

Article

Not peer-reviewed version

Adverse Childhood Experiences Promote Increased and Selective Caregiving in Adulthood

[Ray M. Merrill](#) *

Posted Date: 23 December 2025

doi: 10.20944/preprints202512.2115.v1

Keywords: adverse childhood experiences; BRFSS; caregiver; emotional parentification; instrumental parentification



Preprints.org is a free multidisciplinary platform providing preprint service that is dedicated to making early versions of research outputs permanently available and citable. Preprints posted at Preprints.org appear in Web of Science, Crossref, Google Scholar, Scilit, Europe PMC.

Copyright: This open access article is published under a [Creative Commons CC BY 4.0 license](#), which permit the free download, distribution, and reuse, provided that the author and preprint are cited in any reuse.

Disclaimer/Publisher's Note: The statements, opinions, and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions, or products referred to in the content.

Article

Adverse Childhood Experiences Promote Increased and Selective Caregiving in Adulthood

Ray M. Merrill

Department of Public Health, College of Life Sciences, Brigham Young University; ray_merrill@byu.edu;
Tel.: +1 (801) 422 9788

Abstract

Adverse childhood experiences (ACEs) prompt parentification, which is related to providing regular caregiving as adults. This study examines the association between the number and types of ACEs and caregiving as adults, and to whom caregiving is extended. Analyses were based on 91,193 adults from 13 states in the U.S. in 2020-2024 and involved binomial and multinomial logistic regression, adjusted for selected covariates. Approximately 21% of participants provided regular care and 66% had ≥ 1 ACEs. Each of 11 ACEs considered was positively associated with providing regular care. As the number of ACEs increased, the odds of providing regular care increased. The strongest ACE predictor of providing regular care was living with a parent or adult who was depressed, mentally ill, or suicidal, and the weakest was when the parents were divorced, separated, or an unmarried couple. As the number of ACEs increased, providing regular care for a parent significantly decreased, whereas providing regular care for a friend/nonrelative significantly increased. Among those receiving regular care, if the caregiver had more ACEs versus less, they were significantly less likely to care for a parent or grandparent but more likely to care for a spouse, child, friend or non-relative.

Keywords: adverse childhood experiences; BRFSS; caregiver; emotional parentification; instrumental parentification

1. Introduction

Parentification involves role reversal in which a child assumes developmentally inappropriate parent or adult roles and responsibilities for their age [1,2]. Classifications of parentification are emotional or instrumental, where the child assumes adult roles that can include confidant, counselor, emotional supporter, household earner, self-carer, caregiver, family-navigator, and language and cultural broker [1,3–5]. While parentification often leads to impossible expectations for the child, it can also foster positive characteristics like empathy, responsibility, life skills, coping skills, and autonomy [1,6].

Parentification significantly increases caretaking behavior, sometimes resulting in adults becoming compulsive caretakers in relationships, putting other people's needs first, and feeling their self-worth corresponds with "being needed," even when the care they provide is unnecessary [7–9]. There are several possible causes of parentification, including an emotionally immature parent relying on their child instead of being self-sufficient, an overwhelmed parent beginning to treat their child as a caretaker or parent, a parent without a strong support system who is going through a divorce or other difficult situation enlisting their child to be their support, or a mentally or physically ill parent forcing their child into the role of caregiver [10]. Adverse Childhood Experiences (ACEs) in general have been associated with increased the risk of parentification [11–21].

The extent that specific ACEs are associated with caregiving as adults is not well understood, although caregiving behavior associated with parentification often extends into adulthood. Further, it is unclear whether ACEs result in selective caregiving. The purpose of the current study is to examine the association between the number and type of ACEs and providing regular care as adults, and to whom they provide that care. We hypothesize a positive association between the number of

ACEs and caregiving as adults, that all ACEs influence regular caregiving similarly, and that the number and type of ACEs is associated with who receives regular care.

2. Materials and Methods

2.1. Data

Data was obtained from the 2020-2024 Behavior Risk Factor Surveillance System (BRFSS). The BRFSS is a national system of health-related telephone surveys, which collects data from residents in all 50 states, the District of Columbia, and 3 U.S. territories about health behaviors, chronic health conditions, and preventive service utilization. BRFSS surveys employ a cross-sectional design with standardized questionnaires. Annually, over 400,000 adult surveys (ages 18 and older) are completed, using random probability sampling on landlines and cell phones. BRFSS surveys consist of 3 components: (1) Standard core questions, (2) Rotating core questions, and (3) Optional modules [22]. Median response rates for all participating states and territories were 45% (2020), 43% (2021), 45% (2022), 47% (2023), and 46% (2024) [23–27].

Data analysis involved 13 states in the U.S. that included questions about ACEs and provision of care or assistance for a friend or family member who had a health problem or disability (Table 1). The total number of participants was 91,193. All participants provided informed consent prior to the interview, and the survey was anonymous. A description of the BRFSS survey design, questionnaires, and data collection methods is available elsewhere [28].

2.2. Measures

Providing regular care for a friend or family member was based on the question: “During the past 30 days, did you provide regular care or assistance to a friend or family member who has a health problem or disability?” A small number (n=527, 0.58%) did not know or refused to indicate whether they provided care or assistance for someone. We combined them with those who indicated that they did not provide care for someone in the past 30 days.

Demographic variables appear in Table 2; selected mental and physical health conditions, obesity, and health-risk behaviors appear in Table 3; and 11 ACE items appear in Table 4.

Table 1. Number of participants by area in the U.S. and year.

State	No.	%	Year
Alabama	4007	4.39	2021
Arkansas	4459	4.89	2021
Florida	8616	9.45	2020
Georgia	7106	7.79	2020
Iowa	8081	8.86	2021
Mississippi	4044	4.43	2021
Nevada	4090	4.48	2021, 2024
North Dakota	5350	5.87	2021
Oregon	14783	16.21	2021, 2022, 2023
South Carolina	7335	8.04	2021
Tennessee	4642	5.09	2023
Virginia	13515	14.82	2022, 2024
Wisconsin	5165	5.66	2021
Total	91,193		

Data source: BRFSS.

2.3. Statistical Analysis

Descriptive statistics included frequencies and percentages (standard errors). Estimates were determined by taking the survey stratum, primary sampling units, and sampling weights into consideration. We used logistic regression to estimate the odds of providing regular care according to demographics, mental and physical health conditions, difficulty making decisions, depression, obesity, and health-risk behaviors. It also estimated the odds of providing regular care separately for each ACE. Multinomial logistic regression estimated the odds of 0, 1, 2, or 3 or more ACEs according to demographics and mental and physical health conditions, difficulty making decisions, depression, obesity, and health-risk behaviors. We adjusted the odds ratios for selected covariates. Type 3 analysis of effects in logistic regression evaluated the significance of each ACE in the presence of all other covariates in predicting proving regular care. We presented confidence intervals associated with the odds ratios, indicating statistical significance when they did not overlap 1. All statistical tests were two-sided, with a significance level of 0.05. Analyses were conducted using Statistical Analysis System (SAS) software, version 9.4 (SAS Institute Inc., Cary, NC, USA, 2016).

