Exploring Adverse Childhood Experiences and Bullying of Children Who Are Deaf or Hard of Hearing

Alyson Ward PhD, MS, IA, CHES
Institute for Disability, Research, Policy, and Practice | Utah State University

PRESENTATION OUTLINE

- What are ACEs and why should we care?
- How I conducted this study
- What I found
- What are the potential implications and limitations of my findings
- Discussion/Q&A

ACES

21% of children (ages 0-17) have experienced one ACE

17% of children (ages 0-17) have experienced two or more ACEs

Cumulative effect—experiencing more than 1 ACE increases likelihood of poor outcomes. Research indicates experiencing over 3 ACEs increase odds of experiencing one of the leading causes of death (e.g., heart disease, stroke).

Indication that frequency and intensity of ACEs also influence outcomes, but less understood.

Some research demonstrating increased risk with certain combinations of ACEs, but again less researched.

Derived from advokids https://advokids.org

BULLYING

- Defined as repeated receipt of unwanted or negative behaviors from one or more peers where there is a power differential and can come in the form of verbal, physical, and relational behavior and can occur in person or virtually.
- Some researchers advocate for the inclusion of bullying as an ACE.
- Bullying has also been shown to increase poor short- and long-term physical and mental health.
- Bullying is reported by 20-25% of children.
- Bullying has been deemed a national priority by the US DOE and SAMHSA.

FINDINGS FROM CURRENT LITERATURE

ACEs are negative traumatic events a person is exposed to during childhood.

ACEs can have significant, long-lasting effects on all children, but children with special needs may experience compounded challenges due to their unique vulnerabilities.

Children with disabilities face heightened risks of experiencing ACEs.

Bullying is another traumatic event experienced by many children.

An audit of systematic reviews indicated that bullying was a widespread issue among children with disabilities.

Most studies found a significant increase in prevalence of bullying among children with hearing loss in both school and online settings.

ACEs and bullying are closely linked to social determinants of health, leading to long-lasting effects on both physical and mental health

CHALLENGES FOR CYSHCN, INCLUDING CHILDREN WHO ARE DHH, AND THEIR FAMILIES

- Increased stress levels
- Poor mental health
- Poor physical health
- Finding affordable childcare
- Inability to find flexible employment
- Inability for one or both parents to work sufficient hours
- Time taken from other children
- Parenting style compromised
- Marital stress
- Divorce
- Use of public assistance
- Medical and educational expenses
- Unmet housing and transportation needs

RISK FACTORS FOR ACES & BULLYING FOR CYSHCN, INCLUDING CHILDREN WHO ARE DHH

- Increased dependence on caregivers
- Isolated from resources where abuse reports could be made
- Potential impaired ability to communicate
- Exposed to more/different types of caregivers
- Potential reduced critical thinking or processing
- Specific disabilities are at an even increased risk, such as those with developmental disabilities, have trouble communicating, are visibly different, or rely on adults for care

I found NO research that examines children who are DHH and ACEs.

I found NO research exploring the relationship between ACEs and bullying for children who are DHH.

RESEARCH QUESTION #1& 2

- RQ 1a-d: What is the prevalence (presence or absence) and accumulation (experiencing >1) of ACEs among children who are DHH, children with other disabilities and how does that compare to children with no disabilities? Are there geographic disparities

- RQ 2.a-d: What is the prevalence of bullying victimization among children who are deaf or hard of hearing (DHH), children with other disabilities and how does that compare to children with no disabilities? Are there geographic disparities?

RESEARCH QUESTION #3-5

- RQ 3: Does the relationship between DHH and bullying vary (moderate) based on whether a child has experienced ACEs?

- RQ 4: Does the relationship between DHH status and experiencing ACEs vary (moderate) based on demographic variables (i.e., race, gender, SES, geographic area)?

- RQ 5: Does the relationship between DHH status and experiencing bullying vary (moderate) based on demographic variables (i.e., race, gender, SES, geographic area)?

