Type among rural children, by race/ethnicity

Among children in rural communities, there were statistically significant differences between racial/ethnic groups for parental death, household incarceration, neighborhood violence, substance misuse, racial/ethnic mistreatment, and economic hardship (see Table 2 below). Here, “Other” includes multi-racial or unspecified race/ethnicity children. Over five percent of rural children had experienced the death of a parent. Among rural children, parental death was highest among Asian/Pacific Islander rural children at 9.8%, with Black rural children at 7.3%, “Other” rural children at 7.3%, and Hispanic rural children at 7.2%.

Nearly thirteen percent (12.9%) of rural children had experienced a member of their household being incarcerated. “Other” rural children had the highest proportion of household incarceration (22.9%), followed by Hispanic rural children (17.2%), Black rural children (13.9%) and White rural children (11.6%).

Just over six percent (6.2%) of rural children had witnessed neighborhood violence, with rates highest among Asian/Pacific Islander rural children (13.0%), “Other” rural children (10.0%), Black rural children (8.6%), and Hispanic rural children (7.7%). Overall, 14.3% of rural children had experienced household substance misuse, with high rates of exposure to household substance misuse among Non-Hispanic “Other” children (26.1%), Asian/Pacific Islander children (20.3%), and White children (14.3%). Less than four percent of rural children had experienced racial/ethnic mistreatment, but rates were higher among Other rural children (15.8%), Black rural children (14.2%), and American Indian/Alaska Native rural children (10.2%).

Economic hardship was prevalent among rural children, with 26.2% of this population experiencing economic hardship. Asian/Pacific Islander rural children experienced the largest proportion of economic hardship (42.7%), followed by Black rural children. (40.1%), and Other rural children (36.8%).

Table 2: Adverse Childhood Experiences among rural children ages 6-17, National Survey of Children's Health, in Total and stratified by race/ethnicity								
	Total	Hispanic	White	Black	AI/AN	API	Other	P-value
	%	%	%	%	%	%	%	
ACE Types								
Parental separation/divorce	35.2	37.5	34.6	36.6	11.0	45.6	38.2	0.0690
Parental death	5.1	7.2	4.3	7.3	4.4	9.8	7.3	0.0393
Household incarceration	12.9	17.2	11.6	13.9	D	D	22.9	<.0001
Witness household violence	9.3	10.9	8.7	10.3	1.1	19.2	11.9	0.0740
Witness neighborhood violence	6.2	7.7	5.5	8.6	0.5	13.0	10.0	0.0098
Household mental illness	11.7	12.5	11.5	9.2	8.8	12.7	17.2	0.3433
Household substance misuse	14.3	12.6	14.3	9.6	7.2	20.3	26.1	0.0004
Racial/ethnic mistreatment	3.6	7.8	1.0	14.2	12.3	10.2	15.8	<.0001
Economic hardship	26.2	20.9	24.8	40.1	17.7	42.7	36.8	<.0001

*D indicates data suppression due to small cell size, per United States Census Data Review Board. AI/AN = American Indian or Alaska Native. API = Asian or Pacific Islander. **Bolded** p-values represent statistical significance at $p < 0.05$.

PCE Exposure: In Rural Communities

Among children residing in rural communities, all PCEs were statistically significant by race/ethnicity ($p < 0.05$), see Table 3). Asian/Pacific Islander children had the lowest proportion of each of the following PCEs: after school activities (60.5%), community volunteer (33.4%), and guiding mentor (85.7%), supportive neighborhood (34.8%), and resilient family (80.4%), compared to their counterparts. More than 3 out of every 4 (78.3%) White children reported participation in after school activities, which was greater than their racial/ethnic minority counterparts. Additionally, nearly 97% (96.9%) of White children indicated having a caregiver with whom they could share thoughts and feelings, with “Other” race children having the lowest indications of living with a connected caregiver (89.4%). Black children had the lowest reported proportion of living in a neighborhood that was categorized as feeling safe (93.0%) compared to children of other race/ethnicities.