3. Results

Demographic characteristics of the participants are presented in Table 2. Most participants were 45 years or older (58.12%), women (52.05%), non-Hispanic (NH) Whites (64.25%), married/cohabitating (55.56%), had some college or a college degree (60.38%), and had an annual household income <\$100,000 (65.19%). The highest number of U.S. states asking questions about both providing regular care or assistance and ACEs was in 2021.

Table 2. Odds of providing regular care and of ACEs by demographics.

		Regular Care or Assistance				ACEs	
	No.	% (SE)*	% (SE)*	Odds Ratio (95% CI)*†	Mean (SE)*	Odds Ratio (95% CI)*†	
Age							
	18-24	4811	10.87 (0.23)	15.58 (0.98)	1.00	2.64 (0.07)	1.00
	25-34	8389	15.12 (0.23)	16.41 (0.62)	1.01 (0.84-1.20)	2.75 (0.04)	1.05 (0.94-1.17)
	35-44	11064	15.89 (0.24)	19.94 (0.63)	1.32 (1.11-1.57)	2.38 (0.04)	0.79 (0.70-0.88)
	45-54	12970	15.77 (0.23)	23.57 (0.67)	1.67 (1.40-1.99)	2.18 (0.04)	0.69 (0.62-0.78)
	55-64	16745	16.98 (0.23)	27.10 (0.72)	1.94 (1.62-2.33)	1.85 (0.03)	0.51 (0.46-0.57)
	≥65	37214	25.37 (0.22)	21.47 (0.39)	1.38 (1.17-1.64)	1.23 (0.02)	0.29 (0.26-0.32)
Sex							
	Men	41266	47.95 (0.31)	17.90 (0.36)	1.00	1.86 (0.02)	1.00
	Women	49927	52.05 (0.31)	24.06 (0.37)	1.44 (1.35-1.64)	2.23 (0.02)	1.27 (1.21-1.33)
Race/ethnicity							
	NH White	69009	64.25 (0.30)	22.15 (0.26)	1.00	2.05 (0.02)	1.00
	NH Black	10160	15.13 (0.25)	22.42 (0.76)	1.03 (0.94-1.14)	2.00 (0.04)	0.91 (0.85-0.97)
	NH Other	4896	7.09 (0.16)	18.94 (0.89)	0.86 (0.77-0.98)	2.27 (0.06)	0.88 (0.80-0.97)
	Hispanic	5265	11.72 (0.25)	15.55 (1.24)	0.70 (0.58-0.86)	2.04 (0.07)	0.72 (0.65-0.80)
	Unknown	1863	1.81 (0.07)	17.47 (1.26)	0.81 (0.67-0.97)	1.91 (0.09)	0.96 (0.83-1.10)
Marital Status							
	Mar/Cohab	50118	55.56 (0.31)	22.50 (0.33)	1.00	1.90 (0.02)	1.00
	Previously M	26008	21.46 (0.24)	20.77 (0.53)	0.75 (0.69-0.81)	2.07 (0.03)	1.23 (1.16-1.30)
	Never M	14358	22.22 (0.29)	18.16 (0.64)	0.90 (0.80-1.01)	2.43 (0.04)	1.01 (0.94-1.09)
	Unknown	709	0.76 (0.05)	15.56 (1.95)	0.73 (0.54-0.98)	1.68 (0.17)	0.81 (0.62-1.06)
Education							
	< HS	6088	11.06 (0.24)	18.18 (0.85)	1.00	2.28 (0.06)	1.00
	HS	23487	28.20 (0.29)	20.68 (0.52)	1.15 (1.01-1.32)	2.15 (0.03)	0.83 (1.01-1.32)
	Some college	26139	32.05 (0.29)	23.42 (0.50)	1.32 (1.16-1.52)	2.21 (0.03)	0.89 (1.16-1.52)
	College	35159	28.33 (0.25)	20.15 (0.36)	1.13 (0.99-1.29)	1.70 (0.02)	0.62 (0.99-1.29)
	Unknown	320	0.34 (0.03)	12.73 (2.41)	0.81 (0.51-1.28)	1.06 (0.13)	0.38 (0.51-1.28)
Income							

	<50K	34039	37.02 (0.30)	23.76 (0.45)	1.00	2.32 (0.03)	1.00
	50K-<100K	24443	28.17 (0.29)	21.16 (0.54)	0.78 (0.71-0.85)	2.03 (0.03)	0.89 (0.84-0.95)
	100K-<200K	12157	12.11 (0.15)	19.82 (0.53)	0.65 (0.59-0.72)	2.01 (0.03)	0.82 (0.77-0.88)
	≥200K	3398	3.94 (0.09)	17.19 (0.95)	0.54 (0.46-0.62)	1.75 (0.05)	0.71 (0.64-0.79)
	Unknown	17156	18.76 (0.25)	17.45 (0.55)	0.65 (0.59-0.72)	1.65 (0.03)	0.60 (0.56-0.65)
Year							
	2020	15722	27.48 (0.21)	19.46 (0.71)	1.00	1.86 (0.04)	1.00
	2021	45002	35.25 (0.17)	21.32 (0.29)	1.15 (1.05-1.26)	2.02 (0.02)	1.09 (1.02-1.17)
	2022	13182	13.53 (0.14)	20.03 (0.49)	1.13 (1.01-1.25)	2.13 (0.03)	1.30 (1.20-1.40)
	2023	9733	12.06 (0.11)	24.62 (0.65)	1.42 (1.27-1.59)	2.35 (0.04)	1.44 (1.33-1.56)
	2024	7554	11.67 (0.17)	21.96 (0.72)	1.29 (1.14-1.46)	2.21 (0.05)	1.44 (1.32-1.57)

Data source: BRFSS, 2020-2024. SE: Standard Error; CI: Confidence Interval; NH: Non-Hispanic.
*Weighted estimates, based on the complex sampling design. †Logistic regression adjusted for age, sex, race/ethnicity, marital status, education, annual household income, and year. ‡Multinomial logistic regression adjusted for age, sex, race/ethnicity, marital status, education, annual household income, and year.

A total of 19,691 participants (21% weighted) reported providing regular care. Providing regular care was significantly greater in older age groups, women, NH Whites and Blacks, married/cohabitating, those with some college and lower income. ACEs were more common in younger age groups, women, NH White, previously married, and in those with lower education and income.

