Brendan Kwan

Anna Kopachevsky

Nisha Nibu

Professor Liu

Seminar 3

6 December 2025

How Adverse Childhood Experiences Affect Emotional and Behavioral Development in U.S. Children Ages 12–17

Abstract

Child development is shaped by many different factors, but one of the most important is the family environment. When children face negative experiences early in life, these can have lasting effects. These events are called Adverse Childhood Experiences (ACEs), and they include things like abuse, neglect, witnessing domestic violence, parental substance use, or family disruption such as divorce. Research has shown that ACEs can make it harder for children to manage emotions, succeed in school, and build healthy relationships.

In this study, we looked at how ACEs are related to children's ability to flourish, using data from the National Survey of Children's Health and population information from the U.S. Census Bureau. We found that children who experienced more than one ACE were less likely to flourish and more likely to have emotional or behavioral difficulties between 2021 and 2023. This pattern appeared consistently across multiple years, showing that the impact of ACEs is

ongoing and serious. These results point to the importance of early support and strong family and community structures to help reduce the long-term effects of childhood adversity.

Introduction

The environment a child grows up in profoundly influences their development, with the family home being the single most important factor. While supportive settings allow children to thrive emotionally and socially, adverse experiences during childhood can leave lasting effects. Adverse Childhood Experiences (ACEs) encompass a range of stressful or harmful events that can disrupt a child's emotional and behavioral development. These experiences include physical, emotional, or sexual abuse, as well as physical and emotional neglect during critical developmental years. Household challenges also contribute to ACEs, such as living with a parent who struggles with alcohol or drug abuse, or a parent who is experiencing mental illness. Additional forms of adversity include parental divorce, the incarceration of a parent, and exposure to domestic violence within the home. Together, these factors create environments that heighten stress and instability, increasing the likelihood of long-term developmental difficulties. Research clearly shows that ACEs impact how children manage their emotions, behave in school, and interact with others. Because of this critical link, ACEs are a vital area of study for understanding children's mental, emotional, and behavioral development. In this paper, we utilize data from the National Survey of Children's Health (NSCH) and U.S. Census Bureau estimates to examine how the presence of ACEs is specifically linked to both children's overall flourishing and the development of emotional or behavioral challenges between 2021 and 2023. By

identifying these patterns, we aim to better illustrate the widespread impact of early adversity and underscore the urgent need for early support and prevention strategies.

Methods

Initially, it may be difficult to understand how to categorize and interpret data related to traumatic psychological experiences, because the data being used can be considered very subjective in nature when collected. For this project, we used data from the 2021–2023 National Survey of Children's Health, a national survey that collects information about children's physical, emotional, and behavioral well-being in the United States. We accessed the survey's public tables through the Child and Adolescent Health Measurement Initiative (CAHMI) Data Resource Center. Our main focus was on questions related to Adverse Childhood Experiences and two key outcomes: emotional flourishing and the presence of mental, emotional, developmental, or behavioral (MEDB) challenges. In this context, flourishing is the measure of emotional and behavioral well-being. In the study, three questions were used as part of the flourishing criteria. The first question focuses on a child's engagement, asking how often the child shows interest and curiosity in learning new things. Building on this, the second question looks at perseverance by asking how often the child works to finish the tasks they start. Finally, the third question addresses emotional regulation, asking how often the child stays calm and in control when faced with a challenge. Children that respond "usually" or "always" to these questions are also considered to meet flourishing criteria. To ensure that our findings reflected the United States child population as a whole, we also used child population estimates from the U.S. Census Bureau's America's Children: Key National Indicators of Well-Being (POP1 table).

The NSCH uses a sampling method where households across the United States are selected at random, and one child from each household is chosen to complete the survey. Because of this design, the survey results are meant to represent the overall national population of children. For our analysis, we separated children into two groups based on how many ACEs they experienced: those with 0-1 ACE and those with 2 or more ACEs. This grouping helped us compare how different levels of adversity relate to children's emotional and behavioral development.

