

Family Well-being in Grandparent-Versus Parent-Headed Households

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abstract

BACKGROUND AND OBJECTIVES: Little is known about the 2% of US children being raised by their grandparents. We sought to characterize and compare grandparent- and parent-headed households with respect to adverse childhood experiences (ACEs), child temperament, attention-deficit/hyperactivity disorder (ADHD), and caregiver aggravation and coping.

METHODS: Using a combined data set of children ages 3 to 17 from the 2016, 2017, and 2018 National Survey of Children's Health, we applied survey regression procedures, adjusted for sociodemographic confounders, to compare grandparent- and parent-headed households on composite and single-item outcome measures of ACEs; ADHD; preschool inattention and restlessness; child temperament; and caregiver aggravation, coping, support, and interactions with children.

RESULTS: Among 80 646 households (2407 grandparent-headed, 78 239 parent-headed), children in grandparent-headed households experienced more ACEs ($\beta = 1.22$, 95% confidence interval [CI]: 1.07 to 1.38). Preschool-aged and school-aged children in grandparent-headed households were more likely to have ADHD (adjusted odds ratio = 4.29, 95% CI: 2.22 to 8.28; adjusted odds ratio = 1.72, 95% CI: 1.34 to 2.20). School-aged children in these households had poorer temperament ($\beta_{\text{adj}} = .25$, 95% CI: -0.63 to 1.14), and their caregivers experienced greater aggravation ($\beta_{\text{adj}} = .29$, 95% CI: 0.08 to 0.49). However, these differences were not detected after excluding children with ADHD from the sample. No differences were noted between grandparent- and parent-headed households for caregiver coping, emotional support, or interactions with children.

CONCLUSIONS: Despite caring for children with greater developmental problems and poorer temperaments, grandparent caregivers seem to cope with parenting about as well as parents.

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WHAT'S KNOWN ON THIS SUBJECT: Nearly 3 million children today are raised by their grandparents, often because of social adversity. Research to date has primarily demonstrated negative social and health outcomes for caregivers and children in grandparent-headed households.

WHAT THIS STUDY ADDS: In a large, nationally representative US sample, attention-deficit/hyperactivity disorder and childhood adversity appear to be responsible for some of the behavioral and developmental disparities observed between grandparent- and parent-headed households. No differences in caregiver coping and emotional support were found.

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The number of children being raised by their grandparents has grown considerably in recent years, from 2.5 million in 2005 to 2.9 million in 2015.¹ Although grandparents can provide support and stability in families, the increase in custodial grandparenting in the United States has primarily been driven by the inability of some parents to care for their children,² and up to 72% of children raised by grandparents have been exposed to at least one adverse, traumatic event.³ In light of rising incarceration rates,^{4,5} the current opioid crisis,⁶ and the recent economic recession,⁷ children who enter nonparental kinship care face a unique living environment and complex relationships that can impact their long-term development.

The demographic and health correlates of grandparents assuming the caregiving role have been well-characterized by previous research. Most custodial grandparents are aged 50 to 59 years⁸ and, compared with parents, tend to have poorer physical⁹⁻¹² and mental¹³⁻¹⁵ health before taking on the demanding role of parenting a child. Custodial grandparents may also feel isolated from peers because the demands of caregiving can be time-consuming.¹⁶ To that end, grandparents raising their grandchildren often report receiving inadequate support from those around them, and evidence suggests they are less likely to receive support resources.^{17,18}

There has historically been less attention on the positive outcomes of the grandfamily household structure. Although it is true that caregiving is particularly taxing for older adults,¹⁹ evidence suggests that even when faced with unique financial and health burdens, custodial grandparents and their grandchildren can thrive.²⁰ In fact, many grandparents raising grandchildren report that they would perform the same role again if given the chance.²¹

The literature regarding the health and developmental outcomes of children raised by grandparents has yielded mixed findings. Researchers of previous studies have demonstrated that, in addition to having experienced adversity early in life, these children tend to have fewer coping resources because they cannot turn to their parents for support.²² Some studies indicate that children being raised by grandparents have a higher prevalence of developmental delays,²³ behavioral issues,²⁴ and academic difficulties,²⁵ suggesting that the combination of higher traumatic event exposure and poorer coping skills in children in nonparental care may hinder positive social development. However, after adjusting for selection bias caused by child and family background factors, other studies have shown that nonparental care is not associated with poorer cognitive skills or behavioral problems.²⁶ Reverse causation is a possibility as well because poorer child health may introduce disruption and instability to caregiving arrangements.²⁷