As shown in Table 3, health and behavior variables were generally significantly associated with both providing regular care and having ACEs. Specifically, providing regular care was significantly greater among those reporting more poor mental health days, more poor physical health days, difficulty making decisions, chronic depression, obesity, and being current or former smokers. The provision of regular care was marginally insignificantly associated with heavy drinking (OR 1.03, Type 3 F p = 0.0566). In contrast, having ACEs was significantly more common in all the health and behavior variables, including heavy drinking.

Table 3. Odds of providing regular care or assistance and of ACEs by selected mental and physical health conditions, obesity, and health-risk behaviors.

			Regular Care or Assistance		ACEs	
	No.	% (SE)*	% (SE)*	Odds Ratio (95% CI)**	Mean (SE)*	Odds Ratio (95% CI)*‡
Poor Mental Health Days						
0 days not Gd	55814	57.51 (0.31)	18.13 (0.33)	1.00	1.47 (0.02)	1.00
1-13 days not Gd	21280	25.17 (0.27)	23.85 (0.55)	1.50 (1.39-1.62)	2.52 (0.03)	2.03 (1.92-2.14)
14-30 days not Gd	12355	15.35 (0.22)	28.16 (0.66)	1.83 (1.69-1.98)	3.52 (0.05)	3.52 (3.28-3.76)
Unknown	1744	1.97 (0.09)	18.20 (1.78)	1.10 (0.87-1.40)	1.85 (0.09)	1.29 (1.09-1.53)
Poor Physical Health Days						
0 days not Gd	56653	63.05 (0.30)	19.13 (0.33)	1.00	1.78 (0.02)	1.00
1-13 days not Gd	20230	22.66 (0.26)	24.88 (0.57)	1.35 (1.26-1.45)	2.48 (0.04)	1.60 (1.52-1.69)
14-30 days not Gd	12256	12.18 (0.19)	24.69 (0.65)	1.22 (1.12-1.32)	2.70 (0.04)	2.02 (1.88-2.16)
Unknown	2054	2.12 (0.09)	19.11 (1.62)	1.01 (0.81-1.25)	1.95 (0.09)	1.21 (1.03-1.41)
Difficulty Making Decisions						
Yes	10907	13.36 (0.22)	28.48 (0.83)	1.64 (1.50-1.80)	3.59 (0.06)	2.88 (2.68-3.09)
No	79605	85.91 (0.22)	19.95 (0.27)	1.00	1.81 (0.01)	1.00
Unknown	681	0.72 (0.04)	22.33 (2.50)	1.32 (0.98-1.76)	2.50 (0.16)	1.68 (1.35-2.09)
Depression						
Yes	18603	20.77 (0.24)	27.95 (0.62)	1.53 (1.42-1.65)	3.46 (0.04)	3.06 (2.89-3.23)

No	67485	78.62 (0.25)	19.29 (0.28)	1.00	1.68 (0.01)	1.00
Unknown	502	0.62 (0.06)	22.34 (5.82)	1.37 (0.69-2.72)	2.55 (0.19)	2.13 (1.56-2.90)
Obesity						
Yes	29879	32.18 (0.29)	23.84 (0.44)	1.14 (1.07-1.22)	2.29 (0.02)	1.24 (1.18-1.30)
No	55550	61.07 (0.30)	20.33 (0.34)	1.00	1.97 (0.02)	1.00
Unknown	5764	6.74 (0.18)	15.18 (0.83)	0.68 (0.60-0.78)	1.64 (0.06)	0.68 (0.61-0.75)
Smoking						
Current	12068	14.60 (0.24)	28.11 (0.83)	1.62 (1.47-1.79)	2.94 (0.05)	2.25 (2.09-2.42)
Past	25867	25.08 (0.25)	21.50 (0.49)	1.10 (1.02-1.18)	2.24 (0.03)	1.80 (1.71-1.90)
Never	52566	59.59 (0.30)	19.28 (0.32)	1.00	1.77 (0.02)	1.00
Unknown	692	0.73 (0.05)	17.25 (2.39)	0.92 (0.66-1.30)	1.53 (0.15)	0.94 (0.72-1.23)
Heavy Drinker						
Yes	5480	6.22 (0.15)	21.54 (0.94)	1.03 (0.92-1.15)	2.67 (0.06)	1.56 (1.44-1.70)
No	83914	91.65 (0.18)	21.21 (0.27)	1.00	2.01 (0.02)	1.00
Unknown	1799	2.14 (0.09)	15.28 (1.45)	0.76 (0.61-0.96)	1.89 (0.10)	0.92 (0.79-1.07)

Data source: BRFSS, 2020-2024. SE: Standard Error; CI: Confidence Interval. *Weighted estimates, based on the complex sampling design. †A separate logistic model regression was run for each variable, adjusted for age, sex, race/ethnicity, marital status, education, annual household income, and year. ‡A separate multinomial logistic regression was run for each variable, adjusted for age, sex, race/ethnicity, marital status, education, annual household income, and year.

Distributions of specific ACEs appear in Table 4. The most reported ACEs were having parents who separated or divorced (31% weighted) and having a parent or adult in the home swear at you, insult you, or put you down more than once (30% weighted). The least common ACE was anyone at least 5 years older than you or an adult forcing the child to have sex (2% for “once” and 4% for “more than once” weighted).

Each ACE item was significantly positively associated with providing regular care, after adjusting for the demographic variables. The positive associations remained significant after further adjustment for physical and mental health conditions, difficulty making decisions, chronic depression, obesity, smoking, and heavy drinking. Odds ratios tended to be similar and statistically significant, although the significance required more than one exposure for a couple ACEs. For example, having a parent or adult in the home who physically “hurt” you or verbally “put you down,” becomes significantly positively associated with providing regular care only if the events occurred more than once. On the other hand, even one experience of sexual abuse was sufficient to significantly increase the odds of providing regular care.

Approximately 34% of participants reported no ACEs, 22% reported 1 ACE, and 44% reported 2 or more ACEs. The odds of providing regular care consistently increased with more ACEs (vs. 0), after adjusting for selected covariates (Figure 1). Statistical significance occurred with ≥2 ACEs.

Table 4. Odds of providing regular care or assistance by specific ACE items.