After sorting the data into these categories, we looked at the percentages of children who met all flourishing criteria and those who had reported MEDB concerns. The NSCH provides weighted estimates, which means the percentages are adjusted so that they better represent the entire U.S. child population rather than just the children who responded to the survey. We also used the survey's 95% confidence intervals to help determine whether the differences between the two ACE groups were meaningful and not due to chance. By comparing the results across three separate years of NSCH data, we were able to observe whether the relationship between ACEs and child development stayed the same over time.

Data:

Figure 1: Flourishing and ACEs (NSCH 2021-2022)

National Outcome Measure: Percent of children, ages 6 through 17, who are flourishing

Download & Print

		Met all flourishing items	Did not met all flourishing items	Total %
No adverse childhood experiences	%	**68.7**	**31.3**	**100.0**
	C.I.	67.7 - 69.7	30.3 - 32.3	
	Sample Count	24,130	11,510	
	Pop. Est.	18,645,213	8,480,407	
One adverse childhood experience	%	**60.0**	**40.0**	**100.0**
	C.I.	58.4 - 61.7	38.3 - 41.6	
	Sample Count	7,994	5,994	
	Pop. Est.	6,893,321	4,589,398	
Two or more adverse childhood experiences	%	**43.6**	**56.4**	**100.0**
	C.I.	41.9 - 45.3	54.7 - 58.1	
	Sample Count	5,642	7,968	
	Pop. Est.	4,468,094	5,776,197	

Figure 1 shows how exposure to adverse childhood experiences affects whether children are flourishing. The data is broken into three groups: kids with no ACEs, one ACE, and two or more ACEs. Under children with no ACEs, around 69% were flourishing, meaning they showed positive traits like curiosity, resilience, and emotional well-being. That number drops to 60% for kids with one ACE, and just 44% for those with two or more. This pattern suggests that the more

adversity a child faces, the less likely they are to thrive. The table also shows that kids with two or more ACEs are more likely not to flourish than to flourish, which highlights how serious the impact of multiple stressors can be. With large sample sizes and consistent confidence intervals, the data is strong and supports the idea that ACEs can interfere with healthy development.

Figure 2: Flourishing and ACEs (NSCH 2022-2023)

		Met all flourishing items	Did not meet all flourishing items	Total %
No adverse childhood experiences	%	**68.8**	**31.2**	**100.0**
	C.I.	67.9 - 69.7	30.3 - 32.1	
	Sample Count	25,549	12,482	
	Pop. Est.	18,759,570	8,515,636	
One adverse childhood experience	%	**59.1**	**40.9**	**100.0**
	C.I.	57.5 - 60.7	39.3 - 42.5	
	Sample Count	8,407	6,341	
	Pop. Est.	6,805,985	4,707,852	
Two or more adverse childhood experiences	%	**43.6**	**56.4**	**100.0**
	C.I.	42.0 - 45.3	54.7 - 58.0	
	Sample Count	5,818	8,112	
	Pop. Est.	4,563,871	5,900,669	

Figure 2 presents updated data from the 2022-2023 National Survey of Children's Health showing how adverse childhood experiences relate to children's ability to flourish. The results follow the same pattern as the previous year: children with no ACEs had the highest rate of

flourishing at nearly 69%, while those with one ACE dropped to 59%, and children with two or more ACEs showed the lowest rate at just 43.6%. This steady decline reinforces the idea that more adversity leads to fewer signs of emotional and behavioral well-being. The data also shows that children with two or more ACEs were more likely not to flourish (56.4%) than to flourish, which highlights how serious the impact of multiple stressors can be. With large sample sizes and tight confidence intervals, the findings appear reliable and consistent. Overall, this figure supports the ongoing concern that ACEs can interfere with healthy development and emphasizes the need for early support systems to help children thrive despite adversity.

Figure 3: Children Population 2021-2023 (Data extracted from US Census Bureau [POP1 Table])

Year:	2021	2022	2023
Total Children (In millions)	73.6	73.2	72.8
Children aged 0-5 years (In millions)	22.9	22.6	22.4
Children aged 6-11 years (In millions)	24.6	24.5	24.4
Children aged 12-17 (In millions)	26.2	26.1	26.0

Figure 3 shows the total number of children in the United States from 2021 to 2023, broken down by age group. Overall, the child population slightly declined over the three years, from 73.6 million in 2021 to 72.8 million in 2023. The youngest age group (0-5 years) saw the

biggest drop, going from 22.9 million to 22.4 million. Children aged 6-11 and 12-17 also decreased slightly, but their numbers stayed more stable. This gradual decline in the child population helps give context to the rest of the data in the study. Even though there are fewer children overall, the rates of flourishing and the impact of ACEs stayed consistent, which shows that early help and strong support from families and communities can reduce the long-term effects of childhood adversity.