Previous researchers have further explored grandparent and grandchild outcomes among subpopulations of grandparent caregivers. Analyses have individually been focused on grandmothers^{15,28,29} and grandfathers¹¹ raising grandchildren, racial differences among grandfamilies,^{10,29} the diverse cultural attitudes and outcomes of grandparenting,^{14,30} and how single-grandparent caregivers compare with single-parent caregivers.^{11,12} These studies individually provide key insights into select components of the grandfamily. However, because of differences in samples and analytic methods, results are difficult to compare between studies. No recent studies have investigated both child and caregiver measures using a single, large, nationally representative sample.

The National Survey of Children's Health (NSCH), a cross-sectional annual survey of households in the United States with children <18 years old, offers the unique opportunity to compare grandparent- and parent-headed households with respect to both children and caregivers. In this study, we aimed to assess, using this large nationally representative data set, differences between grandparent- and parent-headed households in terms of sociodemographics, caregiver-child interactions, adverse childhood experiences (ACEs), and other caregiver and child variables, controlling for underlying sociodemographic differences.

METHODS

Sample

The Maternal and Child Health Bureau of the US Health Resources and Services Administration examined the physical and emotional health of noninstitutionalized children ages 0 to 17 through the nationally representative NSCH.³¹ The NSCH used a 2-phase multimode survey approach based on the Census Address Master File, and data were weighted to account for nonresponse and sociodemographics. The 2016, 2017, and 2018 NSCH data sets were combined for cross-sectional analysis per the NSCH Guide to Multi-Year Estimates.³² Children ages 3 to 17 were included.

Households in which the respondent was a grandparent and the other primary caregiver in the household was a grandparent, or there was no other primary caregiver in the household, were categorized as "grandparent-headed households." Households in which a primary caregiver was a biological or adoptive parent and the other primary caregiver in the household was a biological or adoptive parent or stepparent, or there was no other primary caregiver in the household,

were categorized as “parent-headed households.” Households with other structures were excluded.

Single-Item Outcome Measures

Caregivers answered questions about whether the child had ever experienced each of 7 individual ACEs (binary) and whether the child had a current medical diagnosis of attention-deficit/hyperactivity disorder (ADHD) (binary).

Availability of emotional support was assessed by using the question, “during the past 12 months, was there someone that you could turn to for day-to-day emotional support with parenting or raising children” (binary; “no” or “yes”). Caregiver coping (binary) was measured with the question, “how well do you think you are handling the day-to-day demands of raising children?” Responses were dichotomized as “very well” versus “somewhat well,” “not very well,” or “not at all.”

Composite Outcomes

To facilitate analysis of inattention or restlessness, child temperament, parental aggravation, frequency of quality family interactions, and neighborhood support, 6 composite scales were derived by aggregating responses to individual Likert items in the NSCH, as noted in Table 1. Responses to individual component items were weighted such that all items contributed equally to the composite scales. Inattention or restlessness and the frequency of quality family interactions were only assessed for children ages 3 to 5, temperament and parental aggravation were separately assessed for children ages 3 to 5 and ages 6 to 17, and neighborhood support was assessed for all children in the sample. Internal consistency, as measured by Cronbach α , was calculated for each scale. Also, the association between the inattention or restlessness scale and ADHD diagnosis was examined by using a linear regression to evaluate the

validity of the derived scale. In addition to these composite scales, count variables for the number of ACEs experienced were created for children with complete responses for all ACEs.

Statistical Analysis

Grandparent-headed households were compared against parent-headed households on caregiver and child sociodemographics and child health by using second-order Rao–Scott adjusted χ^2 tests. Logistic and linear regressions were used to model outcomes of interest as functions of household structure (grandparent- versus parent-headed household). Regressions were adjusted for potential confounders, which were selected on the basis of observed sociodemographic differences between household structures and anticipated associations with the behavioral outcomes of interest based on the literature. Models were adjusted for caregiver sex, caregiver education, household poverty level, 1- vs 2-caregiver household, and child age, sex, race and ethnicity, and health status, with the exception of models for ADHD diagnosis, which did not control for child health status because ADHD is a component of child health. Additionally, because ADHD has been associated with ACEs,³³ an additional logistic regression was conducted controlling for the occurrence of each individual ACE.