Regular Care or Assistance							
	No.	% (SE)*	% (SE)*	Odds Ratio (95% CI)*†	Type 3 F, (Pr>F)	Odds Ratio (95% CI)*‡	Type 3 F, (Pr>F)
Did you live with anyone who was depressed, mentally ill, or suicidal?							
Yes	16624	19.79 (0.23)	27.57 (0.57)	1.66 (1.54-1.78)	99.74,	1.39 (1.28-1.50)	34.07,
No	72390	77.72 (0.24)	19.47 (0.30)	1.00	<.0001	1.00	<.0001
Unknown	2179	2.49 (0.08)	20.92 (1.37)	1.17 (0.98-1.38)		1.14 (0.96-1.35)	
Did you live with anyone who was a problem drinker or alcoholic?							
Yes	21815	24.62 (0.27)	26.63 (0.57)	1.48 (1.38-1.59)	60.87,	1.32 (1.23-1.42)	35.57,
No	67609	73.33 (0.27)	19.33 (0.29)	1.00	<.0001	1.00	<.0001
Unknown	1769	2.05 (0.08)	18.51 (1.47)	0.98 (0.80-1.20)		0.98 (0.80-1.20)	

Did you live with anyone who used illegal street drugs or who abused prescription medications?								
Yes	9316	12.69 (0.21)	27.69 (0.86)	1.63 (1.48-1.79)	49.41,	1.41 (1.28-1.55)	23.65,	
No	79964	85.06 (0.22)	20.14 (0.27)	1.00	<.0001	1.00	<.0001	
Unknown	1913	2.25 (0.08)	20.43 (1.51)	1.09 (0.90-1.32)		1.10 (0.91-1.32)		
Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?								
Yes	6828	10.16 (0.21)	27.36 (1.06)	1.65 (1.47-1.86)	36.16,	1.45 (1.29-1.63)	20.00,	
No	82651	87.73 (0.22)	20.46 (0.26)	1.00	<.0001	1.00	<.0001	
Unknown	1714	2.11 (0.08)	17.87 (1.54)	0.93 (0.75-1.15)		0.95 (0.77-1.18)		
Were your parents separated or divorced?								
Yes	23586	31.27 (0.30)	22.63 (0.51)	1.20 (1.12-1.29)	11.05,	1.10 (1.03-1.19)	4.33,	
No	64068	63.82 (0.31)	20.44 (0.30)	1.00	<.0001	1.00	0.0047	
P not M	2148	2.74 (0.11)	24.33 (2.19)	1.32 (1.03-1.69)		1.21 (0.95-1.55)		
Unknown	1391	2.17 (0.10)	16.84 (1.37)	0.85 (0.69-1.03)		0.85 (0.69-1.04)		
How often did your parents or adults in your home ever slap, hit, kick, punch or beat each other up?								
0	73398	78.50 (0.25)	19.66 (0.28)	1.00	44.00,	1.00	24.77,	
1	3489	4.30 (0.12)	24.16 (1.20)	1.37 (1.20-1.57)	<.0001	1.27 (1.11-1.45)	<.0001	
≥1	10916	13.05 (0.21)	29.08 (0.83)	1.65 (1.51-1.81)		1.46 (1.33-1.60)		
Unknown	3390	4.14 (0.12)	20.17 (1.17)	1.09 (0.93-1.26)		1.08 (0.93-1.26)		
Not including spanking (before age 18), how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? Was it—								
0	67630	72.18 (0.28)	19.88 (0.30)	1.00	25.36,	1.00	9.14,	
1	5356	5.95 (0.14)	21.86 (0.92)	1.15 (1.02-1.28)	<.0001	1.05 (0.94-1.18)	<.0001	
≥1	15303	18.31 (0.24)	26.15 (0.67)	1.43 (1.32-1.55)		1.25 (1.15-1.36)		
Unknown	2904	3.56 (0.11)	18.83 (1.23)	1.01 (0.86-1.20)		1.02 (0.86-1.21)		
How often did a parent or adult in your home ever swear at you, insult you, or put you down?								
0	58108	60.63 (0.30)	19.11 (0.31)	1.00	45.77,	1.00	18.82,	
1	4484	5.14 (0.14)	19.52 (1.01)	1.10 (0.96-1.26)	<.0001	1.02 (0.89-1.16)	<.0001	
≥1	25210	30.24 (0.28)	25.65 (0.52)	1.52 (1.42-1.63)		1.30 (1.22-1.40)		
Unknown	3391	3.99 (0.12)	19.09 (1.13)	1.07 (0.92-1.24)		1.03 (0.88-1.20)		
How often did anyone, at least 5 years older than you or an adult, ever touch you sexually?								
0	77396	83.77 (0.23)	19.70 (0.27)	1.00	43.28,	1.00	19.48,	
1	3680	4.21 (0.14)	28.89 (1.76)	1.58 (1.32-1.90)	<.0001	1.38 (1.16-1.64)	<.0001	
≥1	6889	8.14 (0.16)	32.09 (0.98)	1.74 (1.57-1.92)		1.44 (1.30-1.60)		
Unknown	3228	3.88 (0.12)	20.12 (1.14)	1.05 (0.91-1.21)		1.01 (0.88-1.18)		
How often did anyone, at least 5 years older or an adult, try to make you touch them sexually?								
0	80139	86.55 (0.21)	20.09 (0.28)	1.00	40.25,	1.00	14.96, <.0001	
1	2783	3.37 (0.12)	27.57 (1.48)	1.45 (1.25-1.68)	<.0001	1.26 (1.25-1.47)	<.0001	

≥1	5029	6.14 (0.14)	32.28 (1.07)	1.73 (1.56-1.93)		1.43 (1.56-1.60)	
Unknown	3242	3.94 (0.13)	20.62 (1.41)	1.05 (0.88-1.26)		1.01 (0.88-1.19)	
How often did anyone at least 5 years older than you or an adult, force you to have sex?							
0	83326	90.26 (0.19)	20.29 (0.26)	1.00	30.06,	1.00	15.03,
1	1539	2.03 (0.11)	32.61 (2.99)	1.86 (1.38-2.50)	<.0001	1.54 (1.16-2.05)	<.0001
≥1	3066	3.69 (0.11)	35.63 (1.61)	1.96 (1.68-2.27)		1.59 (1.37-1.85)	
Unknown	3262	4.02 (0.12)	20.29 (1.22)	1.02 (0.91-1.23)		1.00 (0.85-1.17)	

Data source: BRFSS, 2020-2024. SE: Standard Error; CI: Confidence Interval. Type 3 analysis of effects. For each variable by care, p<.0001 based on the Rao-Scott chi-square test. *Weighted estimates, based on the complex sampling design. ^aA separate model was run for each ACE variable, adjusting for age, sex, race/ethnicity, marital status, education, annual household income, and year. [†]A separate model was run for each ACE variable, adjusting for age, sex, race/ethnicity, marital status, education, annual household income, year, poor mental health days, poor physical health days, difficulty making decisions, depression, obesity, smoking status, and heavy drinking status.