Figure 4: MEDBs and ACEs (NSCH 2021-2022)

		Experienced 2 or more adverse childhood experiences	Experienced 0-1 adverse childhood experiences	Total %
Child has 1 or more reported MEDB problems, and/or qualifies on CSHCN Screener emotional, behavioral or developmental criteria	%	**34.7**	**65.3**	**100.0**
	C.I.	33.5 - 36.0	64.0 - 66.5	
	Sample Count	7,856	15,244	
	Pop. Est.	5,187,336	9,746,724	
Child does not currently have mental, emotional, developmental, or behavioral problems	%	**14.0**	**86.0**	**100.0**
	C.I.	13.4 - 14.6	85.4 - 86.6	
	Sample Count	7,883	55,105	
	Pop. Est.	6,376,186	39,285,289	

Figure 4 shows how adverse childhood experiences are related to mental, emotional, developmental, or behavioral problems in children. The data is split into two groups: children who have MEDB challenges and those who do not. Among kids with reported MEDB problems, about 35% had experienced two or more ACEs, while 65% had experienced 0-1 ACE. In

contrast, only 14% of children without MEDB issues had two or more ACEs, and 86% had few or none. This means that children with emotional or behavioral difficulties were more than twice as likely to have faced multiple ACEs compared to those without these problems. The sample sizes and confidence intervals confirm that the data is reliable. This figure clearly shows that children who face more adversity are more likely to struggle with emotional and behavioral development.

Figure 5: MEDBs and ACEs (NSCH 2022-2023)

		Experienced 2 or more adverse childhood experiences	Experienced 0-1 adverse childhood experience	Total %
Child has 1 or more reported MEDB problems, and/or qualifies on CSHCN Screener EBD criteria	%	34.7	65.3	100.0
	C.I.	33.6 - 35.9	64.1 - 66.4	
	Sample Count	8,259	17,004	
	Pop. Est.	5,472,321	10,278,699	
Child does not currently have mental, emotional, developmental, or behavioral problems	%	13.7	86.3	100.0
	C.I.	13.2 - 14.3	85.7 - 86.8	
	Sample Count	7,765	56,678	
	Pop. Est.	6,186,129	38,874,913	

Figure 5 shows updated data from the 2022–2023 National Survey of Children's Health on how adverse childhood experiences relate to mental, emotional, developmental, or behavioral problems. The pattern is nearly identical to the previous year: among children with reported MEDB challenges, 34.7% had experienced two or more ACEs, while 65.3% had experienced 0-1

ACE. In contrast, only 13.7% of children without MEDB problems had two or more ACEs, and 86.3% had few or none. This means that children with emotional or behavioral difficulties were more than twice as likely to have faced multiple ACEs compared to those without these issues. The consistency of these numbers across years strengthens the connection between adversity and developmental challenges.

Figure 6: Overview of Common Adverse Childhood Experiences (American SPCC, 2023)

Figure 6 displays the major categories of Adverse Childhood Experiences, including various forms of abuse, household challenges, and exposure to traumatic events. These

categories form the types of ACE scoring like the ones used in the NSCH. This graphic helps us understand how different kinds of adversity affect children's emotional and behavioral development.

Results

Using parent-reported data from the 2021–2023 National Survey of Children's Health, we found a steady link between Adverse Childhood Experiences and children's emotional and behavioral outcomes. Among children with mental, emotional, developmental, or behavioral problems, about 35 percent had experienced two or more ACEs. In contrast, only about 14 percent of children without these problems had faced multiple ACEs. This means that children with emotional or behavioral difficulties were about 2.5 times more likely to have gone through several ACEs than those without such issues.