Statistically significant associations between household structure and child temperament and parental aggravation were reexamined in a sample excluding children with ADHD. Additionally, the association between household structure and inattention and restlessness was assessed among 3- to 5-year-old children without a diagnosis of ADHD to determine if subthreshold ADHD phenotypes were associated with household structure. Availability of emotional support was assessed

separately in 1- and 2-caregiver households.

For all analyses, *P* values were derived from 2-sided statistical tests, and associations with *P* values <.05 were considered to be statistically significant. All analyses were conducted in R, version 4.0.0, by using package survey, version 4.0, and all analyses accounted for the complex survey design of the NSCH combined data set. This study was exempt from institutional review board review because it used publicly available, deidentified data.

RESULTS

The eligible sample included 2407 grandparent households (631 single-grandparent households and 1776 two-grandparent households) and 78 239 parent households (10 115 single-parent households and 68 124 two-parent households). Grandparent caregivers achieved lower levels of education ($F = 34.7$, $P < .001$) and had lower household incomes ($F = 51.2$, $P < .001$). They were also more likely to be female ($F = 8.5$, $P = .004$) and to be in a one-caregiver household ($F = 77.8$, $P < .001$) (Table 2).

Child sex and age were not associated with household structure, but the distribution of child race and ethnicity differed with household structure, especially in the proportion of grandparents compared with parents who cared for non-Hispanic Black children (30.5% vs 11.4%, respectively). Children in grandparent-headed households were also less likely to be in excellent or very good health (78.2% vs 90.4%; $F = 47.4$, $P < .001$).

ACEs

Children in grandparent-headed households were more likely to have experienced each of the ACEs (Table 3); on average, children in grandparent-headed households

TABLE 1 Composite Measure Definitions and Component Items From the 2016, 2017, and 2018 NSCH

Scale	Component Items ^a (Range)
Inattention and restlessness, ages 3–5	“How often is this child easily distracted?” (0 [none of the time] to 3 [all of the time]) ^b
Range: 0–12	“Compared to other children his or her age, how often is this child able to sit still?” (0 [all of the time] to 3 [none of the time]) ^c
Cronbach α : 0.69	“How often does this child keep working at something until he or she is finished?” (0 [all of the time] to 3 [none of the time]) ^c
Temperament, ages 3–5	“When he or she is paying attention, how often can this child follow instructions to complete a simple task?” (0 [all of the time] to 3 [none of the time]) ^c
Range: 0–15	“How often does this child play well with others?” (0 [all of the time] to 3 [none of the time]) ^c
Cronbach α : 0.62	“How often does this child become angry or anxious when going from one activity to another?” (0 [none of the time] to 3 [all of the time]) ^b
Temperament, ages 6–17	“When excited or all wound up, how often can this child calm down quickly?” (0 [all of the time] to 3 [none of the time]) ^c
Range: 0–6	“How often does this child lose control of his or her temper when things do not go his or her way?” (0 [none of the time] to 3 [all of the time]) ^b
Cronbach α : 0.56	“This child bounces back quickly when things do not go his or her way.” (0 [definitely true] to 3 [not true]) ^d
Parental aggravation, ages 3–5 and ages 6–17	“This child stays calm and in control when faced with a challenge.” (0 [definitely true] to 3 [not true]) ^d
Range: 0–12	“This child argues too much.” (0 [not true] to 3 [definitely true]) ^e
Cronbach α : 0.76 and 0.79	“During the past month, how often have you felt that this child is much harder to care for than most children his or her age?” (0 [Never] to 4 [Always])
Quality family interaction, ages 3–5	“During the past month, how often have you felt that this child does things that really bother you a lot?” (0 [never] to 4 [always])
Range: 0–6	“During the past month, how often have you felt angry with this child?” (0 [never] to 4 [always])
Cronbach α : 0.76	“During the past week, how many days did you or other family members tell stories or sing songs to this child?” (0 [every day] to 3 [0 days])
Neighborhood support, ages 3–17	“During the past week, how many days did you or other family members read to this child?” (0 [every day] to 3 [0 days])
Range: 0–9	“During the past week, how many days did you or other family members read to this child?” (0 [every day] to 3 [0 days])
Cronbach α : 0.81	“People in this neighborhood help each other out.” (0 [definitely disagree] to 3 [definitely agree])
	“We watch out for each other’s children in this neighborhood.” (0 [definitely disagree] to 3 [definitely agree])
	“When we encounter difficulties, we know where to go for help in our community.” (0 [definitely disagree] to 3 [definitely agree])