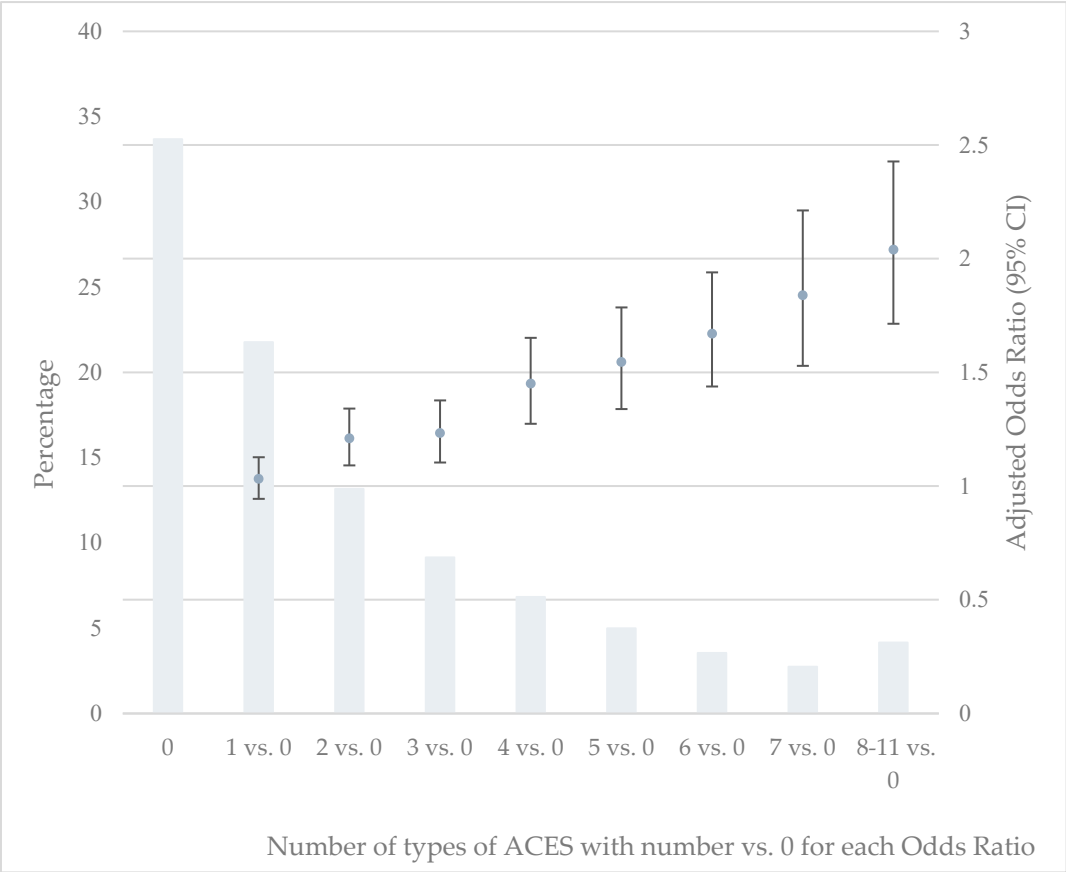


Figure 1. Odds of Providing Regular Care or Assistance by Number of ACEs. Data source: BRFSS, 2020-2024. Odds ratios adjusted for age, sex, race/ethnicity, marital status, education, annual household income, year, poor mental health days, poor physical health days, difficulty making decisions, depression, obesity, smoking status, and heavy drinking status.

The odds of providing regular care for specific groups by number of ACEs appear in Table 5. The odds of providing regular care for a parent, stepparent, or parent-in-law consistently decrease with increasing number of ACEs. This tends to exist for each specific ACE item (Figure 2A). On the

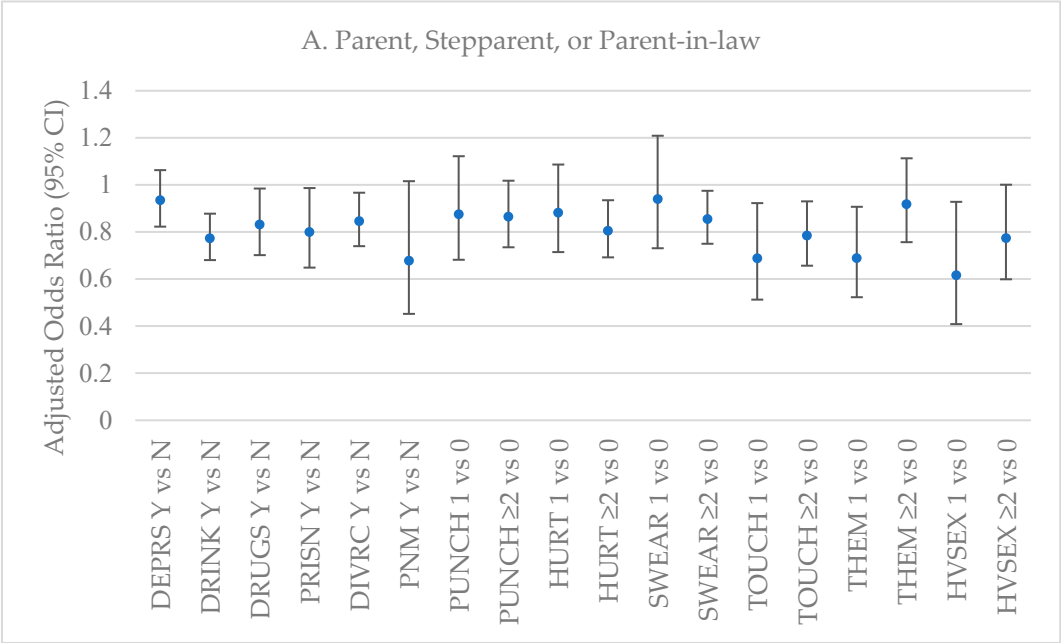
other hand, the odds of regular care for a spouse/partner or friend/relative increase with increasing number of types of ACEs. This too tends to occur for each specific ACE item (Figure 2B).

Among those participants providing regular care, Figure 3 shows that those with a higher ACE count were significantly more likely to care for a spouse, child, sibling, other relative, friend, or non-relative compared with a parent or grandparent.

Table 5. Odds of providing regular care or assistance for distinct groups by number of types of ACEs.