Table 3: Positive Childhood Experiences among rural children ages 6-17, National Survey of Children’s Health, overall and stratified by race/ethnicity

	Total	Hispanic) White	Black	AI/AN	API	Other	P-value
	%	%	%	%	%	%	%	
PCE Types								
After school activities	76.6	68.5	78.3	72.5	77.9	60.5	78.3	0.0004
Community volunteer	48.0	38.2	49.7	44.0	41.8	33.4	45.4	0.0003
Guiding mentor	94.6	87.8	96.1	91.0	90.3	85.7	94.6	<.0001
Connected caregiver	95.6	92.6	96.9	92.1	D	D	89.4	<.0001
Safe neighborhood	97.2	95.5	97.9	93.0	D	D	97.5	<.0001
Supportive neighborhood	59.8	50.6	63.3	47.8	49.4	34.8	52.3	<.0001
Resilient family	92.1	91.3	92.9	90.0	91.6	80.4	88.0	0.0176

*D indicates data suppression due to small cell size, per United States Census Data Review Board. **Bolded** p-values represent statistical significance at $p < 0.05$. AI/AN = American Indian or Alaska Native. API = Asian or Pacific Islander.

CONCLUSIONS

The examination of racial/ethnic differences in ACE and PCE exposure among rural communities may help provide more specific programming and intervention efforts to improve resiliency and moderate and/or mitigate the effects of ACEs among rural racial/ethnic minority children. This study examined whether ACE and PCE exposure varied by race/ethnicity, among rural children, finding that there were higher rates of four or more ACEs among racial/ethnic minority children. There were higher rates of each type of ACE among racial/ethnic minority rural children as well as lower rates of each of type of PCE.

This was the first study to be able to examine racial/ethnic differences in ACEs and PCEs across all fifty states and the District of Columbia, and the findings are revealing for specific racial/ethnic minority groups such as Asian/Pacific Islander rural children. Of particular note were the higher rates of ACEs among Asian/Pacific Islander children. Asian/Pacific Islander children had the highest rates of three out of six ACEs: parental death, witnessing neighborhood violence, and economic hardship. There were also lower rates of each type of PCE among Asian/Pacific Islander children, except for where data was unknown due to small sample size suppression by the United States Census Data Review Board. Expanded efforts, such as family support programs and home visiting programs, are needed to reach Asian/Pacific Islander children who are residing in rural areas.

For all racial/ethnic minority rural children, economic hardship was prevalent, at rates exceeding forty percent for Black and Non-Hispanic Asian/Pacific Islander children. There is clearly a need for the strengthening of economic supports for families, such as child tax credit subsidies, for example, which could reduce both rural and racial/ethnic disparities in economic hardship. The strengthening of economic supports is just one evidence-based approach recommended by the Centers for Disease Control and Prevention (CDC) for their approaches to prevent ACEs.¹¹ Many of the CDC approaches are particularly relevant to rural families.

PCEs have been shown to improve mental health and resiliency.⁴ However, PCEs are not distributed equitably across communities, as our findings demonstrate that the exposure of children to PCEs varies by race/ethnicity. For example, residing in a safe neighborhood was lowest among Non-Hispanic Black rural children and all PCEs were experienced at higher rates among White rural children, compared to their racial/ethnic minority counterparts. Constructing further opportunities for PCE provision in rural communities, such as developing and supporting community organizations in rural areas, may provide openings for children and youth to experience PCEs beyond school and household settings.

One method to moderate or mitigate the effects of ACEs among rural racial/ethnic minority children is through the provision of mental health services. Connecting rural children and families to school mental health professional services previously has been shown to be successful in rural communities.¹² Yet, workforce challenges for rural mental health professionals exist, as practitioners in rural areas face high caseloads and more limited resource opportunities.¹³

This brief would not be complete without noting one of the primary reasons for variations in compositional characteristics of race/ethnicity: structural racism.¹⁴ The American Public Health Association (APHA) has noted that disparate health outcomes between people of color and their white peers due to racism in the United States is a public health crisis.¹⁵ The ongoing COVID-19 pandemic has further illuminated the intersection of race, social determinants of health, and health outcomes.¹⁶

This brief highlights the disparities in ACEs and PCEs by race/ethnicity, among rural children, which needs continued examination. This policy brief is second in a three-part series, with the third brief examining the degree to which children exposed to ACEs also have potentially

strengthening PCEs (see link to first brief when published). Further research examining how to best identify and implement community resources among rural communities in order to increase PCEs is needed.