^a Phrasing of several component items changed slightly between NSCH versions. The table reports the phrasing from the 2016 NSCH.

^b Response options differed between NSCH versions. 2016: (0) none of the time, (1) some of the time, (2) most of the time, and (3) all of the time. 2017 and 2018: (0) never, (1) sometimes, (1) approximately half the time, (2) most of the time, and (3) always.

^c Response options differed between NSCH versions. 2016: (0) all of the time, (1) most of the time, (2) some of the time, (3) none of the time. 2017 and 2018: (0) always, (1) most of the time, (2) approximately half the time, (2) sometimes, and (3) never.

^d Response options differed between NSCH versions. 2016 and 2017: (0) definitely true, (1.5) somewhat true, and (3) not true. 2018: (0) always, (1.5) usually, (1.5) sometimes, and (3) never.

^e Response options differed between NSCH versions. 2016 and 2017: (0) not true, (1.5) somewhat true, and (3) definitely true. 2018: (0) never, (1.5) sometimes, (1.5) usually, and (3) always.

experienced 1.22 (95% confidence interval [CI]: 1.07 to 1.38) more ACEs than children in parent-headed households. Even after adjusting for

confounders, children in grandparent-headed households experienced significantly more ACEs overall (Table 4).

ADHD Diagnosis and Symptoms

Caregivers in grandparent-headed households were more likely to have children with ADHD than those in parent-headed households for children ages 3 to 5 (7.8% vs 1.5%, adjusted odds ratio [aOR] = 4.29, 95% CI: 2.22 to 8.28) and ages 6 to 17 (18.0% vs 9.9%, aOR = 1.72, 95% CI: 1.34 to 2.20). After controlling for ACEs, ADHD was still more common in grandparent-headed households for children ages 3 to 5 (aOR = 3.27, 95% CI: 1.52 to 7.02) but not children ages 6 to 17 (aOR = 1.17, 95% CI: 0.91 to 1.50).

The inattention and restlessness scale was associated with ADHD diagnoses in children ages 3 to 5; preschool-aged children with ADHD scored an average of 3.80 (95% CI: 3.43 to 4.16) points higher on the scale than those without ADHD. In the sample of 3- to 5-year-old children without ADHD, household structure was not associated with inattention and restlessness (adjusted beta [β_{adj}] = 0.11, 95% CI: -0.27 to 0.49). Cronbach α for inattention and restlessness and other composite outcome measures is reported in Table 1.

Child Temperament

Children ages 3 to 5 did not differ in temperament between grandparent-headed and parent-headed households (β_{adj} = .25, 95% CI: -0.63 to 1.14), whereas children ages 6 to 17 in grandparent-headed households had poorer temperament (β_{adj} = .23, 95% CI: 0.07 to 0.40). However, this association was not robust to the removal of children with ADHD from the sample (β_{adj} = .19, 95% CI: -0.01 to 0.38).

Caregiver Aggravation

Similarly, no association was noted between household type and aggravation among caregivers of children ages 3 to 5 (β_{adj} = .17, 95% CI: -0.23 to 0.57), whereas grandparent caregivers of children ages 6 to 17 were more likely to experience

TABLE 2 Sample Characteristics and Demographics of Grandparent Households and Parent Households of Children Ages 3–17, 2016–2018 NSCH (N = 80 646)