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Distinct ACEs Experienced	Parent, stepparent, or parent-in-law (n=6066, 34.61%*)	Grandparent, step grandparent or grandparent-in-law (n=752, 6.71%*)	Spouse or partner (n=4233, 18.13%*)	Child or stepchild; Grandchild or step grandchild (n=1985, 9.98%*)	Sibling, stepsibling, or sibling-in-law, other relatives (n=2844, 14.18%*)	Friend or non-relative (n=3390, 15.27%*)	Unknown (n=209, 1.12%*)
No.	Odds Ratio (95% CI) **	Odds Ratio (95% CI) **	Odds Ratio (95% CI) **	Odds Ratio (95% CI) **	Odds Ratio (95% CI) **	Odds Ratio (95% CI) **	Odds Ratio (95% CI) **
0	1.00	1.00	1.00	1.00	1.00	1.00	
1-2	0.85 (0.73-0.99)	1.19 (0.84-1.68)	1.14 (0.98-1.33)	1.12 (0.92-1.38)	0.92 (0.75-1.15)	1.1 (0.93-1.31)	0.52 (0.33-0.82)
3-4	0.78 (0.66-0.94)	1.01 (0.62-1.65)	1.09 (0.90-1.33)	1.05 (0.84-1.32)	1.04 (0.82-1.32)	1.27 (0.99-1.62)	1.22 (0.62-2.41)
≥5	0.66 (0.55-0.79)	0.98 (0.68-1.41)	1.34 (1.07-1.68)	1.1 (0.88-1.37)	1.09 (0.83-1.42)	1.48 (1.21-1.83)	0.67 (0.37-1.19)
Type 3 Pr > F	0.0001	0.6342	0.0673	0.6752	0.5427	0.002	0.0228

Data source: BRFSS, 2020-2024. SE: Standard Error; CI: Confidence Interval. *Weighted estimates, based on the complex sampling design. **Adjusted for age, sex, race/ethnicity, marital status, education, annual household income, and year.



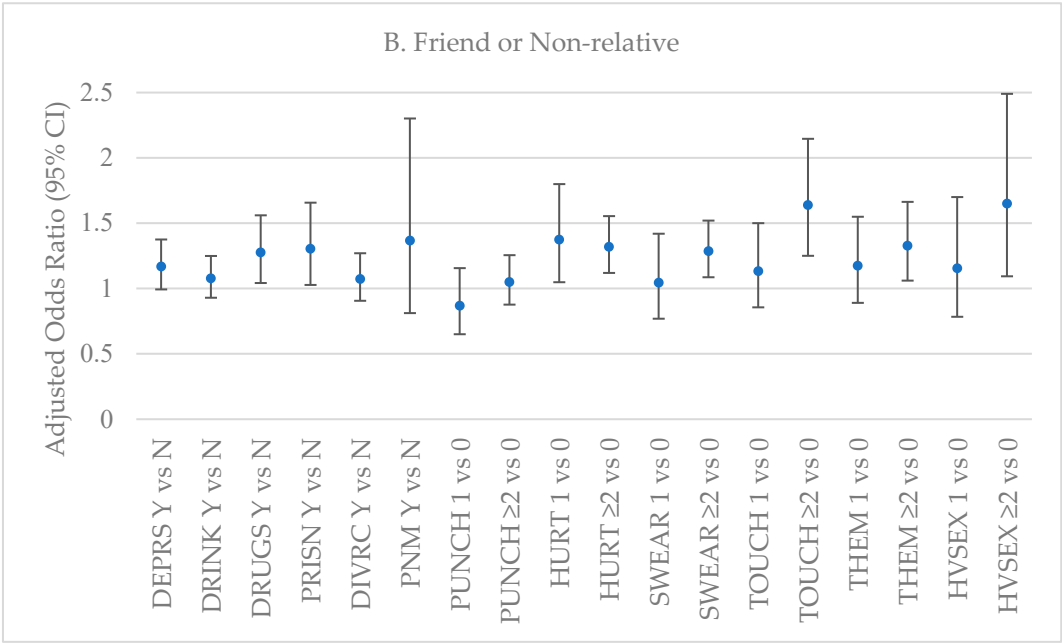


Figure 2. Odds of Providing Regular Care or Assistance for (A) a Parent, Stepparent or Parent-in-law or for (B) a Friend or Non-relative by Type of ACE. Data source: BRFSS, 2020-2024. CI: Confidence Interval; PNM: Parents Not Married. *Weighted estimates, based on the complex sampling design. Logistic regression adjusting for age, sex, race/ethnicity, marital status, education, income, year.

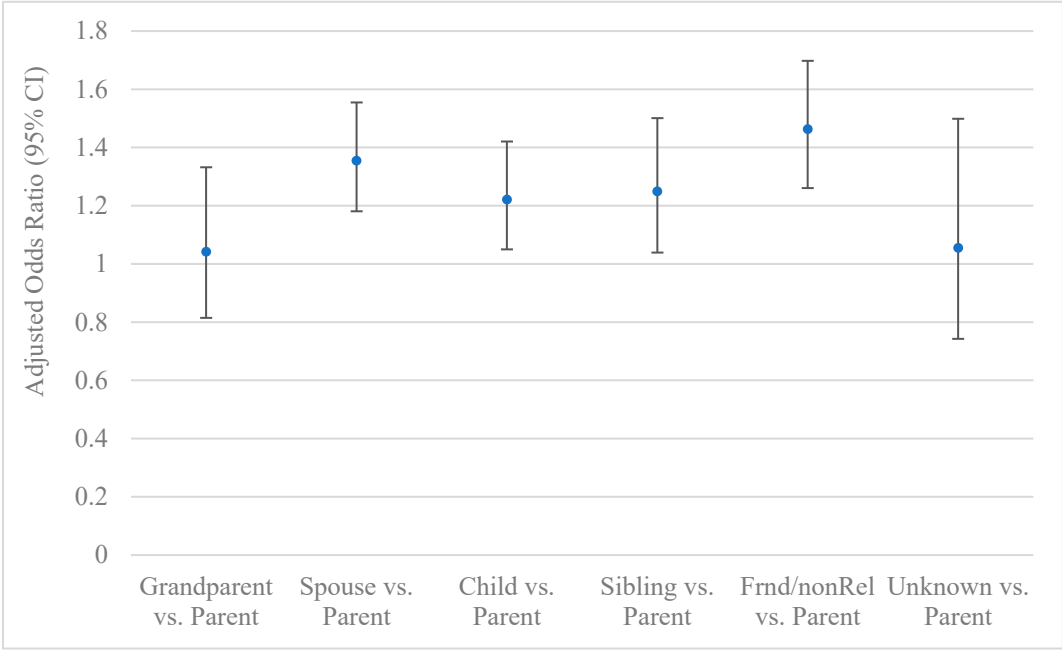


Figure 3. Odds of More ACEs vs. Less for Each Group Compared with the Parent Group. Data source: BRFSS, 2020-2024. *Weighted estimates, based on the complex sampling design. Multinomial logistic regression adjusting for age, sex, race/ethnicity, marital status, education, income, year.