Funding: This project was supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) under grant number #U1CRH30539, Rural Health Research Grant Program Cooperative Agreement. This information or content and conclusions are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS or the U.S. Government.

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Suggested citation: Crouch E, Shi S, Kelly K, McLain AC, Eberth JM, Probst JC, Brown MJ, Merrell MA, Bennett K. Racial/ethnic differences in Adverse and Positive Childhood Experiences: results from the National Survey of Children’s Health. [Link to Report](#)

APPENDIX

Technical Notes

Data for the report were drawn from the combined 2016 and 2017-2018 rounds of the National Survey of Children's Health (NSCH), using the Research Triangle Research Data Center (RDC) in Raleigh, NC, which requires special access and permission to obtain geographic information on all survey participants. This allowed us to have geographic data for respondents in all states. The NSCH is an online and mail survey reaching a representative sample of US households with children aged 0 – 17 years. NSCH interviews last approximately 30 minutes and are conducted with a parent or other caregiver (e.g., grandparent) responsible for the child.¹⁷ Detailed address information, needed for categorizing respondents by rurality, is not available in the NSCH public-use data sets. Thus, final analyses were conducted using restricted data sets at the Triangle Research Data Center (RDC) in Raleigh, NC.

Measures

Residence was classified using 2013 Rural Urban Commuting Area (RUCA) codes, which measures rurality at the census tract level.¹⁸ The use of RUCA rather than county allowed for inclusion of rural areas in large urban counties, which covered many areas of the West.

Race and ethnicity were self-reported by the parent and classified as non-Hispanic White, non-Hispanic Black, Hispanic, American Indian/Alaska Native, Asian/Pacific Islander and Other, which encompasses multi-racial and not specified race.

Adverse events tracked by the NSCH include: parent or guardian divorced or separated; parent or guardian died; parent or guardian served time in jail; saw or heard parents or adults slap, hit, kick, punch one another in the home; was a victim of violence or witnessed violence in neighborhood; lived with anyone who was mentally ill, suicidal, or severely depressed; lived with anyone who had a problem with alcohol or drugs; treated or judged unfairly because of their race or ethnic group; and economic hardship: hard to cover basics like food or housing. Language describing these events comes from the NSCH.

Positive events measured by the NSCH are: child participates in sports, clubs, and lessons after school; child volunteers at church, community, or school; family faces problems, willingness to work together; family faces problems, likely to stay hopeful in difficult situations; and at least one adult who can rely on for guidance and support.

Analysis

Descriptive statistics were used to present the sociodemographic and socioeconomic characteristics of children and adolescents in rural and urban communities, as well as ACE and PCE exposure (both by type of ACE and the count of ACEs) by rurality. Descriptive statistics and bivariate analyses were employed to estimate unadjusted associations, frequencies, and proportions. Chi-square tests were used to test for differences between categories. Appropriate survey sampling weights, cluster, and strata were used as instructed by the NSCH.

Table A-1. Characteristics of Children ages 6 – 17, National Survey of Children’s Health (2016-2018), in Total and Stratified by Residence

Characteristic	All %	Rural	Urban	P-value
		%	%	
<i>Characteristics of Child</i>				
Sex of Child				0.1037
Male	51.3	52.8	51.1	
Female	48.7	47.2	48.9	
Age of Child				0.3113
6 to 12 years old	58.3	57.4	58.4	
13 to 17 years old	41.7	42.6	41.6	
Race/Ethnicity of Child				<.0001
Non-Hispanic (NH) White	52.9	74.4	50.1	
NH Black	13.1	8.1	13.8	
Hispanic	24.5	11.4	26.2	
NH American Indian/Alaska Native	4.4	0.8	4.8	
NH Asian/Pacific Islander	0.4	0.8	0.3	
Other	(4.7	4.4	4.7	
Special Health Care Needs				0.1396
Yes	23.1	24.2	23.0	
Health Insurance for Child				<.0001
Public	28.8	35.0	28.0	
Private	59.9	50.4	61.2	
Public and Private	4.4	5.7	4.2	
Not Insured/ Unspecified	6.9	8.9	6.6	
<i>Characteristics of Parent/Household</i>				
Respondent’s Relation to Child				<.0001
Mother	62.4	64.8	62.1	
Father	27.3	22.5	28.0	
Other	10.3	12.7	10.0	
Primary Language				<.0001
Not English	13.4	6.3	14.4	
Guardian Education				<.0001
Less than high school or high school	28.3	35.0	27.5	
Some college or more	71.7	65.0	72.5	
Family Structure				0.0002
Two parents, currently married	66.7	64.9	67.0	
Two parents, not currently married	7.7	7.0	7.8	