Characteristics	Grandparent Households (n = 2407)		Parent Households ^a (n = 78 239)		Rao–Scott Adjusted F-statistic	P
	n	% ^b	n	% ^b		
Primary caregiver sex					8.5	.004
Male	674	24.9	25 347	31.1		
Female	1697	75.1	52 550	68.9		
Primary caregiver education					34.7	<.001
Less than or equal to eighth grade	48	7.3	694	4.2		
Ninth to 12th grade, no diploma	202	20.9	1535	7.5		
High school graduate or GED	687	28.6	8047	14.5		
Vocational or trade program	209	6.8	3614	6.1		
Some college	481	14.3	11 395	13.9		
Associate degree	269	10.1	8173	8.5		
Bachelor's degree	281	6.1	24 898	25.4		
Master's degree	153	4.3	14 362	14.9		
Doctorate or professional degree	37	1.6	5040	5.0		
Household income, % of federal poverty level					51.2	<.001
0–99	563	33.2	7169	17.9		
100–199	585	31.8	11 577	21.0		
200–399	770	21.8	24 168	27.7		
≥400	489	13.1	35 325	33.4		
No. caregivers					77.8	<.001
1 caregiver	631	30.6	10 115	15.0		
2 caregivers	1776	69.4	68 124	85.0		
Child age, y					2.7	.07
3–8	406	21.7	13 544	19.1		
9–12	958	43.5	27 022	40.2		
13–17	1043	34.9	37 673	40.7		
Child sex					0.0	.98
Male	1240	51.0	40 300	51.0		
Female	1167	49.0	37 939	49.0		
Child race and ethnicity					46.0	<.001
Hispanic	303	20.2	8471	24.7		
White, non-Hispanic	1406	40.7	55 970	53.6		
Black, non-Hispanic	376	30.5	4003	11.4		
Multiracial or other, non-Hispanic	322	8.6	9795	10.4		
Child health status					47.4	<.001
Excellent or very good health	1985	78.2	72 078	90.4		
Good, fair, or poor health	415	21.8	5958	9.6		

GED, general equivalency diploma.

^a Parent households included 2 biological or adoptive parents, 1 biological or adoptive parent plus 1 stepparent, or 1 biological or adoptive parent.

^b Prevalence figures weighted to be nationally representative.

elevated aggravation ($\beta_{\text{adj}} = .29$, 95% CI: 0.08 to 0.49). This association was not robust to the removal of children with ADHD from the sample ($\beta_{\text{adj}} = .16$, 95% CI: –0.06 to 0.38).

Additional Caregiver Measures

Caregivers in grandparent-headed households had more frequent quality family interactions with their child ($\beta = .54$, 95% CI: 0.19 to 0.90),

but this difference was not robust to adjustment for confounders ($\beta_{\text{adj}} = .10$, 95% CI: –0.26 to 0.46). Caregivers in grandparent-headed households had slightly more supportive neighborhoods ($\beta_{\text{adj}} = .32$, 95% CI: 0.04 to 0.59). No differences were noted in caregiver coping (aOR = 0.96, 95% CI: 0.77 to 1.19). Additionally, in 2-caregiver households, no statistically significant differences were noted in caregiver likelihood of having someone to turn to for day-to-day emotional support with parenting and raising children (70.2% grandparents versus 76.1% parents, aOR = 1.00, 95% CI: 0.75 to 1.35). Among 1-caregiver households, fewer grandparents reported having someone for day-to-day emotional support, but no differences were noted in the adjusted model (59.4% grandparents versus 69.0% parents, aOR = 0.77, 95% CI: 0.53 to 1.10).

DISCUSSION

In this cross-sectional analysis of a large nationally representative sample of children ages 3 to 17, children being raised by grandparents were more likely to have had adverse experiences and a diagnosis of ADHD. Additionally, school-aged children in grandparent-headed households had poorer temperaments, and their caregivers experienced greater aggravation from parenting. Importantly, after excluding children with ADHD from our analyses, differences in child temperament and caregiver aggravation were no longer statistically significant. Additionally, although ADHD was more prevalent among children in grandparent-headed households, we did not find differences in inattention and restlessness among young children without an ADHD diagnosis.

