

Adverse Childhood and Family Experiences Among American Indian Children in North Dakota: Analysis of 2011/12 National Survey of Children's Health Data



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PURPOSE

- Health disparities for American Indians (AI) in North Dakota (ND) are pronounced; the average age at death is 20 years younger than Whites (NDDoH, 2014).
- Historical trauma and adverse childhood experiences (ACEs) contribute to this disparity (Warne & Lajimodiere, 2015), and advances in neuroscience and epigenetics help explain the intergenerational impacts on individuals, extended families, and communities.
- Our study explores the prevalence of nine adverse childhood and family experiences (ACFEs) among AI children in ND, and explores disparities in exposure to ACFEs among AI children and White children in the state.

SAMPLE

- The National Survey of Children's Health (NSCH) is a cross-sectional telephone survey of U.S. households with at least one resident child 0 through 17 years of age
- Survey data reflecting children's experiences were parent-reported
- Data for this study came from the 2011/12 survey:
 - ND total sample (N=1,798)
 - ND White only sample (N=1,541)
 - ND AI only sample (N=109); urban, rural, and tribal respondents
 - ND is one of seven states with a representative sample of AI, using statistical weighting techniques that adjust for non-response

METHODS

Procedures of NSCH

- Random-digit-dialing procedure
- One child randomly selected from each household
- Sampling weights to permit national, state-, and race-specific estimates of health and wellbeing, to adjust for nonresponse, and to account for non-coverage of non-telephone households
- Because the NSCH uses a different list of adverse experiences (e.g., not child physical abuse, sexual abuse, or neglect indicators) than the CDC's research on ACEs, and information is from parent/caregiver report (Anda et al., 2006), we refer to ACFEs in our study
- The nine categories of ACFEs: socioeconomic hardship, divorce/separation of parent, 3) death of parent, 4) parent served time in jail, 5) witness to domestic violence, 6) victim of neighborhood violence, 7) lived with someone mentally ill/suicidal, 8) lived with someone with alcohol/drug problem, 9) treated or judged unfairly due to race/ethnicity

Analysis for This Study

- Weighting of variables
- Descriptive statistics, cross-tabulations
- Significance testing

RESULTS

- In ND, 21.3 percent of children had 2 or more ACFEs (similar to the nation at 22.6%) (NDDoH, 2013). This fact masks significant disparities in exposure among different populations in the state.
- AI children in ND were 3.2 times more likely than White children to have exposure to 2 or more ACFEs (50.8% compared to 15.8%).
- AI children were 6.6 times more likely than White children to have experienced 4 or more ACFEs (24.9% compared to 3.8%).
- Exposure increased with age; 28.0 percent of AI children 0 through 9 had a cumulative ACFE score of 2 or more compared to 74.2 percent of AI children 10 through 17.

Figure 1. Cumulative Number of Adverse Childhood and Family Experiences (ACFEs) Among White and AI Children Ages 0 Through 17 in North Dakota

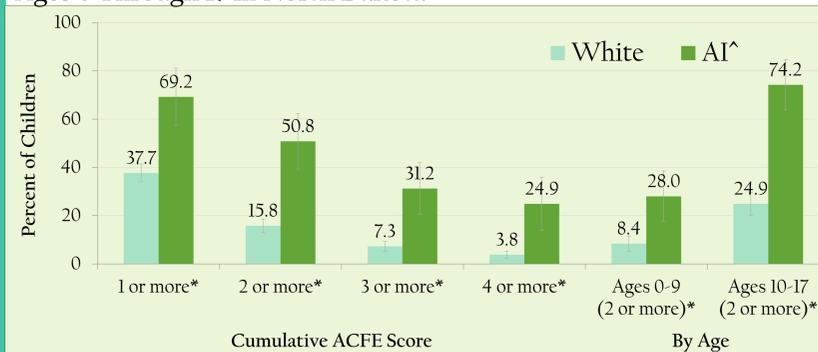


Figure 2. Prevalence of Specific Adverse Childhood and Family Experiences (ACFEs) Among White and AI Children Ages 0 Through 17 in North Dakota



*The NSCH uses the category "American Indian and Alaska Native"; the population of Alaska Natives in North Dakota is very small

*Significant differences between whites and AI were found at $p < .05$

Note: 95% confidence intervals are indicated; estimates for "unfair treatment due to race" for White respondents were unreliable due to small numbers; estimates for "death of a parent" were unreliable for White and AI respondents due to small numbers

- AI children were more likely than White children to have experienced (see Figure 2):
 - Neighborhood violence (5.3 times)
 - Parental incarcerations (5.1 times)
 - Witnessing domestic violence (4.2 times)
 - Living with someone with alcohol/drug problems (3.8 times)
 - Living with someone with mental illness (3.0 times)
 - Divorce/parental separation (2.2 times)
- AI children also had exposure to discrimination due to their race and to socioeconomic hardship.

DISCUSSION

- The current study demonstrates considerably higher rates of ACFEs among AI children and previous research demonstrates long-term health consequences of adverse experiences in childhood, including greater comorbidity in adulthood (Anda et al., 2006).
- Health professionals and policy makers need to focus efforts on preventing ACFEs among AI children in order to reduce the health disparities seen in this population.
- Trauma-informed care and ACFE treatment can reduce the long-term costs associated with negative outcomes resulting from ACFE exposure. It is important that people working in AI communities understand ACFEs and how they impact health and community outcomes.
- Development of culturally-based programs are instrumental.
- The ND Collaborative Improvement and Innovation Network to Reduce Infant Mortality initiative is including strategies to educate individuals, providers, and communities about ACFEs and is contracting with the American Indian Public Health Resource Center for targeted outreach with American Indian tribes in the state.
- Evidence-based maternal, infant, and early childhood home visiting programs in the state are exploring the use of a toolkit to assist home visitors in helping families understand how their lives have been impacted by ACFEs, and their capacities for resiliency and flourishing (Zorrah, 2015).
- Future research directions include quantifying the impact of ACFEs on AI health outcomes and evaluating programs and policies designed to treat and prevent ACFEs (Warne & Lajimodiere, 2015).

REFERENCES

Anda, R. F., Felitti, V. J., Bremner, J. D., Walker, J. D., Whitfield, C., Perry, B. D., ... Giles, W. H. (2006). The enduring effects of abuse and related adverse experiences in childhood. *European Archives of Psychiatry & Clinical Neuroscience*, 256(3), 174-186.

North Dakota Department of Health (NDDoH), Children's Special Health Services. (2013). Overview of adverse child and family experiences among North Dakota children. Retrieved from [http://childhealthdata.org/docs/drc/final-ace-nd-children-\(2\).pdf](http://childhealthdata.org/docs/drc/final-ace-nd-children-(2).pdf)

North Dakota Department of Health (NDDoH), Division of Vital Records. 2007-2012 aggregate death data by race. Special request (April 2014).

Warne, D., & Lajimodiere, D. (2015). American Indian health disparities: psychosocial influences. *Social and Personality Psychology Compass*, 9(10), 567-579.

Zorrah, Q. (2015). NEAR@Home toolkit: A guided process to talk about trauma and resilience in home visiting. Retrieved from <https://thrivewa.org/nearhome-toolkit-guided-process-talk-trauma-resilience-home-visiting/>