HOW I CONDUCTED THIS STUDY

DATA

- 2020-2021 combined data AND 2022 data set from the National Survey of Children's Health (NSCH).
- Only large-scale database that collects information on ACEs, bullying, disability, hearing status, and demographics.
- Cross-sectional survey given to parents in all 50 US states who have children between 0-17. Survey given depends on age of selected child.
- CSCHN are oversampled to accurately depict their lived experience.
- Sample size:
  - 2020-21 = 93,669 (weighted response rate was 42.4% for 2020 and 40.3% for 2021)
  - 2022 = 54,103 (weighted response rate was 39.1%)
  - Total sample for study = 147,772

Data Resource Center for Child & Adolescent Health
A project of the Child and Adolescent Health Measurement Initiative

Hearing	Deafness or problems with hearing
Adverse Childhood Experiences (ACEs)	Hard to cover basics like food or housing Parent or guardian divorced Parent or guardian died Parent or guardian time in jail Child witnessed adults slap, kick, or punch others Child experienced violence Child lived with a person who was mentally ill, suicidal, or depressed Child lived with a person with an alcohol or drug problem Treated unfairly because of race (added in 2011) Treated unfairly because of their sexual orientation or gender (added in 2020) Treated or judged unfairly because of a health condition or disability (added in 2021)
Bullying (only asked for ages 6-17)	During the last 12 months, child bullied, picked on, or excluded by other children
Demographics	Child's sex Child's race Number of children in the home (to calculate federal poverty level) Combined family income in the last 12 months (to calculate federal poverty level) Geographic location (e.g., metro, other)

VARIABLES OF INTEREST

WHAT I FOUND

Findings Summary

- In general, children in all disability groups experienced ACEs and bullying at significantly higher levels than their peers with no disability.
- CSHCN experience ACEs and bullying more frequently than children who are DHH.
- Children who are DHH+CSHCN often experience ACEs and bullying more than either DHH or CSHCN alone. This is likely due to the compounded nature of their disabilities.
- SDOH variables of race, poverty, gender, and geography often moderate the relationship between the disability groups and ACEs and bullying. This signifies that children in the disability groups have who simultaneously belong to other marginalized groups are more vulnerable to trauma.

FINDINGS RQ 1: ACES

RQ 1PREVALENCE

Adverse Childhood Experience (ACE)	DHH (n = 930)	DHH+CSHCN (n = 1,740)	CSHCN (n = 51,104)	No Disability (n = 174,526)
ACE 1: Frequency of Difficulty in Covering the Basics, Like Food or Housing, on Family's Income				
Never	297 (32.6%)	557 (32.5%)	17,011 (33.8%)	48,632 (28.5%)
Rarely	450 (49.4%)	712 (41.6%)	23,840 (47.4%)	105,388 (61.7%)
Somewhat	132 (14.5%)	314 (18.3%)	7,310 (14.6%)	13,825 (8.1%)
Very Often	32 (3.5%)	131 (7.6%)	2,094 (4.2%)	3,005 (1.7%)
Unknown[a]	19	26	849	3,676
ACE 3: Child Ever Experienced a Parent/Guardian Divorced or Separated				
Yes	209 (23.2%)	519 (30.6%)	15,686 (31.6%)	30,901 (18.4%)
No	692 (76.8%)	1,175 (69.4%)	33,954 (68.4%)	137,495 (81.6%)
Unknown[a]	29	46	1,464	6,130
ACE 4: Child Ever Experienced a Parent/Guardian Died				
Yes	41 (4.6%)	92 (5.4%)	2,382 (4.8%)	3,793 (2.3%)
No	856 (95.4%)	1,604 (94.6%)	47,167 (95.2%)	164,406 (97.7%)
Unknown[a]	33	44	1,555	6,327

RQ 1 PREVALENCE CONT'D

Adverse Childhood Experience (ACE)	DHH (n = 930)	DHH+CSHCN (n = 1,740)	CSHCN (n = 51,104)	No Disability (n = 174,526)
ACE 5: Child Ever Experienced a Parent/Guardian Served Time in Jail				
Yes	81 (9.1%)	194 (11.4%)	5,212 (10.5%)	7,342 (4.4%)
No	812 (90.9%)	1,501 (88.6%)	44,323 (89.5%)	160,581 (95.6%)
Unknown[a]	37	45	1,569	6,603
ACE 6: Child Ever Saw or Heard Parents or Adults Slap, Hit, Kick, Punch One Another in the Home				
Yes	58 (6.5%)	189 (11.2%)	4,698 (9.5%)	5,580 (3.3%)
No	838 (93.5%)	1,496 (88.8%)	44,733 (90.5%)	162,259 (96.7%)
Unknown[a]	34	55	1,673	6,687
ACE 7: Child Ever Been a Victim of Violence or Witnessed Violence in His or Her Neighborhood				
Yes	48 (5.4%)	158 (9.4%)	3,751 (7.6%)	3,616 (2.2%)
No	847 (94.6%)	1,531 (90.6%)	45,683 (92.4%)	164,241 (97.8%)
Unknown[a]	35	51	1,670	6,669