Single mother	19.4	20.2	19.3	
Other	6.1	8.0	5.9	
Poverty/Income Level				<.0001
0-99% Federal Poverty Level	19.1	23.0	18.6	
100%-199% Federal Poverty Level	21.3	25.0	20.8	
200%-399% Federal Poverty Level	27.4	32.4	26.8	
400% Federal Poverty Level or above	32.1	19.6	33.8	

Bolded p-values represent statistical significance at $p < 0.05$. The final unweighted rounded sample size was 63,000 children, per the United States Census Bureau Data Review Board (data are rounded for confidentiality purposes).

Table A-2: Characteristics of children ages 6-17, National Survey of Children’s Health (2016-2018), in total and stratified by race/ethnicity

Characteristic	All (%)	Hispanic	Non-Hispanic (NH) White	NH Black	NH AI/AN	NH API	Other	P-value
		%	%	%	%	%	%	
<i>Characteristics of child</i>		24.5	52.9	13.1	4.4	0.4	4.7	
Sex of child								0.3811
Male	51.3	51.2	51.6	52.3	47.9	49.0	48.7	
Female	48.7	48.8	48.4	47.7	52.1	51.0	51.3	
Age of Child								0.0057
6 to 12 years old	58.3	59.3	58.3	55.0	58.1	52.5	63.4	
13 to 17 years old	41.7	40.7	41.7	45.0	41.9	47.5	36.6	
Special health care needs								<.0001
Yes	23.1	19.8	23.9	28.4	12.3	27.8	26.0	
Health Insurance								<.0001
Public	28.8	43.7	18.7	45.0	19.5	44.3	28.1	
Private	59.9	40.5	73.0	40.1	68.9	35.9	62.1	
Public and Private	4.4	4.8	3.4	7.0	4.4	5.4	4.9	
Not	6.9	11.1	4.8	7.9	7.2	14.4	4.9	
<i>Characteristics of Respondent’s relation to</i>								<.0001
Mother	62.4	65.9	61.7	64.1	46.2	58.8	62.2	
Father	27.3	25.7	29.4	16.7	46.3	17.0	26.3	
Other	10.3	8.5	8.9	19.2	7.5	24.3	11.5	
Primary Language								<.0001
Not English	13.4	40.5	2.0	5.0	39.3	3.9	1.3	
Guardian Education								<.0001
Less than high school	28.3	49.6	18.8	32.2	21.2	39.7	19.6	
Some college or more	71.7	50.4	81.2	67.8	78.8	60.3	80.4	
Family Structure								<.0001
Two parents, currently	66.7	63.7	74.8	37.5	82.2	50.0	61.2	
Two parents, not	7.7	10.7	5.9	9.6	3.7	14.6	10.5	
Single mother	19.4	21.1	14.4	39.0	9.9	18.7	21.4	
Other	6.1	4.4	5.0	13.8	4.2	16.7	6.9	
Poverty/ Income Level								<.0001
0-99% Federal Poverty	19.1	29.1	11.4	33.9	15.4	29.9	16.3	
100%-199% Federal	21.3	29.6	16.4	27.1	19.5	23.3	18.9	
200%-399% Federal	27.4	25.3	30.2	22.2	21.7	27.2	27.7	
400% Federal Poverty	32.1	16.1	42.0	16.8	43.4	19.7	37.1	

Bolded p-values represent statistical significance at $p < 0.05$. AI/AN = American Indian or Alaska Native. API = Asian or Pacific Islander