4. Discussion

This study assessed three hypotheses. First, we hypothesize that a positive association exists between the number of ACEs and providing regular care as adults. The results support this hypothesis. After adjustment for covariates, there remained a significant dose-response relationship between number of ACEs and providing regular care. This is consistent with parentification due to ACEs having a persistent effect on caretaking behavior into adulthood. The literature maintains the

idea that ACEs increase the probability of parentification [11–21], with children experiencing parentification often carrying these patterns into adulthood [7–9]. For example, parentified adults may become caregiving partners themselves, seeking out needy or emotionally unavailable partners because of conditioning to prioritize other peoples' needs above their own [1–5]. They may struggle to set boundaries, in fear of rejection or abandonment [11]. Parentified adults may also exhibit behaviors towards their children according to their own experiences and family dynamics, such as being overprotective, dominant, providing excessive emotional support, and taking on family conflicts, thereby not allowing the child to learn to resolve issues independently and develop their own conflict resolution skills [29].

Second, we hypothesize that all ACEs are similarly associated with providing regular care among adults. Indeed, all the ACEs were significantly positively associated with providing care in the complex covariate adjusted models, as consistent with previous research [11–21]. While the effect size of the ACEs was similar, they increased with higher dose of exposure (i.e., ≥ 1 vs. 1 vs. 0). Hence, the role reversal in which a child assumes developmentally inappropriate adult roles and responsibilities for their age [1–5], resulting in caregiving behaviors that extend into adulthood [10], occurred regardless of the type of ACE. The smallest effect size involved whether parents separated, divorced, or were living together as an unmarried couple, although this ACE remained statistically significant in the adjusted model. Consistently, other studies have found that parentification is associated with divorce as the child takes on the role of caretaker for their parents or siblings as they face emotional stress and changes in family dynamics [1,19,30].

Duration of the ACE may influence the level of parentification, and parent divorce and separation could occur later in the child's life, on average, than other ACE events. Unfortunately, our data does not contain the timing of the ACE. Further research may explore the long-term caregiving effect of parentification related to the timing of the ACE.

Third, we hypothesize that the number and type of ACEs is associated with whom regular care is given. As the number of ACEs increased, providing regular care for the parent group significantly decreased. This inverse relationship occurred for most the ACEs, albeit not significantly so when the parent suffered from depression, anxiety, or mental illness, or when the parents were observed to physically hurt each other. Parentification may result in anger and resentment towards their parents [1,30], potentially explaining the inverse dose-response relationship between the number of ACEs and providing regular care for the parent group.

On the other hand, as the number of ACEs increased, providing regular care for friends or non-relatives significantly increased. A significant increase occurs for most ACEs, especially when they occurred more than once, but were least likely influenced by whether the parents were married, separated, divorced, or an unmarried couple or when the parents were observed to physically hurt each other. Providing significantly more care to friends or non-relatives may be because parentification causes the individual to better sense the emotional and practical needs of others [1,6]. Why the marital status of parents and why the parents who physically hurt each other do not promote a greater sense of emotional and practical needs of others is unclear. Further research may address this observation.

5. Conclusions

The study confirms a positive association between the number of ACEs and caregiving as adults. All the ACEs significantly influence providing regular caregiving similarly, except divorce, separation, and unmarried parents play a lesser role. As the number and type of ACEs increases, providing regular care for parents decreases but providing regular care for friends and non-relatives increases. These results tend to occur across the diverse types of ACEs, with few exceptions. Finally, among those who provided regular care for someone, a higher ACE count significantly increased the odds of providing regular care for a spouse, child, sibling, other relative, friend, or non-relative compared with a parent. There was no difference between providing regular care for a grandparent versus a parent.

Parentification stemming from ACEs and extending into adulthood appears to explain the results, along with resentment directed toward parents. While some caregiving behaviors are positive, negative consequences of parentification resulting in caregiving as adults may be negative (e.g., a tendency to prioritize others’ needs above one’s own, difficulty with saying “no” to requests, feeling responsible for others’ feelings, accepting poor treatment which may seem normal, difficulty delegating or trusting others, hypervigilance and emotional dysregulation). The negative consequences may also extend beyond the individual to family, friends, and future generations.

Understanding that parentification helps explain the link between ACEs and providing regular caregiving as adults can help us identify the positive and negative aspects of ACE induced caregiving. ACE-driven caregivers should receive counseling to help them better understand motives and ways they can protect their own health and wellbeing, and that of others. Further research may develop the type of counseling needed for those caregivers who have experienced ACEs.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki. Ethical review and approval were waived for this study because the data was deidentified and available in the public domain by the Centers for Disease Control and Prevention (CDC).

Informed Consent Statement: The BRFSS requires all participants to provide informed consent prior to the interview, and the survey is anonymous.

Data Availability Statement: Data used in this study is publicly available through the CDCs BRFSS program.

Acknowledgments: The author has reviewed and edited the output and takes full responsibility for the content of this publication.

Conflicts of Interest: The author declares no conflicts of interest.:

Abbreviations

The following abbreviations occur in this manuscript:

ACE	Adverse Childhood Experiences
BRFSS	Behavior Risk Factor Surveillance System
CDC	Centers for Disease Control and Prevention
CI	Confidence Interval
NH	Non-Hispanic
SE	Standard Error
SAS	Statistical Analysis System

References

1. Dariotis, J.K.; Chen, F.R.; Park, Y.R.; Nowak, M.K.; French, K.M.; Codamon, A.M. Parentification vulnerability, reactivity, resilience, and thriving: A mixed methods systematic literature review. *Int. J. Environ. Res. Public. Health* **2023**, *20*(13), 6197. <https://doi.org/10.3390/ijerph20136197>.
2. Połomski, P.; Peplińska, A.; Lewandowska-Walter, A.; Borchet, J. Exploring resiliency and parentification in Polish adolescents. *Int. J. Environ. Res. Public. Health* **2021**, *18*(21), 11454. <https://doi.org/10.3390/ijerph182111454>.
3. Burton, L. Childhood adultification in economically disadvantaged families: A conceptual model. *Fam. Relat.* **2007**, *56*, 329–345. <https://doi.org/10.1111/j.1741-3729.2007.00463.x>.
4. Hooper, L.M. Parentification, in encyclopedia of adolescence. In Levesque R.J.R., editor. Springer; New York, NY, USA, **2011**; 2023–2031.
5. Hooper, L.M.; Wallace, S.A.; Doehler, K.; Dantzler, J. Parentification, ethnic identity, and psychological health in lack and White American college students: Implications of family-of-origin and cultural factors. *J. Comp. Fam. Stud.* **2012**, *43*, 811–835. <https://doi.org/10.3138/jcfs.43.6.811>.