RQ 1 PREVALENCE CONT'D

Adverse Childhood Experience (ACE)	DHH n = 196	DHH+CSHCN n = 382	CSHCN n = 12,552	No Disability n = 40,687
ACE 8: Child Ever Lived with Anyone Who Was Mentally Ill, Suicidal, or Severely Depressed				
Yes	109 (12.2%)	320 (18.9%)	9,145 (18.5%)	10,330 (6.2%)
No	788 (87.8%)	1,364 (81.1%)	40,314 (81.5%)	157,490 (93.8%)
Unknown[a]	33	56	1,645	6,706
ACE 9: Child Ever Lived with Someone with Alcohol or Drug Problem				
Yes	109 (12.2%)	252 (15.0%)	8,131 (16.4%)	11,552 (6.9%)
No	788 (87.8%)	1,432 (85.0%)	41,328 (83.6%)	156,268 (93.1%)
Unknown[a]	33	56	1,645	6,706
ACE 10: Child Ever Been Treated Unfairly Because of Race				
Yes	52 (5.8%)	112 (6.6%)	2,986 (6.0%)	4,833 (2.9%)
No	841 (94.2%)	1,574 (93.4%)	46,478 (94.0%)	163,104 (97.1%)
Unknown[a]	37	54	1,640	6,589

RQ 1 PREVALENCE CONT'D

Adverse Childhood Experience (ACE)	DHH n = 390	DHH+CSHCN n = 752	CSHCN n = 23,299	No Disability n = 80,058
ACE 11: Child Ever Been Treated Unfairly Because of a Health Condition or Disability (2021 & 2022)				
Yes	10 (2.7%)	163 (22.4%)	2,534 (11.2%)	452 (0.6%)
No	366 (97.3%)	566 (77.6%)	19,992 (88.8%)	76,370 (99.4%)
Unknown[a]	14	23	773	3,236
Adverse Childhood Experience (ACE)	DHH n = 196	DHH+CSHCN n = 382	CSHCN n = 12,552	No Disability n = 40,687
ACE 12: Child Ever Been Treated Unfairly Because of Sexual Orientation or Gender (2022)				
Yes	3 (2.6%)	11 (4.3%)	470 (4.8%)	254 (1.1%)
No	114 (97.4%)	242 (95.7%)	9,233 (95.2%)	22,329 (98.9%)
Unknown[a]	79	129	2,849	18,104

FINDINGS RQ 1 (OR)

- Individual ACEs: In general, children in the disability groups had higher ACEs. However, DHH+CSHCN and CSHCN were generally had higher ACEs than DHH alone.

Group	ACE 1	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10	ACE 11	ACE 12
OR, Compared to No Disability											
CSHCN	**0.78**	**2.06**	**2.19**	**2.57**	**3.05**	**3.73**	**3.46**	**2.66**	**2.17**	**21.4**	**4.47**
DHH	**0.82**	**1.34**	**2.08**	**2.18**	**2.01**	**2.57**	**2.12**	**1.87**	**2.09**	**4.62**	2.31
DHH+CSHCN	**0.83**	**1.97**	**2.08**	**2.83**	**3.67**	**4.69**	**3.56**	**2.38**	**2.40**	**48.7**	**4.00**
OR, Compared to CSHCN											
DHH	**1.06**	**0.65**	**0.95**	0.85	**0.66**	**0.69**	**0.61**	**0.70**	0.96	**0.22**	0.52

Note. OR odds ratio (bolded OR = significance at .05 level or lower)

- ACE Total: followed trend of individual ACEs.
- ACE Accumulation: results were lost some significance. With CSHCN still having significantly higher levels at the 3+ levels but other results varied by cohort.