The results from our analyses, in many ways, are similar to what is currently known about grandparents raising grandchildren. Compared with parent caregivers, custodial grandparents had lower educational

TABLE 3 ACEs Among Grandparent and Parent Households, 2016–2018 NSCH (*N* = 80 646)

ACEs	Grandparent Households (<i>n</i> = 2407)		Parent Households ^a (<i>n</i> = 78 239)		OR ^b (95% CI)	aOR ^{b,c} (95% CI)
	<i>n</i>	% ^b	<i>n</i>	% ^b		
	Child experienced parent or guardian divorcing or separating					
No	852	43.6	61 268	77.5	Reference	Reference
Yes	1478	56.4	16 251	22.5	4.47 (3.64 to 5.49)	4.34 (3.28 to 5.73)
Child experienced parent or guardian dying						
No	1953	87.0	75 496	97.3	Reference	Reference
Yes	359	13.0	1867	2.7	5.40 (4.09 to 7.14)	3.84 (2.63 to 5.59)
Child experienced parent or guardian serving time in jail						
No	1331	64.4	73 728	94.2	Reference	Reference
Yes	986	35.6	3534	5.8	8.92 (7.34 to 10.84)	6.24 (4.92 to 7.93)
Child saw or heard parents or adults slapping, hitting, kicking, or punching one another in the home						
No	1687	79.1	74 131	95.3	Reference	Reference
Yes	604	20.9	3086	4.7	5.38 (4.35 to 6.66)	4.32 (3.35 to 5.57)
Child was a victim of violence or witnessed violence in the neighborhood						
No	1986	88.8	74 774	96.4	Reference	Reference
Yes	318	11.2	2440	3.6	3.34 (2.59 to 4.31)	2.27 (1.67 to 3.09)
Child lived with anyone who was mentally ill, suicidal, or severely depressed						
No	1828	85.9	70 759	92.6	Reference	Reference
Yes	476	14.1	6341	7.4	2.08 (1.68 to 2.56)	2.00 (1.57 to 2.54)
Child lived with anyone who had a problem with alcohol or drugs						
No	1375	70.3	70 850	92.6	Reference	Reference
Yes	932	29.7	6362	7.4	5.26 (4.35 to 6.35)	5.20 (4.17 to 6.47)

OR, odds ratio.

^a Parent households included 2 biological or adoptive parents, 1 biological or adoptive parent plus 1 stepparent, or 1 biological or adoptive parent.^b Weighted to be nationally representative.^c Adjusted for caregiver sex, caregiver education, household poverty level, number of caregivers, child age, child sex, child race and ethnicity, and child health status.

attainment and household income. Children raised by grandparents were also more likely to have experienced a variety of ACEs than children raised by parents, reinforcing past findings about children in nonparental care.³⁴ Adverse experiences have been shown to have cumulative associations with behavioral problems, developmental delays, and difficulties in school and adult outcomes like substance abuse and depression.³⁵ In light of rising incarceration rates^{4,5} and the current

opioid crisis,⁶ our findings are similar to previous research about the precipitating factors of the grandfamily household structure, as well as its financial and health correlates.^{3,22}

Given the established association between ACE exposure and ADHD,³³ it is unsurprising that we identified elevated rates of ADHD among both preschool and school-aged children raised in grandparent-headed households. However, after

accounting for ACE exposure, although our effect estimate was attenuated, grandparent-headed households remained more likely to have children with ADHD. A possible explanation may be the heritability of ADHD.³⁶ Mothers with ADHD are more likely to experience unplanned pregnancies,³⁷ which are a common precipitating factor for grandparents raising their grandchildren; because the children of mothers with ADHD are more likely to also have ADHD, this pathway may explain elevated rates of ADHD among children in grandparent-headed households. Furthermore, there is a higher prevalence of substance abuse among adults with ADHD³⁸; substance abuse, as well as the elevated incarceration rates associated with it, further contributes to grandparent caregiving because of parents' inability to effectively care for their children. Importantly, we did not find evidence of differences in inattention and restlessness among preschool-aged children without an ADHD diagnosis between grandparent-headed and parent-headed households.