REFERENCES

- [1] Masten AS, Barnes AJ. Resilience in children: developmental perspectives. *Children*. 2018;5(7):98. <https://doi.org/10.3390/children5070098>
- [2] Shonkoff JP, Garner AS, Siegel BS, et al. The lifelong effects of early childhood adversity and toxic stress. *Pediatrics*. 2012;129(1):e232-e246.
- [3] Felitti VJ, Anda RF, Nordenberg D, et al. Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The Adverse Childhood Experiences (ACE) Study. *Am J Prev Med*. 2019; 56(6), 774-786.
- [4] Sege RD, Browne CH. Responding to ACEs with HOPE: Health outcomes from positive experiences. *Acad Pediatr*. 2017; 17(7), S79-S85
- [5] Probst, J., Zahnd, W., & Breneman, C. (2019). Declines in pediatric mortality fall short for rural US children. *Health Affairs*, 38(12), 2069-2076.
- [6] Probst, J. C., Moore, C. G., Glover, S. H., & Samuels, M. E. (2004). Person and place: the compounding effects of race/ethnicity and rurality on health. *American journal of public health*, 94(10), 1695-1703.
- [7] Crouch E, Radcliff E, Probst JC, Bennett KJ, McKinney SH. Rural-Urban Differences in Adverse Childhood Experiences Across a National Sample of Children. *J Rural Health*. 2020; Jan;36(1):55-64.
- [8] Crouch, E., Radcliff, E., Merrell, M. A., Brown, M. J., Ingram, L. A., & Probst, J. (2021). Racial/ethnic differences in positive childhood experiences across a national sample. *Child abuse & neglect*, 115, 105012.
- [9] Crouch, E., Radcliff, E., Merrell, M. A., Bennett, K. J., & Wilson, M. (2021). Examining racial-ethnic differences in positive childhood experiences among rural children. *Journal of Rural Mental Health*.
- [10] Kenney MK, Singh GK. Adverse childhood experiences among American Indian/Alaska native children: the 2011-2012 national survey of children's health. *Scientifica (Cairo)*. 2016:7424239.
- [11] Centers for Disease Control and Prevention (2019). *Preventing Adverse Childhood Experiences: Leveraging the Best Available Evidence*. Atlanta, GA: National Center for Injury Prevention and Control, Centers for Disease Control and Prevention.
- [12] Eckert, M. D., Nishimura, S. T., Oka, L., Barber, S., Fleming, L., Hishinuma, E. S., Goebert, D. A., & Guerrero, A. P. S. (2017). A pilot school-based rural mental health consultation program utilizing an innovative stakeholder partnership at a diverse elementary school. *Rural Mental Health*, 41(4), 263–283. <https://doi.org/10.1037/rmh0000083>

- [13] Hastings, S. L., & Cohn, T. J. (2013). Challenges and opportunities associated with rural mental health practice. *Rural Mental Health*, 37(1), 37–49. <https://doi.org/10.1037/rmh0000002>
- [14] Bailey, Z. D., Krieger, N., Agénor, M., Graves, J., Linos, N., & Bassett, M. T. (2017). Structural racism and health inequities in the USA: Evidence and interventions. *Lancet*, 389(10077), 1453–1463. [https://doi.org/10.1016/S0140-6736\(17\)30569-X](https://doi.org/10.1016/S0140-6736(17)30569-X)
- [15] The American Public Health Association (APHA). (2020). Racism and health. <https://www.apha.org/topics-and-issues/health-equity/racism-and-health>
- [16] Egede, L. E., & Walker, R. J. (2020). Structural racism, social risk factors, and Covid-19—A dangerous convergence for Black Americans. *The New England Journal of Medicine*, 383(12), Article e77. <https://doi.org/10.1056/NEJMp2023616>
- [17] Data Resource Center for Child and Adolescent Health. Available at <http://childhealthdata.org/learn/NSCH>. Accessed June 9, 2021.
- [18] United States Department of Agriculture. 2010 Rural-Urban Commuting Area (RUCA) Codes. <http://www.ers.usda.gov/data-products/rural-urban-commuting-area-codes/documentation.aspx>. Accessed June 9, 2021.