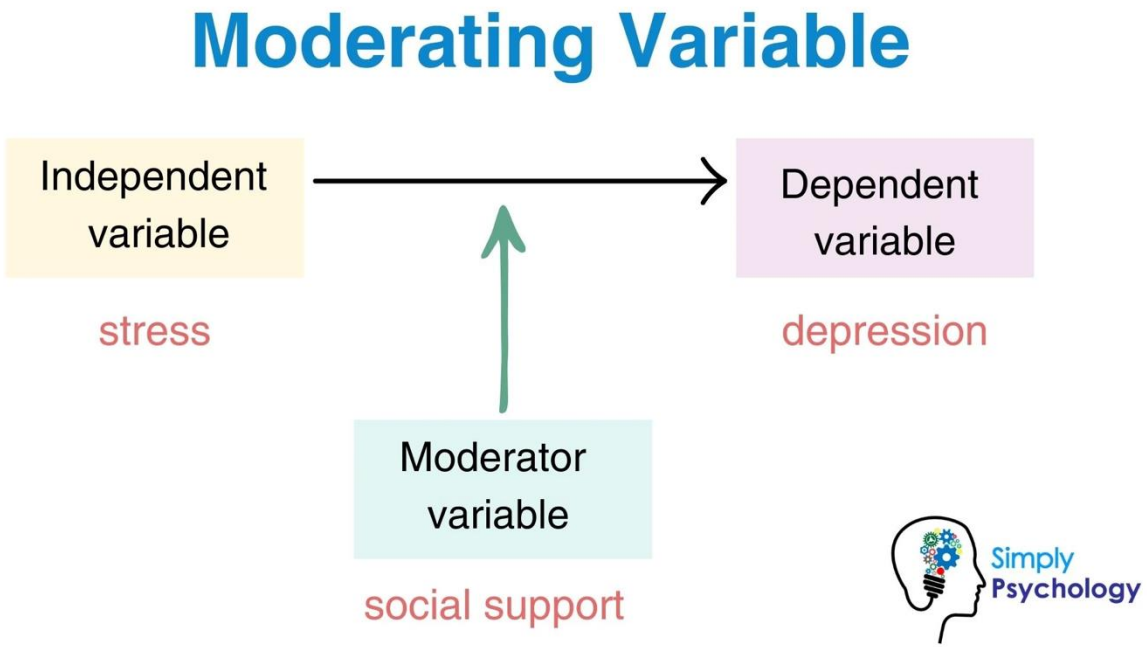
FINDINGS RQ 2: BULLYING

RQ 2 PREVALENCE

- Children in the disability groups experienced more bullying at the monthly, weekly, and daily levels when compared to children with no disability.
- Children who are DHH experienced significantly less bullying in comparison to CSHCN.

Frequency	DHH (n = 930)	DHH+CSHCN (n = 1,740)	CSHCN (n = 51,104)	No Disability (n = 174,526)
Never	191 (32.5%)	361 (31.6%)	12,790 (33.8%)	27,973 (29.1%)
1–2 Times Yearly	311 (52.9%)	418 (36.6%)	15,679 (41.4%)	60,341 (62.7%)
1–2 Times Monthly	52 (8.8%)	156 (13.7%)	4,890 (12.9%)	5,283 (5.5%)
1–2 Times Weekly	28 (4.8%)	111 (9.7%)	2,871 (7.6%)	1,910 (2.0%)
Almost Daily	6 (1.0%)	96 (8.4%)	1,647 (4.3%)	631 (0.7%)
Unknown[a]	342	598	13,227	78,388

FINDINGS RQ 3: ACES MODERATING BULLYING



FINDINGS RQ 3

- Individual ACEs: ACEs were not a significant modifier of the relationship between bullying and disability group, except for ACE 4: parent died or ACE 10: judged unfairly because of race.

Group	ACE 1	ACE 3	ACE 4[a]	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10[a]	ACE 11	ACE 12
1–2 Times Yearly Compared to Never											
OR, Compared to No Disability (Final Model)											
DHH	**0.79**	**0.76**	0.67	0.76	**0.76**	**0.75**	**0.78**	**0.77**	1.49	**0.66**	**0.62**
DHH+CSHCN	**0.56**	**0.55**	0.65	0.55	**0.55**	**0.55**	**0.57**	**0.55**	0.66	**0.55**	**0.42**
CSHCN	**0.59**	**0.58**	0.90	0.57	**0.58**	**0.58**	**0.60**	**0.59**	**1.23**	**0.57**	**0.54**
OR, Compared to CSHCN (Final Model)											
DHH	**1.34**	**1.31**	0.75	**1.32**	**1.31**	**1.30**	**1.30**	**1.31**	1.21	1.17	1.16
1–2 Times Monthly Compared to Never											
OR, Compared to No Disability (Final Model)											
DHH	**1.36**	**1.37**	0.92	1.34	**1.37**	1.36	1.32	1.36	1.03	1.41	1.36
DHH+CSHCN	**2.10**	**2.22**	0.94	**2.23**	**2.19**	**2.22**	**2.13**	2.22	**1.06**	**1.83**	**1.80**
CSHCN	**1.93**	**1.98**	**1.26**	**2.00**	**1.98**	**1.97**	**1.92**	1.98	**0.94**	**1.90**	**2.02**
OR, Compared to CSHCN (Final Model)											
DHH	**0.71**	**0.69**	0.73	**0.67**	**0.69**	**0.69**	**0.69**	**0.69**	**1.10**	0.74	0.68

Note. OR = odds ratio (bolded OR = significance at .05 level or lower)

FINDINGS RQ 4: ACES MODERATED BY DEMOGRAPHICS

FINDINGS RQ 4

- Individual ACEs: in general, three-way moderation models were the best fit. Race x poverty were the most consistent moderators.