In our sample, grandparent-headed households were much more likely to have children with ADHD. Because children with ADHD tend to exhibit more externalizing behaviors and are often perceived as harder to care for by their caregivers, it is not surprising that we found poorer child temperament and elevated parental aggravation in grandparent-headed households. These findings are also consistent with the current understanding of behavioral and social characteristics of children raised by grandparents.^{3,8,25,39}

The fact that significant differences in child temperament and parental aggravation disappeared when we excluded children with ADHD from analyses suggests that ADHD itself may be responsible for many between-group differences in child behaviors and social characteristics. Children in nonparental care are at

TABLE 4 ACE Composite Measures Among Grandparent and Parent Households, 2016–2018 NSCH (N = 77 281)

ACE Composite Measures	Grandparent Households (n = 2148)		Parent Households ^a (n = 75 133)		OR ^b (95% CI)	aOR ^{b,c} (95% CI)
	n	% ^b	n	% ^b		
	Child experienced					
≥1 ACE						
No	447	28.4	52 567	68.8	Reference	Reference
Yes	1701	71.6	22 566	31.2	5.56 (4.27 to 7.24)	5.20 (3.71 to 7.29)
Child experienced						
≥2 ACEs						
No	956	56.6	66 326	87.8	Reference	Reference
Yes	1192	43.4	8807	12.2	5.49 (4.50 to 6.71)	4.88 (3.79 to 6.30)
Child experienced						
≥3 ACEs						
No	1310	70.0	71 014	94.2	Reference	Reference
Yes	838	30.0	4119	5.8	6.99 (5.70 to 8.57)	6.19 (4.78 to 8.01)
Child experienced						
≥4 ACEs						
No	1605	82.5	73 238	97.2	Reference	Reference
Yes	543	17.5	1895	2.8	7.50 (6.04 to 9.33)	6.41 (4.86 to 8.45)

OR, odds ratio.

^a Parent households included 2 biological or adoptive parents, 1 biological or adoptive parent plus 1 stepparent, or 1 biological or adoptive parent.

^b Weighted to be nationally representative.

^c Adjusted for caregiver sex, caregiver education, household poverty level, number of caregivers, child age, child sex, child race and ethnicity, and child health status.

higher risk for living under unstable caregiving arrangements,³⁵ which puts these children at greater risk for externalizing behavior problems.⁴⁰ However, many other factors may also be involved. Although our analyses controlled for many key sociodemographic variables, residual confounding related to other risk factors (eg, prenatal alcohol exposure, lead exposure, or family history of ADHD) may have impacted our analyses. Large-scale longitudinal studies examining children in nonparental care would be necessary to determine the extent to which externalizing behavior contributes to child placement in nonparental care.

Although the differences between grandparent- and parent-headed households have important implications for children and caregivers, so too do the similarities between these 2 groups. For example, although we found that grandparent-headed households have a higher frequency of quality interactions between caregivers and children, our analyses indicate that sociodemographic differences, rather

than differences inherent to grandparent and parent caregivers, may explain this small disparity. Additionally, although caregivers in grandparent-headed households were more likely to experience aggravation from parenting, we did not identify differences in caregivers' reported ability to cope with the daily demands of caregiving. We found that grandparent and parent caregivers in both 1- and 2-caregiver households did not differ in their odds of having someone to turn to for day-to-day emotional support with parenting or raising children, after controlling for confounders.

Of concern, 24% of parent caregivers and 30% of grandparent caregivers in 2-caregiver households did not have someone to turn to for day-to-day emotional support. Moreover, 31% of single-parent caregivers and 41% of single-grandparent caregivers lacked this type of support. Given the demographic characteristics of our sample, it is possible that custodial grandparents may not have as many friends and family to rely on for parenting support. Notably, after

controlling for sociodemographic confounders, we found that grandparents report greater support from their neighborhoods. However, this difference in neighborhood support between grandparents and parents was fairly small and unlikely to have substantial implications.

Given grandparent caregivers' limited access to emotional support, it has been suggested that grandparent households may be particularly in need of social support services to cope with the difficulties associated with raising grandchildren.²¹ In conjunction with previous evidence that grandparents who serve as the primary caregiver for a child were twice as likely to develop symptoms of depression than noncaregiving grandparents,⁴¹ it is vital that grandparents raising grandchildren take advantage of support groups in their community and on-line. Policies to create local grandparent-raising-grandchildren support programs can provide ways to cope, informational support, social support, and resource connections to caregivers.^{20,42,43} In a recent randomized controlled trial, Pandey et al⁴³ (2018) compared the effectiveness of traditional child welfare services with 3 community-based forms of support for custodial grandmothers. They concluded that traditional child welfare is better suited for the needs of parents and foster parents and that peer-based community programs provide greater informational and emotional support to grandmothers raising their grandchildren. Given the difficulties many grandparent caregivers face with respect to emotional support with parenting, pediatricians should refer these caregivers to community-based organizations oriented toward supporting grandparents raising grandchildren; in particular, pediatricians should be mindful of the additional support needed by grandparents in one-caregiver households. Organizations such as Grandfamilies.org provide a directory

of national and state-specific resources and support groups, which pediatricians can use to guide and counsel custodial grandparents.⁴⁴