Most children without MEDB problems, about 86 percent, had few or no ACEs. This suggests that limited exposure to adversity is connected to healthier developmental outcomes. One area we studied closely was "flourishing," which refers to children who usually or always show curiosity in learning new things, finish tasks, and stay calm when challenges arise. Here we saw a similar pattern. About 43 to 44 percent of children with two or more ACEs met all flourishing criteria, compared with nearly 69 percent of children with no ACEs. This 25 percent gap shows that greater adversity is linked to lower emotional stability, persistence, and curiosity.

According to the U.S. Census Bureau, the total child population declined slightly from 73.6 million in 2021 to 72.8 million in 2023. Despite this demographic change, the share of children affected by ACEs and related developmental difficulties stayed about the same. This

shows that millions of children continue to face the emotional and developmental effects of ACEs.

Discussion

Our findings show that when children experience more adverse childhood experiences, their emotional and behavioral development is consistently weaker. Children who faced multiple difficult experiences were much less likely to flourish and were about two and a half times more likely to struggle with mental, emotional, developmental, or behavioral challenges compared to children with little or no adversity. Because the information in this study comes from parent reports, the results reflect how parents and caregivers see their children's ability to manage emotions, finish tasks, and stay interested in learning. This viewpoint helps emphasize how important the family environment is in shaping a child's growth. The pattern in our results from 2021 to 2023 also shows that this connection between adversity and developmental difficulties stays steady over time, even while the total number of children in the United States has slightly decreased. This steady pattern suggests that the impact of these stressful experiences is not short-lived but remains an ongoing public concern that affects many children across the country. These results highlight the importance of early support and remind us that children grow best when the adults around them provide patience, stability, and positive guidance, especially during times when life at home may be stressful or uncertain.

Conclusion

Around the world, childhood experiences have drastically changed since the pandemic has concluded (2021 and onwards). More specifically, adverse childhood experiences have

become a subject of interest by the National Survey of Children's Health (NSCH) and the Child and Adolescent Health Measurement Initiative (CAHMI) Data Resource Center. With developmental and behavioral disorders in children on the rise, these organizations examined how adverse childhood experiences (ACEs) influence child development over time. Studies found that children with more perceived behavioral or emotional difficulties were more likely to have faced multiple adverse childhood experiences, negatively impacting neurological development in different ways. First, emotional stability is negatively associated with an increase in adversity during developmental years. This means that a child may have less curiosity and perseverance, because they divert more energy and attention into overcoming the perceived adversity. Without curiosity, a child will not find themselves having new experiences to challenge and grow their brains. The results in the research reflect this, as children with more ACEs underperformed in cognitive measures tests.

Adverse Childhood Experiences (ACEs) have a significant and continuous impact on the emotional and behavioral development of children aged 0-17 in the United States. Building on the patterns observed in recent national surveys, children exposed to multiple ACEs between 2021 and 2023 were noticeably less likely to flourish and more likely to face persistent emotional or behavioral difficulties. This is consistent with both the noticeable increase in early childhood developlemntal disorders, as well as the results found in the flourishing criteria testing.

Works Cited:

"Interactive Data Query: National Survey of Children's Health (2022-Present)." *NSCH Interactive Data Query (2022 - Present) - Data Resource Center for Child and Adolescent Health*, The Child & Adolescent Health Measurement Initiative, www.childhealthdata.org/browse/survey. Accessed 2 Dec. 2025.

"POP1 Child Population: Number of Children (in Millions) Ages 0–17 in the United States by Age, 1950–2022 and Projected 2023–2050." *CHILDSTATS*, www.childstats.gov/americaschildren/tables/pop1.asp. Accessed 2 Dec. 2025.

Acknowledgements:

We are grateful to Professor Charles Liu and Dr. Lana B. Karasik of the College of Staten Island (CUNY CSI) for their support and direction during this research project. Their suggestions and encouragement helped strengthen our work, and we appreciate the effort they dedicated to assisting us.

I acknowledge that I used AI assistance (Copilot) while working on this paper. The AI helped me with vocabulary, grammar, and some descriptions. All ideas and final decisions in the paper are my own, and I reviewed and approved all content before submitting it.