Group Interactions	ACE 1	ACE 3	ACE 4	ACE 5	ACE 6	ACE 7	ACE 8	ACE 9	ACE 10	ACE 11	ACE 12
2-way Interactions											
Group x Poverty										X	
Group x Gender									X		X
Group x Race			X	X					X		
Group x Metro											
3-way Interactions											
Group x Poverty x Gender		X									
Group x Poverty x Race		X			X			X			
Group x Gender x Metro	X										
Group x Poverty x Metro											
Group x Race x Metro	X	X			X	X		X			
Group x Gender x Race							X				

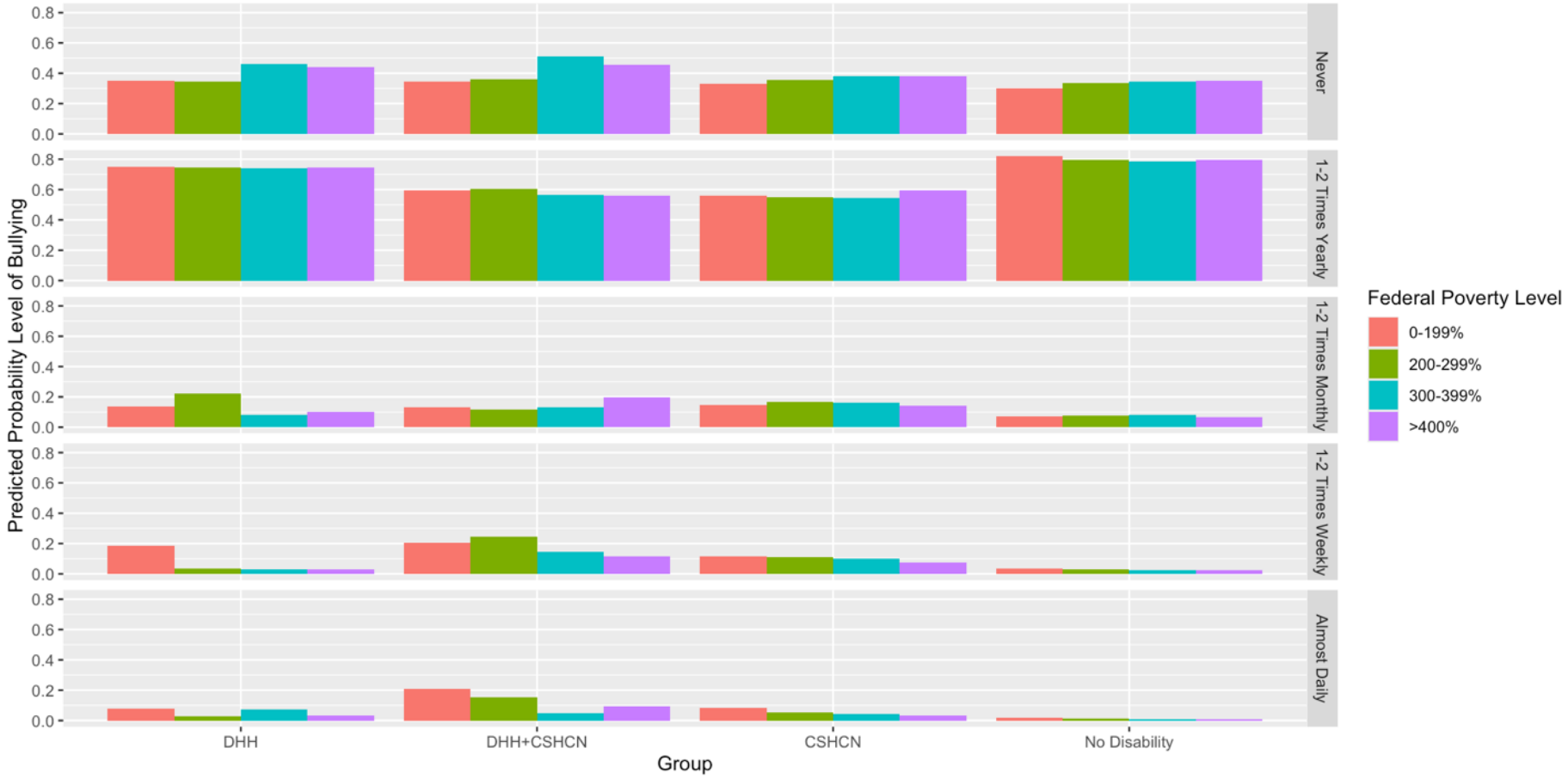
- ACE Total: all three cohorts found significant three-way interaction between group x poverty x race. Two cohorts found a significant interaction between group x race x metro.
- ACE Accumulation: two-way interaction between group x poverty for one cohort. Two other cohorts had a significant three-way interactions between group x poverty x gender and group x poverty x metro.