6. Hendricks, B.A.; B Vo, J.; Dionne-Odom, J.N.; Bakitas, M.A. Parentification among young carers: A concept analysis. *Child Adolesc. Social Work J.* **2021** *38*(5), 519–531. <https://doi.org/10.1007/s10560-021-00784-7>.
7. Jones, R.A.; Wells. An empirical study of parentification and personality. *Am. J. Fam. Ther. The*, **1996**, *24*(2), 145–152. <https://doi.org/10.1080/01926189608251027>.
8. McMahon, T.J.; Luthar, S.S. Defining characteristics and potential consequences of caretaking burden among children living in urban poverty. *AJO*, **2007**, *77*(2), 267–281. <https://doi.org/10.1037/0002-9432.77.2.267>.
9. Nuttall, A.K.; Coberly, B.; Diesel, S.J. Childhood caregiving roles, perceptions of benefits, and future caregiving intentions among typically developing adult siblings of individuals with autism spectrum disorder. *J. Autism Dev. Disord.* **2018**, *48*(4), 1199–1209. <https://doi.org/10.1007/s10803-018-3464-6>.
10. Gupta, S. What is parentification? Available online: <https://www.verywellmind.com/parentification0types-causes-and-effects-7090611> (accessed 15 Dec 25).
11. Thompson, M. J.; Platts, C. R.; Davies, P. T. Parent–child boundary dissolution and children’s psychological difficulties: A meta-analytic review. *Psych. Bull.* **2024**, *150*(7), 873–919. <https://doi.org/10.1037/bul0000440>.
12. Chen, C.Y.; Panebianco, A. Physical and psychological conditions of parental chronic illness, parentification and adolescent psychological adjustment. *Psychol. Health* **2020**, *35*(9), 1075–1094. <https://doi.org/10.1080/08870446.2019.1699091>.
13. Van Loon, L.M.; Van de Ven, M.O.; Van Doesum KT, Hosman CM, Witteman CL. Parentification, stress, and problem behavior of adolescents who have a parent with mental health problems. *Fam. Process* **2017**, *56*(1), 141–153. <https://doi.org/10.1111/famp.12165>.
14. Burnett, G.; Jones, R.A.; Bliwise, N.G.; Ross, L.T. Family unpredictability, parental alcoholism, and the development of parentification. *Am. J. Fam. Ther.* **2006**, *34*(3), 181–189. <https://doi.org/10.1080/01926180600550437>.
15. Hicks, H.R. Experiences & long-term implications of childhood parentification & parental substance misuse: A scoping review. *McNair Scholars Research Journal* **2023**, *26*, 6 <https://doi.org/10.32855/2642-2492.1005>.
16. Fitzgerald, M.M.; Schneider, R.A.; Salstrom, S.; Zinzow, H.M.; Jackson, J.; Fossel, R.V. Child sexual abuse, early family risk, and childhood parentification: Pathways to current psychosocial adjustment. *JFP*, **2008**, *22*(2), 320–324. <https://doi.org/10.1037/0893-3200.22.2.320>.
17. Pedersen, S.; Revenson, T.A. Parental illness, family functioning, and adolescent well-being: A family ecology framework to guide research. *JFP*, **2005**, *19*(3), 404–419. <https://doi.org/10.1037/0893-3200.19.3.404>.
18. Peris, T.S.; Goeke-Morey, M.C.; Cummings, E.M.; Emery, R.E. Marital conflict and support seeking by parents in adolescence: empirical support for the parentification construct. *JFP*, **2008**, *22*(4), 633–642. <https://doi.org/10.1037/a0012792>.
19. Jurkovic, G.J.; Thirkield, A.; Morrell, R. Parentification of adult children of divorce: A multidimensional analysis. *J. Youth Adolesc.* **2001**, *30*, 245–257. <https://doi.org/10.1023/A:1010349925974>.
20. Masiran, R.; Ibrahim, N.; Awang, H.; Lim, P.Y. The positive and negative aspects of parentification: An integrated review. *Child. Youth Serv. Rev.* **2023**, *144*, 1–10. <https://doi.org/10.1016/j.childyouth.2022.106709>.
21. Blake-Holmes, K.; Maynard, E.; Brandon, M. The impact of acquiescence: a model of coping developed from children of parents with mental illness. *Advances in Mental Health*, **2023**, *21*(3), 199–217. <https://doi.org/10.1080/18387357.2023.2206037>.
22. Centers for Disease Control and Prevention. (2013, August 15). The BRFSS user guide. Available online: https://www.cdc.gov/brfss/data_documentation/pdf/UserguideJune2013.pdf (accessed 15 Dec 2025).
23. Centers for Disease Control and Prevention. (2021, August 2). *The Behavioral Risk Factor Surveillance System’s 2020 summary data quality report*. Available online: https://www.cdc.gov/brfss/annual_data/2020/pdf/2020-sdqr-508.pdf (accessed 15 Dec 2025).
24. Centers for Disease Control and Prevention. (2022, August 9). *The Behavioral Risk Factor Surveillance System’s 2021 summary data quality report*. Available online: https://www.cdc.gov/brfss/annual_data/2021/pdf/2021-DQR-508.pdf (accessed 15 Dec 2025).

25. Centers for Disease Control and Prevention. (2023, August 8). *The Behavioral Risk Factor Surveillance System's 2022 summary data quality report*. Available online: https://www.cdc.gov/brfss/annual_data/2022/pdf/2022-DQR-508.pdf (accessed 15 Dec 2025).
26. Centers for Disease Control and Prevention. (2024, August 6). *The Behavioral Risk Factor Surveillance System's 2023 summary data quality report*. Available online: https://www.cdc.gov/brfss/annual_data/2023/pdf/2023-DQR-508.pdf (accessed 15 Dec 2025).
27. Centers for Disease Control and Prevention. (2025, July 25). *The Behavioral Risk Factor Surveillance System's 2024 summary data quality report*. Available online: https://www.cdc.gov/brfss/annual_data/2024/pdf/2024-DQR-508.pdf (accessed 15 Dec 2025).
28. Centers for Disease Control and Prevention. (2025). *Behavioral Risk Factor Surveillance System survey data*. Available online: <https://www.cdc.gov/brfss/index.html> (accessed 15 Dec 2025).
29. Guy-Evans, O. Parentification effects: How growing up too fast impacts adulthood. Available online: Parentification Effects: How Growing Up Too Fast Impacts Adulthood (accessed 15 Dec 2025).
30. Dragan, M., Hardt, J. Childhood adversities and risk for problematic alcohol use. *Addict. Behav.* **2016**, 59, 65–71. <https://doi.org/10.1016/j.addbeh.2016.03.015>.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.