Although past studies have revealed that children raised in grandparent-headed households may have poorer outcomes throughout adolescence and adulthood, our findings suggest that efforts to identify children who would benefit from medical or mental health interventions would be best served through screening that identifies ACEs and ADHD. The American Academy of Pediatrics has suggested that pediatricians screen their patients for early childhood adversity to identify children at high risk for toxic stress.⁴⁵ Given that pediatricians tend to under-identify risk factors such as ACEs and unmet social needs,⁴⁶ and given the elevated prevalence of ACEs among children in grandparent-headed households, pediatricians should be particularly mindful of the importance of early childhood screening in this population. Continued research into the complex interplay between childhood adversity, ADHD, and physical and emotional health is essential for the development and refinement of effective screening and interventions in this high-risk population.

One strength of our study is its large, nationally representative sample of 80 646 caregivers of children, including 2407 grandparents raising their grandchildren, making this the largest study to date examining childhood adversity, caregiver-child relationships, and other related measures in grandparent-headed households using a nationally representative sample. The sample size allowed analytical models to control for many key confounders. Whereas most previous studies of grandparent households have focused on psychological, behavioral, and health measures among either the caregivers or the children, in this study, we directly compare grandparent households and parent households with respect to both

caregiver variables and child variables using the same large, nationally representative sample. This methodology allows for consistent interpretations of findings pertaining to both children and caregivers. Additionally, whereas researchers of many studies analyzed individual Likert items when examining child and caregiver outcomes, in our study, we used composite measures, reducing the impact of random variation and measurement error on our findings.

However, the use of these composite measures also introduced notable limitations to this study. In particular, with the exception of the inattention and restlessness scale, we could not evaluate the construct validity of our composite scales. Another potential limitation of these measures was caused by minor variation between individual components in different iterations of the NSCH, which may have introduced some inconsistency to our composite measures. However, the majority of our composite measures had strong internal consistency, indicating that the individual component items were closely related to each other.

In addition to the limitations introduced by our composite measures, our study was also limited by the reliance on caregiver report. It is possible that grandparents are more critical about or have higher expectations for the behavior of their grandchildren. However, this type of bias is less likely to apply to reports about ACEs or medical diagnosis of ADHD. Additionally, the NSCH questionnaire's focus on lifetime exposure to adversity did not allow us to determine if the ACEs occurred before or after the child's placement with their caregiver. Finally, although we had the ability to control for demographic differences between groups, as with any retrospective cross-sectional analysis, residual confounding remains a possibility. For example, beyond the number of

caregivers, the NSCH did not include questions evaluating important characteristics of caregivers and the caregiver-child relationship, such as caregiver race or the duration of time that the child has been in the care of their parent or grandparent. Our inability to account for these underlying household characteristics may have impacted our findings.

CONCLUSIONS

In this study, we highlight many profound differences between grandparent- and parent-headed households. Even after adjusting for potential confounders, children in grandparent-headed households were much more likely to have experienced psychosocial adversity. Additionally, school-aged children in grandparent-headed households had poorer temperaments and their caregivers reported greater aggravation. However, no differences were noted with respect to how well caregivers were handling the day-to-day demands of parenting. With nearly 3 million children now being raised by one or both grandparents, pediatricians must be mindful of the demographic, psychosocial, and parenting challenges that characterize many grandparent-headed households. In addition to screening children in these families for adversity and heightened stress, pediatricians should refer these families to appropriate support groups and other resources committed to meeting the needs of parenting grandparents.

ABBREVIATIONS

ACE: adverse childhood experience
ADHD: attention-deficit/
hyperactivity disorder
aOR: adjusted odds ratio
CI: confidence interval
NSCH: National Survey of
Children's Health
 β_{adj} : adjusted beta

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