FINDINGS RQ 5: BULLYING MODERATED BY DEMOGRAPHICS

FINDINGS RQ 5

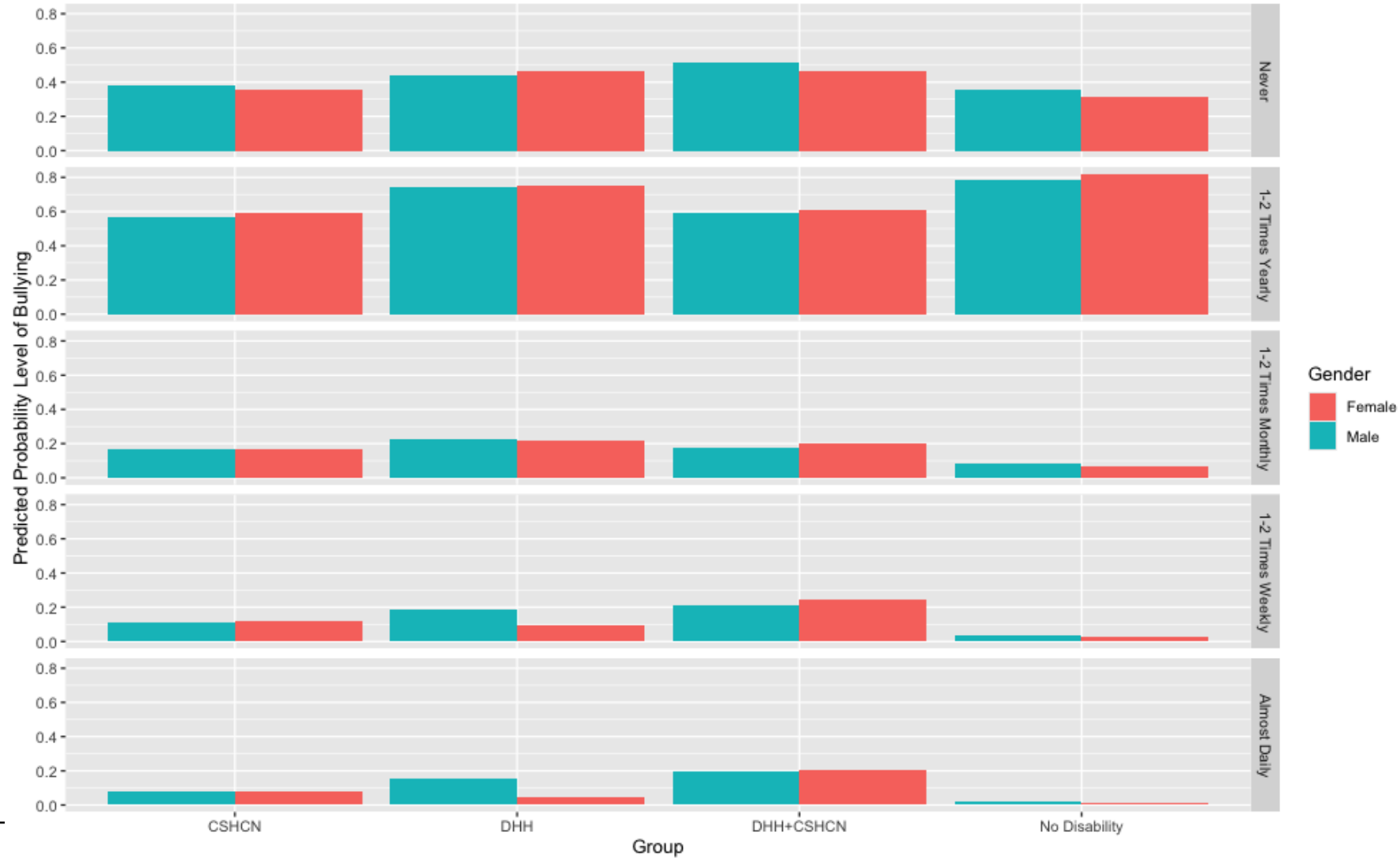
- Best fitting model included three, two-way interactions

Moderating Effect of Poverty on the Relationship between Disability Group and Bullied (2018–2020)



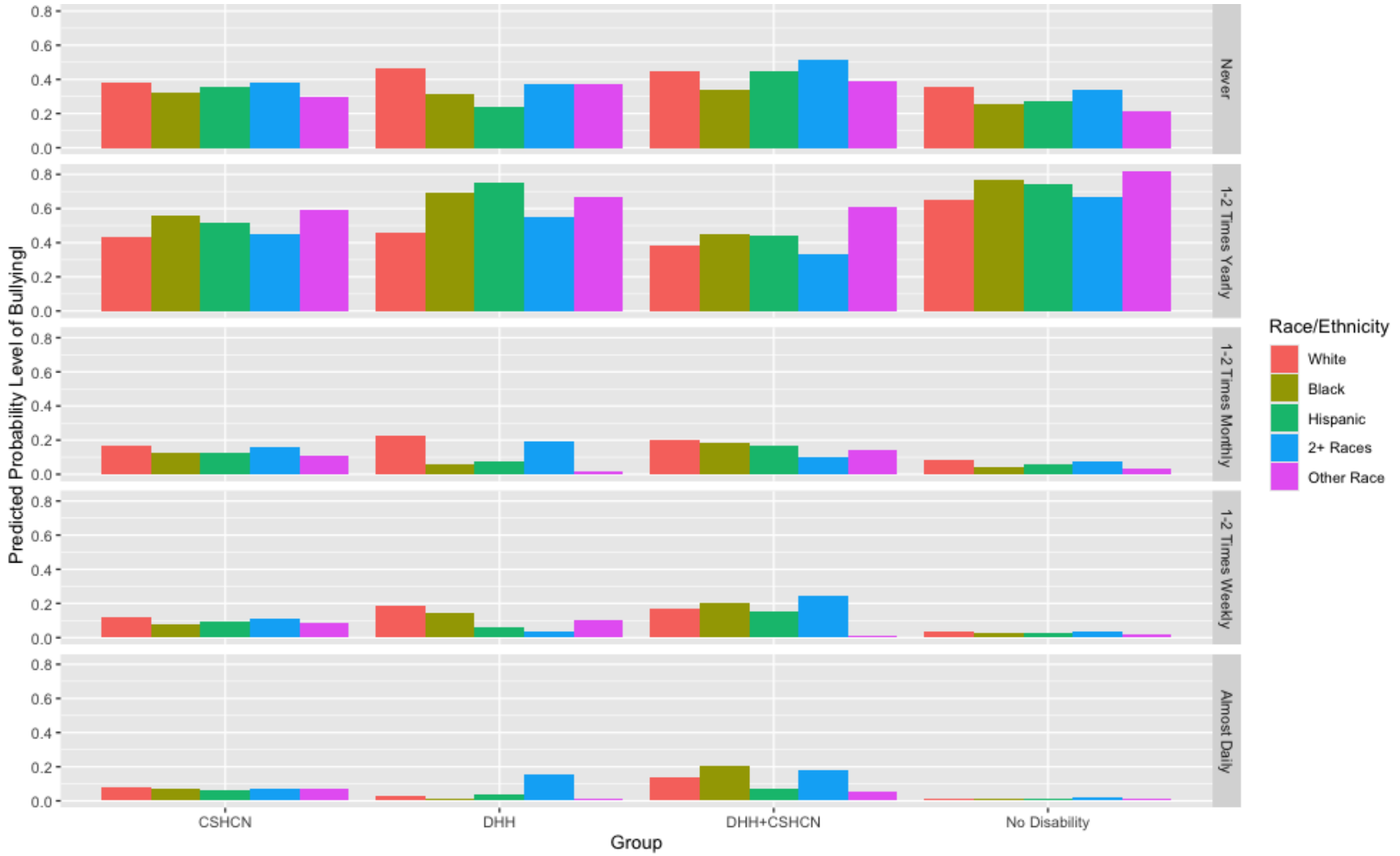
FINDINGS RQ 5 CONT'D

Moderating Effect of Gender on the Relationship between Disability Group and Bullied (2018–2020)



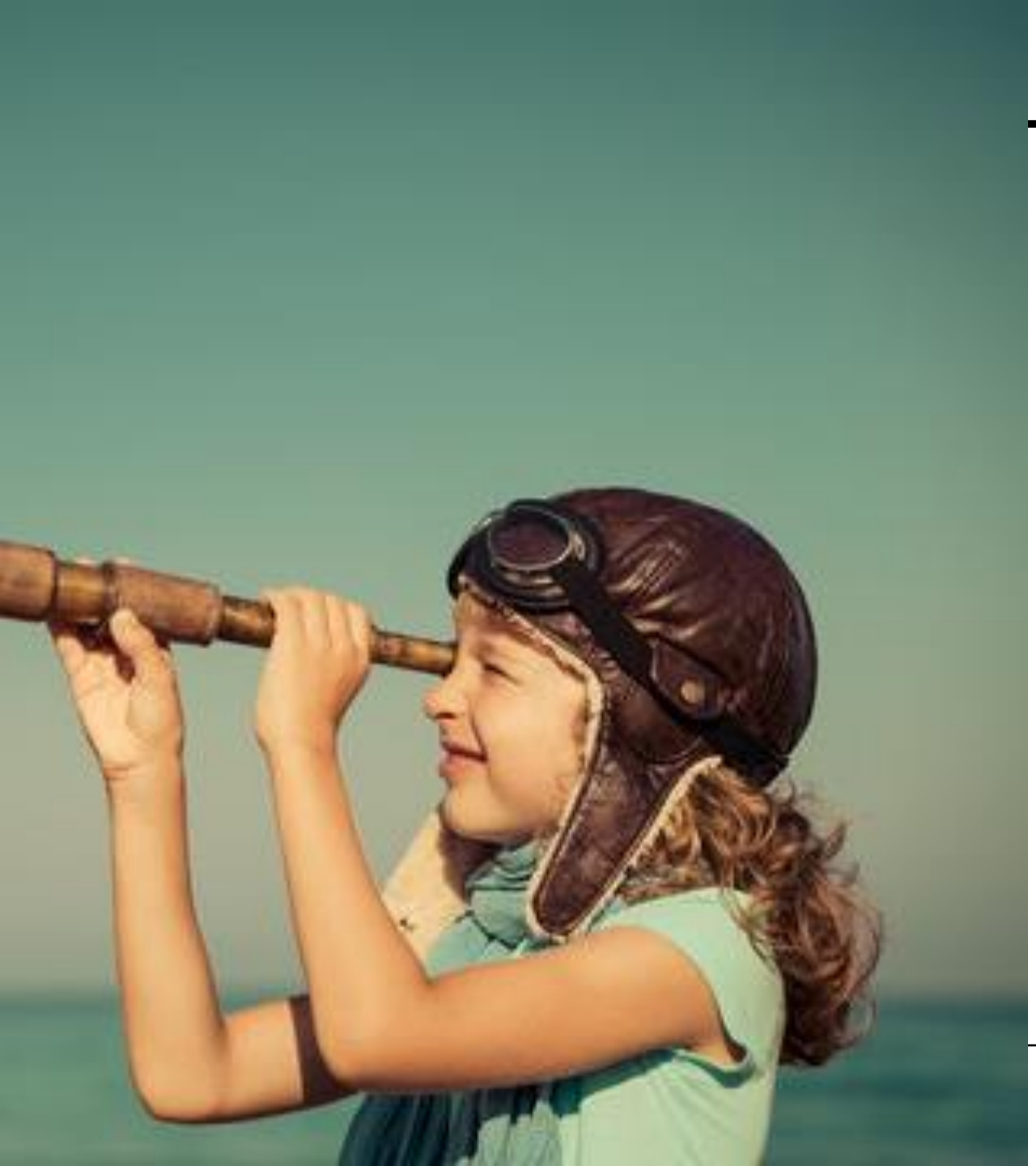
FINDINGS RQ 5 CONT'D

Moderating Effect of Race/Ethnicity on the Relationship between Disability Group and Bullied (2018–2020)



IMPACT ON FAMILY AND COMMUNITY

- Assist in creating responsive trauma or adversity--informed services.
- Help prevent ACEs in the home—parenting classes, therapy etc.
- Encourage healthcare providers to promote prevention strategies and offer support to parents.
- Inform public health programs in reaching out to parents to provide them with information and connect them to resources.
- Influence Individualized Family Service Plan and bullying prevention programs.
- Shared with welfare agencies that may be able to offer parent support and respite care services.
- Inform court systems that can mitigate future ACES or reduce burden of experienced ACEs.



FUTURE RESEARCH

- The NSCH has other variables of interest that could expand this work and examine the impacts of ACEs and bullying on important areas including flourishing, depression, anxiety, and behavioral problems for children in these disability groups.
- A closer examination of the nuanced challenges faced by children who are DHH—including communication barriers, difficulties in classroom settings, and social isolation and how these factors contribute to ACEs and the risk of bullying.

LIMITATIONS

- NSCH
  - Parental report (especially as child gets older)
  - Does not collect direct abuse toward the child.
  - Does not collect school setting information.
  - Collects only one question about hearing.
  - Only asks one question about bullying victimization
- Creation of DHH+CSHCN variable difficult to decipher who these children are

QUESTIONS